From: Boyd David
To: David Boyd
Subject: Fwd: News Re ease: BLM mod fies parcel l st for June 2017 oil and gas lease sa e (4.17 17)
Date: Monday April 17 2017 3:36:30 PM

News Release

Bureau of Land Management Colorado

FOR IMMEDIATE RELEASE

April 17, 2017

Contact: Courtney Whiteman, Public Affairs Specialist, 303-239-3668

BLM modifies parcel list for June 2017 oil and gas lease sale

DENVER – The Bureau of Land Management Colorado has removed 20 parcels totaling 27,529 acres in Grand County from its June 8, 2017, oil and gas lease sale. The BLM will now offer 86 parcels totaling 73,288 acre in Jackson, Routt, Rio Blanco and Moffat counties.

The BLM removed these 20 parcels due to low energy potential and reduced industry interest in the geographic area, as well as concern from local government and the public. The parcels were nominated before the latest revision to the land use plan for the area was completed.

“We understand concerns raised by Grand County and other stakeholders about offering these parcels at this time,” said acting BLM Deputy State Director for Energy Lands and Minerals Kent Walter. “We want to be sure they are still appropriate for leasing.”

To find out more about this and other BLM Colorado lease sales, visit https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/leasing/regional-lease-sales/colorado <http://link.email.dynect.net/link.php?DynEngagement true&H WAA0HYy4enWklLGLVOCoftvRiKxkwcx7028A%2BNZlWSzSEaUD3cyAX4te78n9xEluLDzCp1sVEfuABrbns0vyKDO22qpqpWk4l2eOZ3TIcKOGkaeJfwm59g%3D%3D&G 0&R https%3A%2F%2Fwww.blm.gov%2Fprograms%2Fenergy-and-minerals%2Foil-and-gas%2Fleasing%2Fregional-lease-sales%2Fcolorado&I 20170417193105.000000140a42%40mail6-33-usnbn1&X MHwxMDQ2NzU4OjU4ZjUxN2Y1MTBmNDgwMTZkMGY5ODliYzs%3D&S QCnPr4uZRKU30rI4r1aAIY5_FhRvwu66Ln7zG04YzLg> . In Fiscal Year 2016, oil and gas development on public lands directly contributed $796 million to Colorado’s economy. BLM Colorado received more than $98 million in federal revenues, including royalties, rents and bonus bids, from oil and gas development on public lands. The state of Colorado receives 49 percent of these revenues. Statewide, more than 22,900 jobs are tied to mineral and energy development on public lands.

# # #

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David Boyd

Bureau of Land Management

Public Affairs Specialist

NW Colorado District

2300 River Frontage Road
Silt, CO 81652

(970) 876-9008
(970) 319-4130 (cell)
<http://trk.email.dynect.net/trk.php?a /o2/0/WAA0HYy4enWklLGLVOCoftvRiKxkwcx7028A%2BNZlWSzSEaUD3cyAX4te78n9xEluLDzCp1sVEfuABrbns0vyKDO22qpqpWk4l2eOZ3TIcKOGkaeJfwm59g%3D%3D/i.gif&i 20170417193105.000000140a42%40mail6-33-usnbn1&x MHwxMDQ2NzU4OjU4ZjUxN2Y1MTBmNDgwMTZkMGY5ODliYzs%3D>

From:	Losey, Ashley
To:	Christopher Merritt; David Yoder; James Kirkland; Josh Ewing; Justina Parsons-Bernstein; Steven Acerson; Arie Leeflang; Amanda Nichols; KITTERMAN, ANYA D GS-12 USAF AFMC 75 CEG/CEIE; Diana Acerson; Elizabeth Hora; Joel Boomgarden; Jody Patterson; Kenny Wintch; Marcia Simonis; Shaun Nelson; Wilson, Richa -FS; Samantha Kirkley
Cc:	Casey Snider; Mindie Walkoviak; Brian Higgin; Nathan Thomas; Kimberly Finch; Hugh McDonald; Diana Barg
Subject:	Reminder - Respect and Protect MOU edits - DD 4/28
Date:	Wednesday, April 19, 2017 10:10:40 AM
Attachments:	draft.respect.protect.MOU 03.20.2017 (2).docx

All,

Just a quick reminder to look over the MOU and provide us any needed edits. We're asking that you return edits to us by 4/28/2017.

Thank you to all of you who've already done this, we really appreciate it.

The MOU is attached, if you need it. It's the same copy as was shared a couple weeks ago.

Thanks again,

Ashley
--
Ashley Losey, MS
Archaeologist
BLM Utah, State Office
440 West 200 South, Suite 500
Salt Lake City, Utah 84101-1345
alosey@blm.gov

(801) 539-4079 Office

MEMORANDUM OF UNDERSTANDING
between
TREAD LIGHTLY!, INC.,
BUREAU OF LAND MANAGEMENT, UTAH STATE OFFICE,
NATIONAL PARK SERVICE, UTAH AREA,
UNITED STATES FOREST SERVICE, INTERMOUNTAIN REGION,
UTAH DEPARTMENT OF ARTS AND HERITAGE, DIVISION OF STATE HISTORY,
UTAH DEPARTMENT OF NATURAL RESOURCES, DIVISON OF OIL, GAS AND MINING,
UTAH DEPARTMENT OF NATURAL RESOURCES, DIVISION OF PARKS AND RECREATION,
UTAH DEPARTMENT OF NATURAL RESOURCES, UTAH GEOLOGICAL SURVEY,
UTAH PUBLIC LANDS POLICY COORDINATING OFFICE,
STATE OF UTAH, SCHOOL AND INSTITUTIONAL TRUST LANDS ADMINISTRATION,
FRIENDS OF CEDAR MESA,
UTAH FRIENDS OF PALEONTOLOGY,
UTAH PROFESSIONAL ARCHAEOLOGICAL COUNCIL,
UTAH ROCK ART RESEARCH ASSOCIATION,
and
UTAH STATEWIDE ARCHAEOLOGICAL SOCIETY
REGARDING THE DEVELOPMENT AND IMPLEMENTATION OF THE
"RESPECT AND PROTECT" PUBLIC AWARENESS CAMPAIGN

I. Introduction

This Memorandum of Understanding (MOU) is between Tread Lightly!, Inc.; the Bureau of Land Management, Utah State Office; National Park Service, Utah Area; United States Forest Service – Intermountain Region; Utah Department of Arts and Heritage, Division of State History; Utah Department of Natural Resources, Division of Oil, Gas and Mining; Utah Department of Natural Resources, Division of Parks and Recreation; Utah Department of Natural Resources, Utah Geological Survey; Utah Public Lands Policy Coordinating Office; State of Utah School and Institutional Trust Lands Administration; Friends of Cedar Mesa; Utah Friends of Paleontology; Utah Professional Archaeological Council; Utah Rock Art Research Association; and Utah Statewide Archaeological Society (hereafter collectively referred to as "the parties") and defines the relationship between the parties and their respective roles in the development and implementation of the *Respect and Protect* public awareness campaign to eliminate the illegal looting and vandalism of archaeological, ~~and~~ paleontological, and other natural resources across the State of Utah.

II. Purpose

The purpose of this MOU is to establish a collaborative foundation for the parties to cooperatively develop and implement the *Respect and Protect* public awareness campaign to eliminate the illegal looting and vandalism of archaeological, ~~and~~ paleontological, and other natural resources in Utah. This MOU also provides an opportunity for an enhanced capacity for the federal agencies who participate in this campaign to comply with the Archaeological Resources Protection Act of 1979, the National Historic Preservation Act of 1966, and the Paleontological Resources Preservation Act of 2009.

III. Background

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The parties to this MOU all maintain a vested interest in cooperatively promoting proactive and consistent messaging regarding the importance of protecting archaeological, ~~and~~ paleontological, and other natural resources to both Utahans and Utah visitors as follows:

- **Tread Lightly!, Inc.:** Tread Lightly! is a non-profit organization that works across the United States to protect and enhance recreation access and opportunities by promoting outdoor ethics to heighten individuals' sense of good stewardship. Tread Lightly!'s positive messages about balancing outdoor ethics with recreation currently reach over 10 million people every year.
- **Bureau of Land Management – Utah State Office (BLM-Utah):** BLM-Utah administers almost 23 million acres of federal public land across Utah. These public lands contain tens of thousands of archaeological and paleontological resources that possess scientific, traditional, religious, and recreational values.
- **National Park Service, Utah Area (NPS-Utah):** The NPS preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generation. NPS-Utah's responsibilities include the management of five National Parks, six National Monuments, one National Recreation Area, one National Historic Site, and four National Historic Trails throughout the state.
- **United States Forest Service – Intermountain Region (USFS):** The USFS' Intermountain Region administers more that 8 million acres and over 12,000 heritage resources in Utah, Nevada, western Wyoming, and southern and central Idaho.
- **Utah Department of Heritage and Arts, Division of State History (State History):** State History's mission is to preserve and share the past for a better present and future. As a state agency, State History provides services, technical assistance, and information to many different businesses, industries, agencies, and individuals.
- **Utah Department of Natural Resources, Division of Oil, Gas and Mining (DOGM):** The mission of the Utah DOGM is to regulate the exploration and development of coal, oil and gas, and other minerals in Utah.
- **Utah Department of Natural Resources, Division of Parks and Recreation (State Parks):** Utah State Parks' mission is to enhance the quality of life by preserving and providing natural, cultural, and recreational resources at 43 heritage, scenic, and recreation parks for the enjoyment , education, and inspiration of this and future generations.
- **Utah Department of Natural Resources, Utah Geological Survey (UGS):** The UGS provides timely scientific information about Utah's geologic environment, resources, and hazards.
- **Utah Public Lands Policy Coordinating Office (PLPCO):** PLPCO's mission is to preserve and defend rights to access, use, and benefit from public lands within Utah.
- **State of Utah School and Institutional Trust Lands Administration (SITLA):** SITLA manages and generates revenue from Utah's 3.4 million acres of trust lands on behalf of 12 beneficiaries designated by Congress. Revenue generated from trust lands is deposited into perpetual endowments for each state institution, and interest and dividends are distributed to each beneficiary annually.
- **Friends of Cedar Mesa:** Friends of Cedar Mesa is a non-profit organization that works to ensure that the public lands in San Juan County, with all their cultural and natural values, are respected and protected.
- **Utah Friends of Paleontology (UFOP):** UFOP is a statewide non-profit volunteer organization dedicated to preserving Utah's fossil resources through public education and volunteer work with sponsoring institutions.
- **Utah Professional Archaeological Council (UPAC):** UPAC's mission is to maintain and promote the goals of professional archaeology in the state of Utah.
- **Utah Rock Art Research Association (URARA):** URARA is the largest non-profit organization dedicated to Utah rock art. URARA members have professional, academic, and avocational interest in Utah rock art. Their mission is to:
  - Lead in the preservation, conservation, and understanding of the value of rock art.

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- Encourage the appreciation and enjoyment of rock art sites.
- Assist in the study, presentation, and publication of rock art research.

- **Utah Statewide Archaeological Society (USAS):** USAS is an organization dedicated to the study and preservation of Utah's past, and was conceived for the individual who is curious about or wants to learn more about archaeology and the state's prehistoric cultures.

IV. Authorities

This MOU is executed pursuant to the following federal authorities: Federal Land Policy and Management Act of 1976; Antiquities Act of 1906; Historic Sites Act of 1935; Federal Property and Administrative Act of 1949; Reservoir Salvage Act of 1960 as amended by the Archaeological and Historic Preservation Act of 1974; National Historic Preservation Act of 1966, as amended; Archaeological Resources Protection Act of 1979; Native American Graves Protection and Repatriation Act of 1990; and the Omnibus Public Lands Management Act of 2009: Paleontological Resources Preservation Act.

SITLA pursuant to Utah Code § 53C-1-302 is authorized through its Director to exercise broad authority in the management of trust resources and to enter into agreements in furtherance of that goal.
Nothing in this MOU alters or supersedes the authorities, standards, and responsibilities of either party on any matter under their respective jurisdictions.

V. Roles and Responsibilities

A. The parties jointly agree that:

1. The number of archaeological, ~~and~~ paleontological, and other natural resources that have been illegally looted and vandalized in Utah is unacceptable. As stewards of our nation's cultural and natural heritage, it is in the best interest of all parties to work together to eliminate these illegal behaviors.
2. Archaeological resources found across Utah are still culturally and religiously significant to many Native American communities today. The looting and vandalism of these resources have real and personal consequences to these Americans, and these illegal behaviors represent blatant disrespect of native cultures.
3. The looting and vandalism of archaeological and paleontological resources represent irreplaceable losses of scientific data that could have expanded our collective understanding of America's cultural and natural history.
4. The looting and vandalism of archaeological and paleontological resources from federal, state, and tribal lands are violations of numerous federal and state laws. Such crimes should be fully investigated, and individuals participating in these illegal behaviors should be prosecuted to the maximum extent allowable by law.
5. The parties provide a wide range of educational, professional development, and volunteer opportunities that complement the goals of the *Respect and Protect* public awareness campaign.

B. Tread Lightly! shall:

1. Invite all parties to participate in quarterly coordination meetings regarding the development and implementation of the *Respect and Protect* public awareness campaign.

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2. When appropriate, establish cost-sharing agreements or other appropriate administrative mechanisms to provide each individual party with the ability to financially contribute towards the development and implementation of the *Respect and Protect* public awareness campaign.
3. Seek private sector funding to support the development and implementation of the *Respect and Protect* public awareness campaign.
4. Create and maintain a *Respect and Protect* website that will serve as a central source for campaign messages, materials, and resources and provide links to the other parties' websites and programs that are relevant to the goals of the *Respect and Protect* public awareness campaign.
5. ~~Create and maintain social media profiles for~~Share ~~the~~ *Respect and Protect* ~~public awareness~~ campaign materials on its various social medium profiles, including but not limited to, ~~profiles on~~ Facebook, YouTube, Tumblr, Twitter, and Instagram, ~~that will~~as well as share the other parties' social media posts that are relevant to the *Respect and Protect* public awareness campaign.
6. Purchase any necessary advertising space for *Respect and Protect* public awareness campaign's marketing efforts, including but not limited to billboards, Google Ad Words, and print and online media advertising opportunities.
7. Allow the parties to purchase *Respect and Protect* promotional and educational items, such as bumper stickers, T-shirts, hats, etc. directly from Tread Lightly!.
8. Create and maintain a quarterly calendar of *Respect and Protect* outreach efforts that encompasses all parties' relevant traditional and social media initiatives and their educational, professional development, and volunteer events.
9. When appropriate, integrate the logos of all parties to this MOU in *Respect and Protect* websites, social media profiles, and other campaign products.
10. When necessary, obtain written permission from the appropriate federal land manager in accordance with Appendix 2 of this MOU prior to releasing any protected information about cultural and/or paleontological resources in support of the *Respect and Protect* public awareness campaign.

C. All other parties shall:

1. Participate in quarterly coordination meetings regarding the development and implementation of the *Respect and Protect* public awareness campaign.
2. When possible, contribute financial resources and/or in-kind services towards the development and implementation of the *Respect and Protect* public awareness campaign.
3. Provide Tread Lightly! with all relevant files, website links, and other data for inclusion on the *Respect and Protect* website and campaign materials, and include reciprocal links to the *Respect and Protect* website on internal websites as appropriate.
4. When appropriate, integrate ~~the~~ Tread Lightly!'s *Respect and Protect* social media ~~profile(s)~~posts and the #respectandprotect hashtag into all internal~~ly generated~~ social media ~~posts~~ outreach that supports the goals of the *Respect and Protect* public awareness campaign.
5. Provide Tread Lightly! with a list of relevant traditional and social media initiatives and educational, professional development, and volunteer events for inclusion in a quarterly calendar of *Respect and Protect* outreach efforts.
6. Integrate the *Respect and Protect* logo and public service announcements into publications, maps, exhibits, trailheads, and other public documents/locations where emphasizing the protection of archaeological and/or paleontological resources in Utah is warranted.
7. Integrate the use of the *Respect and Protect* logo, public service announcements, and promotional and educational items into relevant internal educational, professional development, and volunteer events.

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8. When necessary, obtain written permission from the appropriate federal land manager in accordance with Appendix 2 prior to releasing any protected information about cultural and/or paleontological resources in support of the *Respect and Protect* public awareness campaign.
9. When necessary, facilitate the timely consideration of requests from other parties made in accordance with Appendix 2 to release protected information about cultural and/or paleontological resources in support of the *Respect and Protect* public awareness campaign.

VI. Representatives

The parties' designated representatives as specified in Appendix 1 will ensure coordination during the implementation of this MOU. The parties may change their point of contact at any time by providing a revised Appendix 1 to the other parties. Any revisions will be added to each party's official MOU file.

VII. Funding

A. This MOU shall not obligate any party to expend funds or involve the parties in any contract or other obligations for the payment of money.
B. This MOU is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between the parties to this MOU will be handled in accordance with applicable laws, regulations and procedures, including those for government procurement and printing. This MOU does not establish authority for noncompetitive awards to the parties of any contract or other agreement. Any contract or agreement for other services must fully comply with all applicable requirements for competition.

VIII. Records

Any records or documents generated as a result of this MOU shall become part of each party's official records and maintained in accordance with their applicable records management policies. Any requests for the release of records associated with the implementation of this MOU to anyone besides the parties must be considered by the respective federal or state agency based on applicable laws, including the Freedom of Information Act and Privacy Act and state statutes.

IX. Compliance with Applicable Laws and Regulations; Severability Clause

This MOU is subject to all applicable federal and Utah laws, regulations, and policies, whether in force now or hereafter enacted or promulgated. Nothing in this MOU shall be construed in any way to impair the general powers of the parties under such applicable laws, regulations, and policies. If any term or provision of this MOU is held to be invalid or illegal, such term or provision shall not affect the validity or enforceability of the remaining terms and provisions. Meeting the terms of this MOU shall not excuse any failure to comply with all applicable laws, regulations, and policies, regardless of whether or not these laws and regulations are specifically listed herein.

X. Terms, Amendments, and Termination

A. Term of MOU:
   1. This MOU becomes effective upon the date last signed and executed by the duly authorized representative of the parties to this MOU.

2. This MOU shall remain in effect for five years from the execution date unless terminated, extended, or cancelled prior to the expiration date.

B. Amendments:
   1. The parties may request changes to this MOU, which shall be effective only upon the written agreement of all parties.
   2. Any changes, modification, revisions, or amendments to this MOU shall be incorporated by written instrument, executed and signed by all parties, and will be effective in accordance with the terms and conditions contained therein.

C. Termination:
   1. This MOU may be unilaterally terminated at any time by any one of the federal or state agencies following at least 30 days written notice to the other parties.

XI. Signatures

A. All signatories have the appropriate delegation of authority to sign this MOU.
B. In witness whereof, the parties hereto have executed this MOU on the dates shown below.
C. Additional parties may sign this MOU without the resigning of previous parties. In such cases, the MOU will be revised to include the parties name within the title and introduction on the first page, followed by changes in background section and their contact information in Appendix 1.

Signatures

_____ _____

Casey Snider, Acting Executive Director — Date
Tread Lightly!, Inc.

_____ _____

Edwin Roberson, State Director — Date
Bureau of Land Management, Utah

_____ _____

Jim Ireland, Utah State Coordinator — Date
National Park Service

_____ _____

Nora Rasure, Regional Forester — Date
USFS - Intermountain Region

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_____ _____

P. Bradford Westwood, Director/State Historic Preservation Officer
Utah Department of Arts and Heritage,
Division of State History

Date

_____ _____

John Baza, Director
Utah Department of Natural Resources,
Division of Oil, Gas and Mining

Date

_____ _____

Fred Hayes, Director
Utah Department of Natural Resources,
Division of State Parks

Date

_____ _____

Rick Allis, Director
Utah Department of Natural Resources,
Utah Geological Survey

Date

_____ _____

Kathleen Clarke, Director
Utah Public Lands Policy Coordination Office

Date

_____ _____

Dave Ure, Director
State of Utah School and Institutional Trust Lands Administration

Date

_____ _____

Josh Ewing, Executive Director
Friends of Cedar Mesa

Date

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Bill Biesele, President Utah Friends of Paleontology	Date
Andy Yentch, President Utah Professional Archaeological Council	Date
Steven Acerson, Vice President Utah Rock Art Research Association	Date
Ryan Moreau, President Utah Statewide Archaeological Society	Date

Appendices (3):

- Appendix 1: Designated MOU Party Representatives
- Appendix 2: Safeguarding Site, Locality, and Other Protected Information Regarding Cultural and Paleontological Resources
- Appendix 3: Additional Parties Supporting the Goals of the *Respect and Protect* MOU

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APPENDIX 1: ***DESIGNATED MOU PARTY REPRESENTATIVES***

The principal contacts for implementing this MOU are:

Casey Snider, Acting Executive Director
Tread Lightly!, Inc.
(435) 770-4081
casey@treadlightly.org

Aaron Curtis, Branch Chief for Outdoor and Heritage Resources
BLM Utah State Office
(801) 539-4225
acurtis@blm.gov

Jim Ireland, Utah State Coordinator
National Park Service
(801) 756-5239 x101
jim_ireland@nps.gov

_____
USFS – Intermountain Region

_____
Utah Division of State History

_____
Utah Division of Oil, Gas, and Mining

_____
Utah Division of Parks and Recreation

_____
Utah Geological Survey

David T. Yoder, Archaeologist
Utah Public Lands Policy Coordinating Office
(801) 537-9014
davidyoder@utah.gov

Joel Boomgarden, Staff Archaeologist
State of Utah, School and Institutional Trust Lands Administration
(801) 538-5186
jboomgarden@utah.gov

Josh Ewing, Executive Director
Friends of Cedar Mesa
(435) 414-0343

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josh@cedarmesafriends.org

_____
Utah Friends of Paleontology

_____
Utah Professional Archaeological Council

Diana Acerson, Conservation & Preservation
Utah Rock Art Research Association
(435) 262-7044
dace1950@gmail.com

_____
Utah Statewide Archaeological Society

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APPENDIX 2: *SAFEGUARDING SITE, LOCALITY, AND OTHER PROTECTED INFORMATION REGARDING CULTURAL AND PALEONTOLOGICAL RESOURCES*

I. Applicable Federal Laws

The following public laws limit the disclosure of information to the general public about the nature and location of cultural and paleontological resources located on federally-administered public lands:

A. Archaeological Resource Protection Act of 1979: Section 2(b) states, "The purpose of this Act is to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands…" Section 9(a) states, "Information concerning the nature and location of any archaeological resource… may not be made available to the public… unless the Federal land manager concerned determines that such disclosure would-

(1) Further the purposes of this Act…

(2) Not create a risk of harm to such resources or to the site at which such resources are located."

B. National Historic Preservation Act of 1966, as amended: Section 304 states, "The head of a Federal agency or other public official… shall withhold from disclosure to the public, information about the location, character, or ownership of a historic resource if the Secretary and the agency determine that disclosure may:

1. Cause a significant invasion of privacy;
2. Risk harm to the historic resources; or
3. Impede the use of traditional religious site by practitioners."

C. Paleontological Resources Preservation Act of 2009: Section 6302 tasks federal agencies to, "manage and protect paleontological resources on Federal land using scientific principles and expertise. The Secretary shall develop appropriate plans for inventory, monitoring, and the scientific and education use of paleontological resources… These plans shall emphasize interagency coordination and collaborative efforts where possible with non-Federal partners, the scientific community, and the general public." Section 6309 states, "Information concerning the nature and specific location of a paleontological resource shall be exempt from disclosure… unless the Secretary determines that disclosure would:

1. Further the purposes of this subtitle;
2. Not create risk of harm to or theft or destruction of the resource or the site containing the resource; and
3. Be in accordance with other applicable laws."

II. Disclosing Protected Information

To ensure conformance with these laws, ~~A~~all parties must ~~ensure compliance~~comply with this MOU appendix prior to disclosing any protected information about cultural and/or paleontological resources on federal lands to the general public in support of the *Respect and Protect* public awareness campaign.

A. When Prior Permission by the Federal Land Manager is Not Required

In situations where the federal land management agency has already disclosed protected information about the cultural or paleontological resource to the general public, such as on a public website or brochure that encourages public visitation, no prior permission from the federal land manager will be necessary. In instances where there is still some question as to whether this condition applies, prior written permission to disclose the protected information from the federal land manager must be obtained in accordance with Section II.B of this appendix.

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B. When Prior Permission by the Federal Land Manager is Required

In all situations where Section II.A of this appendix does not apply, all parties must first obtain written permission from the appropriate federal land manager with jurisdiction over the cultural or paleontological resource prior to disclosing protected information to the general public in support of the *Respect and Protect* public awareness campaign. For example, if a party would like to create a social media post that would disclose protected information about a cultural resource located on BLM lands administered by the BLM Fillmore Field Office, the party must first obtain written permission from the BLM Fillmore Field Manager. Each party's designated MOU representative identified in Appendix 1 will facilitate the parties' request in a timely manner. Requests and approvals must be submitted in writing via letter or email, and requests may include the following language:

> *Dear Federal Land Manager:*
>
> *As a party to the Respect and Protect MOU, I am requesting to release statutorily-protected information about the _____ cultural/paleontological resource located within your jurisdiction to the general public. Our agency/organization would like to include information about the nature/location of the _____ cultural/paleontological resource to the public through a social media post/website/brochure/educational event. The disclosure of this information will integrate ethical messages about visiting archaeological/paleontological resources that are included in the Respect and Protect public awareness campaign, and as such, our agency/organization believes that the disclosure of this information will not create a risk of harm, theft, or destruction of the resource and will further our collective efforts to protect archaeological/paleontological resources in Utah.*

C. Other Arrangements by the Parties

Nothing in this MOU precludes any of the parties' ability to enter into other agreements with each other related to the public release of protected cultural and/or paleontological resource information.

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APPENDIX 3: ***ADDITIONAL PARTIES SUPPORTING THE GOALS OF THE RESPECT AND PROTECT MOU***

The following parties do not maintain an organizational structure that support their ability to officially sign a memorandum of understanding with government agencies, nevertheless, the following parties will hereby support the goals included in this agreement:

_____ _____

Name, Title
Agency or Organization

Date

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From:	Nelson, Michael
To:	Chris Robinson
Cc:	Bailey, Travis (Salt Lake City); Rod Thompson; Jerry M. Houghton; Mark Nelsen; Blaine Gehring; Shawn Milne; Wade Bitner; Myron Bateman; LAWRENCE Judd; Lance Kippen <lkippen@up.com>; Vicky Doehring2; Eric Cheng (echeng@utah.gov); William Jaramillo
Subject:	Re: Foothill Drive Railroad Crossing Discussion
Date:	Thursday, April 20, 2017 9:56:05 AM

Yes, we can host the meeting on Monday at 3:00 pm. I will reserve a room.

On Thu, Apr 20, 2017 at 7:43 AM, Chris Robinson <crobinson@theensigngroup.com> wrote:

Travis,

I understand UDOT's position and it makes sense. The primary purpose for this meeting on Monday was to discuss the selection and scope of work for an environmental consultant to help with the NEPA process. At this point, the only "federal action" that we have is obtaining the BLM FLPMA Title V right-of-way from BLM. The County has signed and submitted to BLM the Form 299 seeking the ROW, but to expedite it, I need to hire a consultant.

All,

For those interested, I would still like to have a meeting on Monday at 3:00 pm at BLM's West Desert District Offices in SLC to discuss the ROW, hiring a consultant, and next steps. This ROW from BLM is the critical path.

Mike Nelson,

Does that work for you?

Judd,

Could you please forward to us your construction drawings and bid schedule for Roads A & B (which reconnect Foothill using the new railroad crossing)?

Thanks,

Chris
801-599-4397

From: Travis Bailey <travis.bailey@aecom.com>
Date: Wednesday, April 19, 2017 at 4:31 PM
To: Rodney Thompson <rthompson@tooeleco.org>
Cc: Jerry HOUGHTON <jhoughton@tooeleco.org>, Mark Nelsen <mnelsen@tooeleco.org>, Blaine Gehring <bgehring@tooeleco.org>, Shawn Milne <smilne@tooeleco.org>, Wade Bitner <wbitner@tooeleco.org>, Myron Bateman <mbateman@tooeleco.org>, Judd LAWRENCE <jlawrence@binghamnet.com>, Christopher Robinson <crobinson@theensigngroup.com>, Lance Kippen <lkippen@up.com>, Vicky Doehring2 <vdoehring2@utah.gov>, Eric Cheng <echeng@utah.gov>, Michael G NELSON <mnelson@blm.gov>, Willie JARAMILLO <wjaramillo@tooeleco.org>
Subject: RE: Foothill Drive Railroad Crossing Discussion

Rod,

UDOT's attorney has reviewed the agreement sent by Chris Robinson and determined that UDOT does not need to be a party in the agreement nor can UDOT be bound by the terms of the agreement. UDOT will following

its normal process for installing lights and gates at a crossing. We need the County to send a letter to Eric Cheng, with a concept plan for the proposed crossing attached, stating that the County approves the proposed location of the crossing and intends to take ownership of the proposed roadway. We will respond with a letter and begin coordination with Union Pacific to get the lights and gates installed. I am cancelling the meeting we had scheduled for Monday.

As a side note, before the proposed crossing can be opened the County will need to provide metes and bounds for the right-of-way through the proposed railroad crossing to Union Pacific.

Thanks,

Travis C Bailey, PE
D 1.801.904.4178
C 1.801.550.8037

-----Original Appointment-----
From: Bailey, Travis (Salt Lake City)
Sent: Tuesday, April 18, 2017 8:31 PM
To: Bailey, Travis (Salt Lake City); Lance Kippen <lkippen@up.com>; Vicky Doehring2; Eric Cheng (echeng@utah.gov); NELSON Michael G; William Jaramillo; Rod Thompson; Jerry M. Houghton; Mark Nelsen; Blaine Gehring; Shawn Milne; Wade Bitner; Myron Bateman; LAWRENCE Judd; Chris Robinson
Subject: Foothill Drive Railroad Crossing Discussion
When: Monday, April 24, 2017 3:00 PM-4:00 PM (UTC-07:00) Mountain Time (US & Canada).
Where: 4501 2700 W, West Valley City, UT 84119; Program Development Conference Room, 3rd Floor

<< File: Road Dedication Agreement CFR Draft 4 8 2017 w Ex's.pdf >> << File: Road Dedication Agreement CFR Draft 4 8 2017.docx >>

--

Michael G. Nelson
Assistant Field Manager, Nonrenewable Resources

BLM Salt Lake Field Office
2370 South Decker Lake Blvd.
West Valley City, UT 84119
801 977-4355

From:	Spotts, Richard
To:	Phil Hanceford; scott@suwa.org; Terri Martin; Dave Pacheco; davidr@suwa.org; kim@grandcanyonwildlands.org; kelly@grandcanyonwildlands.org; Katie Davis; mark.clemens@sierraclub.org; utah.chapter@sierraclub.org; Michael Kellett; (b) (6) - Steve Erickson; wildutah@xmission.com; Utah Native Plant Society; joro.walker@westernresources.org; Roger Clark; eaumack@grandcanyontrust.org; Tim Peterson; mobrien@grandcanyontrust.org; Kieran Suckling; rspivak@biologicaldiversity.org; Rob Mrowka; Susan Crook; Tom Butine; Jane Whalen; Arthur Haines; bluesage10(b) (6) Dave Ribacchi; utahsmalls@msn.com; Kathleen Harcksen; eyork@tnc.org; lisa(b) (6) Chris Gorzalski; Iris Picat; friendsofgoldbutte@gmail.com; Tony Barron; nada_culver@tws.org; Christine Albano; Samantha Hammer; Sandy Bahr; alicyn.gitlin@sierraclub.org; Sara Vickerman Gage; admin@sonorandesert.org; RRomero@biologicaldiversity.org; Greta Anderson; Ed LaRue; Glenn Stewart; Kristin Berry; Kirk Robinson; Pete Woodman; ianderson@biologicaldiversity.org; Northern Jaguar Project
Subject:	FYI - National Monuments: Trump orders crackdown on "abusive" land protections & Bishop vows bills aimed at Bears Ears, "damn" Antiquities Act
Date:	Wednesday, April 26, 2017 2:52:49 PM
Attachments:	Antiquities Act Executive Order.pdf

FYI - If you have not already seen them, you may find the two related articles below of interest. President Trump's executive order on the Antiquities Act is also attached. RS

NATIONAL MONUMENTS

Trump orders crackdown on 'abusive' land protections

Jennifer Yachnin, E&E News reporter

Published: Wednesday, April 26, 2017



President Trump signed an executive order on the Antiquities Act at the Interior Department's

headquarters today. Photo courtesy of the White House.

President Trump today vowed to end the "abusive practice" of establishing national monuments under the Antiquities Act, signing an executive order that will require the Interior Department to review the boundaries of dozens of sites designated within the last two decades.

As anticipated, Trump's executive order will mandate Interior Secretary Ryan Zinke to lead a review of monuments created since 1996 that comprise at least 100,000 acres.

The review, which will include an initial report focused exclusively on Bears Ears National Monument in Utah within 45 days, will ultimately recommend whether the president should rescind, resize or modify the management of about 30 monuments. A final report is due within 120 days.

"It's time we ended this abusive practice," Trump said during a signing ceremony at the Interior Department today. Although the president may only designate existing federal lands for monument status, Trump added that he is "gravely concerned about this massive federal land grab."

"It's gotten worse and worse and worse, and now we're going to free it up, which is what should have happened in the first place," he said.

Utah state and congressional Republican lawmakers have actively pushed Trump to address the 1.35-million-acre Bears Ears monument, which President Obama designated in his final weeks in office. Republicans in the state had lobbied against the monument status, arguing instead in favor of a legislative designation known as the Utah Public Lands Initiative.

"The previous administration used a 100-year-old law known as the Antiquities Act to unilaterally put millions of acres of land and water under strict federal control ... eliminating the ability of the people who actually live in those states to actually decide how best to use that land," Trump said.

Trump, who was joined by officials including Utah Gov. Gary Herbert (R), credited Utah GOP Sens. Orrin Hatch and Mike Lee for urging him to sign the executive order with their "never-ending prodding."

During introductory remarks, Zinke vowed that the executive order would not eliminate any monument designations or weaken environmental protections, even as he criticized unspecified monument designations for placing lands "off limits to public access for grazing, fishing, mining, multiple use and even outdoor recreation."

The former Montana lawmaker also emphasized in his remarks that the monuments should conform to the "smallest area" possible, suggesting the final review could aim to slash the size of numerous sites.

"Despite this clear directive, 'smallest area' has often become the exception rather than the rule," Zinke said.

Swift defense

Despite Zinke's vow that the executive order will not immediately remove any monument

designations, conservationists warned that the review is a thinly veiled "giveaway" to fossil fuel producers.

"The clear but unstated goal of Trump's executive order is to remove existing protections on Americans' public lands by shrinking monument boundaries," said Chris Krupp of WildEarth Guardians. "The order is a gift to the coal, oil and gas industries, who will quickly start looking at digging and drilling on public lands that will no longer be protected after boundaries are redrawn."

Similarly, National Wildlife Federation President and CEO Collin O'Mara warned that the review will amount to "a death-by-a-thousands-cut approach" to monument sites.

"The very things that make places like Bears Ears, Rio Grande del Norte, Papahanaumokuakea and Browns Canyon so special could be in jeopardy if important fish and wildlife habitat, archaeological treasures and waterways are carved out of the monuments and left unprotected," O'Mara said.

Proponents of federal land protections also disputed Zinke's assertions that recent designations under the Antiquities Act have failed to take into account input from local officials and communities.

"Eliminating or shrinking the 55 national monuments designated during the last 21 years would short-circuit the will of local residents, hunters, anglers, business owners and recreationists who campaigned, in some cases for decades, for these monument designations," O'Mara said.

Former Interior Secretary Sally Jewell expressed confidence in an interview with *The Salt Lake Tribune* yesterday that the Trump administration's review would have difficulty undoing the Bears Ears designation in particular.

"I am very confident our work will stand the test of time," she said, and later added: "There is no question in my mind that the land that was set aside for these monuments was legitimate and appropriate in the spirit of the Antiquities Act. It's fair to say, as we have learned more about habitat and the importance of connected habitat and landscapes more broadly. The area needed to protect these resources has also expanded."

Jewell also slammed suggestions from Bishop and others that the Obama administration had not kept lawmakers informed about its decision to designate the monument in late December.

"Every member of [Utah's] delegation and governor's office knew for years we would use the Antiquities Act by the end of the Obama administration if they were not successful getting legislation passed. None of this was a surprise," Jewell said.

Advocates of reducing the federal estate including the American Lands Council praised the new executive order, asserting it serves as a "double-check on past, present, and future presidential authority."

"The increasingly massive acreages that have been unilaterally placed under 'national monument' designations calls attention to the need to restore a sensible process for protecting important cultural resources while preventing abuse of power," said ALC CEO Jennifer Fielder, who is also a Montana state senator. "We applaud President Trump for recognizing the importance of applying the Antiquities Act appropriately and taking steps to stop it from being

used as a tool to threaten Western states and arbitrarily lock the public out of millions of acres of our public lands."

Lawsuits, legislation coming

It remains to be seen whether Trump will attempt to ultimately reduce the boundaries of monuments himself — as past presidents have done — or look to Congress to address changes via legislation.

While Congress itself can act to eliminate a monument, it has done so fewer than a dozen times since the law's creation in 1906, more often opting to convert areas to national parks.

But conservationists said any effort by Trump to take executive action will result in likely legal challenges.

While former presidents have diminished the size of monuments, including major reductions to the former Mount Olympus National Monument in Washington state and the Grand Canyon II National Monument, none of those decisions faced litigation. No president has attempted to reduce the size of a monument since President Kennedy in 1963.

"This review is a first step toward monument rollbacks, which we will fight all the way. The president does not have the authority to reverse monument designations, and the public supports protection of public lands," said Natural Resources Defense Council President Rhea Suh.

Conservationists also point to a recent Colorado College State of the Rockies Project poll that showed residents in seven Western states broadly in favor of existing monuments (*E&E News PM*, Jan. 31).

Earthjustice attorney Heidi McIntosh likewise suggested a "huge battle" should the Trump administration ultimately attempt to roll back any monument boundaries or designations.

"This is shaping up to be an unprecedented attack on national monuments, which have protected some of the most popular landscapes in America, and these national monuments have protected places of not only great scenic beauty but cultural importance," McIntosh said. "They're poking a hornet's nest."

She also asserted that "it's pretty clear [Trump] doesn't understand the Antiquities Act, its purpose or the case law that supports its use for large monuments."

Zinke in previewing the executive order last night acknowledged it remains unclear whether the administration has the legal authority to rescind monuments. "I'm not scared of getting sued," he said (*Greenwire*, April 25).

Republicans and Democrats could very well find common ground on reforming the Antiquities Act, said Rep. Colleen Hanabusa (D-Hawaii) today, particularly if the executive order review focuses on soliciting public feedback and transparency.

"How successful we all may be on this is going to rest, I think, with the secretary," said the top Democrat on the Natural Resources Federal Lands Subcommittee. Hanabusa, who did not serve with Zinke when he was in Congress, said that the Democrats she has talked to "have

positive feelings about him," adding that, "if people feel you can be fair and do that analysis, that's the most critical part. And that's what I've heard about the secretary."

Hanabusa said she also expects Zinke to come before the committee soon to discuss the review.

But Arizona Rep. Raúl Grijalva, the top Democrat on the Natural Resources Committee, asserted that the review process would likely only prove the popularity of public lands.

"Attempting to wipe national monuments off the map with the stroke of a pen would be illegal and unpopular, and this review will show as much," he said. "If done in good faith, this review will lead President Trump and Secretary Zinke to see these wonderful places as the American people see them: as sources of national pride and engines for local economic development."

Reporter Kellie Lunney contributed.

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PUBLIC LANDS

Bishop vows bills aimed at Bears Ears, 'damn' Antiquities Act

Corbin Hiar, Kellie Lunney and Jennifer Yachnin, E&E News reporters

Published: Wednesday, April 26, 2017



House Natural Resources Chairman Rob Bishop (R-Utah) still plans to pursue legislation to overhaul the Antiquities Act. Photo courtesy of House Committee on Natural Resources via Facebook.

House Natural Resources Chairman Rob Bishop yesterday vowed to push legislation this congressional session "right-sizing" the Bears Ears National Monument and overhauling the century-old law President Obama used to create it.

"You can't modernize the act administratively," the Utah Republican said. "All things should be done legislatively, including the damn Antiquities Act."

His comments came in response to news that President Trump will sign an executive order today calling for a review of the Antiquities Act and dozens of national monuments that were created by his predecessors in the past two decades — beginning with the controversial 1.35-million-acre Bears Ears monument (*Greenwire*, April 25).

Bishop is a longtime critic of the power the Antiquities Act grants to presidents to unilaterally protect vast swaths of land and water without the approval of Congress or local officials. As a result, he welcomed the upcoming executive order's 120-day review of the law and monuments it has enabled, which will culminate in recommendations from Interior Secretary Ryan Zinke to rescind, resize or modify the management of some 30 monuments created since 1996 that are more than 100,000 acres in size.

The order "does what the past administration should have done," he said. "Talk to real people who live in the [affected] communities and not just special out-of-state interest groups."

Sen. Steve Daines (R-Mont.), who will be at the order-signing ceremony this morning along with Bishop, said the most important thing about the order is that it will create "a process that respects the input of local stakeholders." He added, "The current process does not."

But enacting the legislative changes Zinke eventually recommends or enacting a law to shrink the size of Bears Ears will remain a challenge for Bishop and other critics of the Antiquities Act.

"We've had this vote before [on overhauling the law], and it didn't go through the Senate," said Sen. Maria Cantwell (D-Wash.), the ranking member on the Energy and Natural Resources Committee. "And there are more Democrats now, not less, than when we had the vote last time."

Other Democratic lawmakers have already warned that the review and legislative reform effort could prompt a major backlash.

"If this sweeping review is actually an excuse to cut out the public and to target these incredible landscapes for elimination or for scaling back the protections that exist there, I think this president is going to find a very resistant public," Sen. Martin Heinrich (D-N.M.) said on a call with conservation groups. "Any actions taken on behalf of designating or undesignating these national monuments should be part of a conversation with the American public."

He added, "If this president really wants to make America great, he will use the Antiquities Act the way that previous Republican and Democratic administrations have: to protect some of our greatest public assets."

'Untested' grounds

While Congress itself can act to eliminate a monument, it has done so fewer than a dozen times since the law's creation in 1906, more often opting to convert areas to national parks.

Bishop and other Republicans contend that the president could opt to rescind or reduce the boundaries of a monument through executive action, utilizing the Antiquities Act just as previous presidents have done to create monuments.

But no commander in chief has ever sought to reverse the designations of his predecessors, as Zinke acknowledged at last night's White House press briefing.

"It is untested ... whether the president can do that," he said of rescinding a monument.

University of Colorado Natural Resources Law Center Director Mark Squillace, who has studied the Antiquities Act, suggested on the conservationists' call that the president would be in violation of the Constitution's property clause if he were to attempt to do so.

"This language clearly does not include any authority to rescind or modify a national monument," he added of the Antiquities Act, noting that only Congress has that authority under the Constitution.

While former presidents have diminished the size of monuments — most notably the former Mount Olympus National Monument in Washington state and the Grand Canyon II National Monument — Squillace noted that none of those actions has ever faced legal challenges.

"No one ever litigated any of these reductions in the monument size. And so we don't actually have any decision from any courts as to the legality of this," he said.

Before its conversion into Olympic National Park in 1938, Mount Olympus faced three rounds of reductions, including one by President Wilson that nearly halved its acreage. That action occurred in 1915, when Wilson cited the need for timber for airplanes and other projects related to World War I.

Squillace also suggested that while previous presidents may have had the ability to amend monuments, the creation of the subsequent statutes would have overridden that ability.

"The language in the Federal Land Policy and Management Act in 1976 would seem to suggest that whatever authority a president might have had to revoke or modify a monument is now gone because FLPMA was enacted after the most recent decision," Squillace said, pointing to a reduction made by then-President Eisenhower. Bureau of Land Management records show President Kennedy made reductions through 1963.

Christy Goldfuss, the Center for American Progress Action Fund's vice president for energy and environment policy, noted on the call that while former Interior Secretary Gale Norton reviewed monuments created under the Clinton administration in the early days of President George W. Bush's administration, no major changes were ultimately made.

At the time, Norton wrote to local officials seeking input on how land uses should be accommodated in areas like Grand Staircase-Escalate National Monument and asked to hear concerns about issues like off-highway vehicle access and grazing.

"I want to hear local voices and ideas on how to protect, use and care for these precious national treasures for generations to come," Norton wrote in a letter widely quoted at the time.

Twitter: @corbinhiar Email: chiar@eenews.net

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
April 26, 2017

EXECUTIVE ORDER

- - - - - - -

REVIEW OF DESIGNATIONS UNDER THE ANTIQUITIES ACT

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in recognition of the importance of the Nation's wealth of natural resources to American workers and the American economy, it is hereby ordered as follows:

Section 1. Policy. Designations of national monuments under the Antiquities Act of 1906, recently recodified at sections 320301 to 320303 of title 54, United States Code (the "Antiquities Act" or "Act"), have a substantial impact on the management of Federal lands and the use and enjoyment of neighboring lands. Such designations are a means of stewarding America's natural resources, protecting America's natural beauty, and preserving America's historic places. Monument designations that result from a lack of public outreach and proper coordination with State, tribal, and local officials and other relevant stakeholders may also create barriers to achieving energy independence, restrict public access to and use of Federal lands, burden State, tribal, and local governments, and otherwise curtail economic growth. Designations should be made in accordance with the requirements and original objectives of the Act and appropriately balance the protection of landmarks, structures, and objects against the appropriate use of Federal lands and the effects on surrounding lands and communities.

Sec. 2. Review of National Monument Designations. (a) The Secretary of the Interior (Secretary) shall conduct a review of all Presidential designations or expansions of designations under the Antiquities Act made since January 1, 1996, where the designation covers more than 100,000 acres, where the designation after expansion covers more than 100,000 acres, or where the Secretary determines that the designation or expansion was made without adequate public outreach and coordination with relevant stakeholders, to determine whether each designation or expansion conforms to the policy set forth in section 1 of this order. In making those determinations, the Secretary shall consider:

(i) the requirements and original objectives of the Act, including the Act's requirement that reservations of land not exceed "the smallest area compatible with the proper care and management of the objects to be protected";

(ii) whether designated lands are appropriately classified under the Act as "historic landmarks, historic and prehistoric structures, [or] other objects of historic or scientific interest";

(iii) the effects of a designation on the available uses of designated Federal lands, including consideration of the multiple-use policy of section 102(a)(7) of the Federal Land Policy and Management Act (43 U.S.C. 1701(a)(7)), as well as the effects on the available uses of Federal lands beyond the monument boundaries;

(iv) the effects of a designation on the use and enjoyment of non-Federal lands within or beyond monument boundaries;

(v) concerns of State, tribal, and local governments affected by a designation, including the economic development and fiscal condition of affected States, tribes, and localities;

(vi) the availability of Federal resources to properly manage designated areas; and

(vii) such other factors as the Secretary deems appropriate.

(b) In conducting the review described in subsection (a) of this section, the Secretary shall consult and coordinate with, as appropriate, the Secretary of Defense, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Energy, the Secretary of Homeland Security, and the heads of any other executive departments or agencies concerned with areas designated under the Act.

(c) In conducting the review described in subsection (a) of this section, the Secretary shall, as appropriate, consult and coordinate with the Governors of States affected by monument designations or other relevant officials of affected State, tribal, and local governments.

(d) Within 45 days of the date of this order, the Secretary shall provide an interim report to the President, through the Director of the Office of Management and Budget, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chairman of the Council on Environmental Quality, summarizing the findings of the review described in subsection (a) of this section with respect to Proclamation 9558 of December 28, 2016 (Establishment of the Bears Ears National Monument), and such other designations as the Secretary determines to be appropriate for inclusion in the interim report. For those designations, the interim report shall include recommendations for such Presidential actions,

legislative proposals, or other actions consistent with law as the Secretary may consider appropriate to carry out the policy set forth in section 1 of this order.

(e) Within 120 days of the date of this order, the Secretary shall provide a final report to the President, through the Director of the Office of Management and Budget, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chairman of the Council on Environmental Quality, summarizing the findings of the review described in subsection (a) of this section. The final report shall include recommendations for such Presidential actions, legislative proposals, or other actions consistent with law as the Secretary may consider appropriate to carry out the policy set forth in section 1 of this order.

Sec. 3. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
April 26, 2017.

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From: Boyd, David
To: David Boyd
Subject: News Release: BLM evaluating oil and gas leasing proposals in Garfield and Mesa counties
Date: Thursday, May 11, 2017 3:17:36 PM
Attachments: Dec 17 lease DNA nr 5-11-17.pdf

News Release
Grand Junction Field Office, Colorado

May 11, 2017

Contact: David Boyd, Public Affairs Specialist, (970) 876-9008
Christopher B Joyner, Public Affairs Specialist, (970) 244-3097

BLM evaluating oil and gas leasing proposals in Garfield and Mesa counties

GRAND JUNCTION, Colo. – The Bureau of Land Management is seeking public comments on a proposal to offer 28 parcels totaling about 27,280 acres of federal minerals in northwestern Colorado in the December 2017 competitive oil and gas lease sale.

Maps and lease stipulations are available for review at http://bit.ly/2qx0Mdo.

“The most effective comments will address issues and concerns specific to these parcels being considered,” said BLM Grand Junction Field Manager Katie Stevens.

The proposal includes 4,975 acres in western Garfield County and 22,308 acres in various locations in Mesa County.

Comments need to be received by June 9, 2017. They should be e-mailed to blm_co_december_2017_lease_sa@blm.gov, or mailed to the Bureau of Land Management, Attn: Dec 2017 Lease Sale, 220 E. Market St., Meeker, CO 81641.

The State of Colorado receives 49 percent of the proceeds from each mineral lease sale and from mineral royalties, with the remainder going to the U.S. government. In Fiscal Year 2015, Colorado received about $247 million from royalties, rentals and bonus bid payments for all federal minerals, including oil and gas. Statewide, more than 22,900 jobs are tied to mineral and energy development on public lands.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

# # #

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David Boyd

Bureau of Land Management

Public Affairs Specialist

NW Colorado District

2300 River Frontage Road

Silt, CO 81652

(970) 876-9008
(970) 319-4130 (cell)

U.S. Department of the Interior
Bureau of Land Management

News Release

Grand Junction Field Office, Colorado

May 11, 2017

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# # #

From: Laura King
To: NM_FOIA@blm.gov
Cc: "Jeremy Nichols"; "Erik Schlenker-Goodrich"
Subject: FOIA Request
Date: Monday, May 22, 2017 6:37:14 PM
Attachments: FOIA Request_Trump EO and Zinke SO Farmington and Carlsbad FOs and NM SO.pdf

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Dear Ms. Chavez,

On behalf of WildEarth Guardians, I submit the attached FOIA request for records related to Executive Order 13783 and Secretarial Order 3349 from the BLM's Farmington and Carlsbad Field Offices and the BLM New Mexico State Office. This request will also be arriving by certified mail, return receipt requested. We look forward to your determination on this request and the associated fee waiver request within FOIA's 20-day determination deadline.

Please let me know if you have any questions or if I can be of any assistance in the processing of this FOIA request.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

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Defending the West www.westernlaw.org

May 22, 2017

Sent via Email and USPS Certified Mail Return Receipt Requested

Eileen Chavez
FOIA Officer
1474 Rodeo Road
P.O. Box 27115
Santa Fe, NM 87502-0115
505-438-7636
FAX 505-438-7432
NM_FOIA@blm.gov

FREEDOM OF INFORMATION ACT REQUEST

Dear Ms. Chavez:

This is a request under the Freedom of Information Act (FOIA), 5 U.S.C. § 552, as amended. I make this request on behalf of WildEarth Guardians ("Guardians") for the following records from the Bureau of Land Management's Farmington and Carlsbad Field Offices and the Bureau of Land Management's New Mexico State Office:

- All agency records produced by the Bureau of Land Management's Farmington and Carlsbad Field Offices and the Bureau of Land Management's New Mexico State Office in the course of complying with Executive Order No. 13783, "Promoting Energy Independence and Economic Growth," which was published on March 28, 2017.
- All agency records produced by the Bureau of Land Management's Farmington and Carlsbad Field Offices and the Bureau of Land Management's New Mexico State Office in the course of complying with Secretarial Order No. 3349, "American Energy Independence," which was published on March 29, 2017, under Secretary of the Interior Ryan Zinke.

For purposes of this request, "agency records" is consistent with the meaning of the term under FOIA. This includes, but is not limited to, documents of any kind including electronic as well as paper documents, emails, writings (handwritten, typed, electronic or otherwise produced, reproduced, or stored), correspondence, letters, memoranda, reports, consultations, notes, recordings, telephone conversation recordings, voice mails, telephone logs, messages, instant

messages, G-chats, text messages, chats, telefaxes, photographs, videos, meeting notes or minutes, and electronic and magnetic recordings of meetings. All of the foregoing is included in this request if it is in BLM's possession and control. If such recordings are no longer under the control of BLM but were at any time, please refer this request to the relevant federal agency or agencies.

This request is not meant to exclude any other records that, although not specially requested, are reasonably related to the subject matter of this request. Please provide responsive records in digital format whenever possible.

*** * ***

Please identify and inform us of all responsive or potentially responsive records within 20 working days as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i), and the basis of any claimed exemptions or privilege, including the specific responsive or potentially responsive records(s) to which such exemption or privilege may apply. *See Citizens for Responsibility and Ethics in Washington v. Federal Election Com'n*, 711 F.3d 180, 182-183 (D.C. Cir. 2013) (holding that the agency must identify the exemptions it will claim with respect to any withheld documents within the time frame prescribed by FOIA). The Supreme Court has stated that FOIA establishes a "strong presumption in favor of disclosure" of requested information, and that the burden is on the government to substantiate why information may not be released under FOIA's limited exemptions. *Department of State v. Ray*, 502 U.S. 164, 173 (1991). Congress affirmed these tenets of FOIA in legislation as recently as December 2007, stating that government remains accessible to the American people and "is always based not upon the 'need to know' but upon the fundamental 'right to know.'" Public Law 110-175, 121 Stat. 2524, 2525 (Dec. 31, 2007).

If your office takes the position that any portion of the requested records is exempt from disclosure, we request that you provide us with an index of those records as required under *Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973), with sufficient specificity "to permit a reasoned judgment as to whether the material is actually exempt under FOIA." *Founding Church of Scientology v. Bell*, 603 F.2d 945, 959 (D.C. Cir. 1979). A *Vaughn* index must (1) identify each document or portion of document withheld; (2) state the statutory exemption claimed; and (3) explain how disclosure of the document or portion of document would damage the interests protected by the claimed exemption. *See Citizens Comm'n on Human Rights v. FDA*, 45 F.3d 1325, 1326 n.1 (9th Cir. 1995). "The description and explanation the agency offers should reveal as much detail as possible as to the nature of the document," in order to provide "the requestor with a realistic opportunity to challenge the agency's decision." *Oglesby v. U.S. Dept. of Army*, 79 F.3d 1172, 1176 (D.C. Cir. 1996). Such explanation will be helpful in deciding whether to appeal a decision to withhold documents and may help to avoid unnecessary litigation.

In the event that some portions of the requested records are properly exempt from disclosure, please disclose any reasonably segregable, non-exempt portions of the requested records. *See* 5 U.S.C. §552(b). If it is your position that a document contains non-exempt segments and that those non-exempt segments are so dispersed throughout the documents as to make segregation impossible, please state what portion of the document is non-exempt and how

the material is dispersed through the document. *See Mead Data Central v. U.S. Department of the Air Force*, 455 F.2d 242, 261 (D.C. Cir. 1977). Claims of non-segregability must be made with the same detail as required for claims of exemption in a *Vaughn* index. If a request is denied in whole, please state specifically that it is not reasonable to segregate portions of the record for release.

FOIA requires federal agencies to make their records "promptly available" to any person who makes a proper request for them. 5 U.S.C. § 552(a)(3)(A) (as amended by OPEN Government Act of 2007, Pub. L. No. 110-175, 121 Stat. 2524).

Presumption of Openness and "Foreseeable Harm" Standard

On his first full day in office President Obama demonstrated his commitment to the ideals of transparency and openness by issuing a Memorandum to the heads of all Executive Branch Departments and agencies by calling on them to "renew their commitment to the principles embodied in FOIA." *See* Presidential Memorandum for Heads of Executive Departments and Agencies Concerning the FOIA, 74 Fed. Reg. 4683 (Jan. 21, 2009). The President directed all agencies to administer the FOIA with a clear presumption in favor of disclosure, to resolve doubts in favor of openness, and to not withhold information based on "speculative or abstract fears." *Id.* In addition, the President called on agencies to ensure that requests are responded to in "a spirit of cooperation," that disclosures are timely made, and that modern technology is used to make information available to the public even before a request is made. *Id.*

In accordance with the President's directives, on March 19, 2009, Attorney General Holder issued new FOIA guidelines, calling on all agencies to reaffirm the government's "commitment to accountability and transparency." Memorandum from Att'y Gen. Eric Holder for Heads of Executive Departments and Agencies (Mar. 19, 2009), *available at* http://www.justice.gov/ag/foia-memo-march2009.pdf. The Guidelines stress that the FOIA is to be administered with the presumption of openness called for by the President. *Id*. at p. 1.

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In issuing these new guidelines, Attorney General Holder established a new "foreseeable harm" standard for defending agency decisions to withhold information. Under this new standard, the U.S. Department of Justice will defend an agency's denial of a FOIA request "only if (1) the agency reasonably foresees that disclosure would harm an interest protected by one of the statutory exemptions, or (2) disclosure is prohibited by law." *Id*. As a result, "agencies must now include the 'foreseeable harm' standard as part of the FOIA analysis at the initial request stage and the administrative appeal stage." Department of Justice Guide to the FOIA (2009), p. 25, available at http://www.justice.gov/oip/foia_guide09.htm.

Request for Fee Waiver

FOIA was designed to grant a broad right of access to government information, with a focus on the public's "right to be informed about what their government is up to," thereby "open[ing] agency action to the light of public scrutiny." *U.S. Dep't of Justice v. Reporters Comm. for Freedom of Press*, 489 U.S. 749, 773-74 (1989) (internal quotation and citations omitted). A key component of providing public access to those records is FOIA's fee waiver provision, 5 U.S.C. § 552(a)(4)(A)(iii), which provides that "[d]ocuments shall be furnished without any charge or at a [reduced] charge . . . if disclosure of the information is in the public interest because it is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester."

FOIA's fee waiver requirement is to be "liberally construed." *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003); *Forest Guardians v. U.S. Dept. of Interior*, 416 F.3d 1173, 1178 (10th Cir. 2005). The fee waiver amendments of 1986 were designed specifically to provide organizations such as Guardians access to government documents without the payment of fees. As one Senator stated, "[a]gencies should not be allowed to use fees as an offensive weapon against requesters seeking access to Government information . . ." 132 Cong. Rec. S. 14298 (statement of Senator Leahy). Indeed, FOIA's waiver provision was intended "to prevent government agencies from using high fees to discourage certain types of requesters and requests, in clear reference to requests from journalists, scholars, and . . . non-profit public interest groups." *Better Gov't Ass'n v. Dep't of State*, 780 F.2d 86, 93-94 (D.C. Cir. 1986) (quoting *Ettlinger v. FBI*, 596 F. Supp. 867, 876 (D. Mass. 1984)).

Guardians, a non-commercial and public-interest requester, hereby requests a waiver of all fees associated with this request because disclosure "is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester." 5 U.S.C. § 552(a)(4)(A)(iii); *see also* 43 C.F.R § 2.45. This request satisfies both statutory and regulatory requirements for granting a fee waiver, including fees for search, review, and duplication.[1] Below, stated first in bold, are the criteria the BLM considers in assessing requests for fee waivers, followed by an explanation of Guardians' satisfaction of those requirements. *See* 43 C.F.R § 2.48.[2] Fee waiver requests must be evaluated based on the face of the request. *See Citizens for Responsibility & Ethics in Washington v. U.S. Dep't of Justice*, 602 F. Supp. 2d 121, 125 (D.D.C. 2009).

(1) The subject of Guardians' request concerns identifiable operations or activities of the Federal Government:

The subject matter of the requested records directly and specifically concerns identifiable

[1] Pursuant to FOIA, 5 U.S.C. § 552(a)(4)(A)(iv), no fee may be charged for the first two hours of search time or for the first one hundred pages of duplication.

[2] *See also* Department of Justice Fee Waiver Guidance to Agency Heads From Stephan Markman, Assistant Att'y Gen. (Apr. 2, 1987) (advising agencies of factors to consider when construing fee waivers), *available at* http://www.justice.gov/oip/foia_updates/Vol_VIII_1/viii1page2.htm.

operations or activities of the federal government, with a connection that is direct and clear, not remote. Guardians requests documents related to Executive Order No. 13783 and Secretarial Order No. 3349, which was designed to implement the directive in the Executive Order No. 13783, to, *inter alia*, "review all existing regulations, orders, guidance documents, policies, and any other similar agency actions . . . that potentially burden the development or use of domestically produced energy resources."

The Department of Justice Freedom of Information Act Guide expressly concedes that "in most cases records possessed by a federal agency will meet this threshold" of identifiable operations or activities of the government. *See* Department of Justice Guide to the FOIA (2009), p. 25. This requirement is clearly met in this case.

(2) How disclosure is likely to contribute to public understanding of those operations or activities:

Disclosure of these records is likely to contribute to public understanding of the operations and activities of the federal government. BLM "must not make value judgments about whether the information at issue is 'important' enough to be made public; it is not the bureau's role to attempt to determine the level of public interest in requested information." 43 C.F.R. § 2.45(f).

(i) How the contents of the records are meaningfully informative:

The requested records are meaningfully informative about government operations or activities and are likely to contribute to an increased public understanding of those operations or activities. The records requested will provide Guardians with the ability to communicate to the public about the activities of the BLM, and, more broadly, of the federal government. The documents will give Guardians, and therefore the public, crucial insight into the way the federal government intends to manage energy development on public lands. Regarding this issue, the actions and assessments of the BLM, and the actions and assessments of other branches of the federal government which would be revealed by records in the possession of BLM, are of concern to the public. Disclosure of the requested records will enhance the public's knowledge of this issue and support public oversight of federal agency operations.

These documents are not currently in the public domain. Their release is "likely to contribute" to better public understanding of federal government's management of public lands. The public is always well served when it knows how government activities, particularly matters touching on legal and ethical questions, have been conducted. *See Judicial Watch*, 326 F.3d at 1314 ("[T]he American people have as much interest in knowing that key [agency] decisions are free from the taint of conflict of interest as they have in discovering that they are not.").

(ii) The logical connection between the content of the records and the operations or activities:

The requested records directly concern the operations or activities of the federal government.

(iii) How disclosure will contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

The public currently does not have the ability to fully evaluate the actions or inactions of the federal government regarding the management of public lands. Disclosure of these records will contribute to the understanding of a reasonably broad audience of persons interested in the subject because we will disseminate the information we receive to a large audience of interested persons. Once the information is made available, it will be analyzed and presented to the public in a manner that will meaningfully enhance the public's understanding of this issue.

(iv) Your identity, vocation, qualifications, and expertise regarding the requested information and information that explains how you plan to disclose the information in a manner that will be informative to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

WildEarth Guardians is a nonprofit organization dedicated to environmental protection. WildEarth Guardians protects and restores wild places, wildlife, and wild rivers in the American West. Through its Climate and Energy Program, Guardians works to sustain a transition from fossil fuels to clean energy in order to safeguard the American West.

WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding BLM actions and policy. For example, WildEarth Guardians has utilized FOIA to obtain records related to BLM's federal coal leasing activities in Wyoming and has disseminated this information through the media, its own website, and through other forms of public commentary. Guardians most recently utilized FOIA to obtain and disseminate information regarding BLM management of oil and gas resources in New Mexico. This information was related to the agency's decision to abruptly change the location of a planned oil and gas lease sale. The responsive FOIA documents have been shared with the media and have been reported on in various news stories.

Further, WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding other federal agency actions and is consistently granted fee waivers from these agencies. Just in the last five years, Guardians has been granted fee waivers in conjunction with FOIA requests to the U.S. Environmental Protection Agency, U.S. Office of Surface Mining Reclamation and Enforcement, U.S. Forest Service, U.S. Fish and Wildlife Service, and U.S. Bureau of Reclamation. In granting WildEarth Guardians' requests for fee waivers, these agencies have acknowledged Guardians' ability to obtain, analyze, and disseminate information to a reasonably broad audience.

(v) Your ability and intent to disseminate the information to a reasonably broad audience of persons interested in the subject (for example, how and to whom do you intend to disseminate the information):

Guardians has the ability and intention to disseminate the information requested to the public and its many members and supporters. Therefore, the disclosure of the requested documents will contribute to the understanding of a reasonably broad audience of persons interested in the subject.

Guardians plans to disseminate the information it obtains pursuant to this FOIA request in various effective ways, including through its website, newsletter, press releases, Facebook page, public education events, comments on proposed agency actions, and other public interest advocacy. Guardians' staff will first analyze and digest the documents. The information will then be disseminated to Guardians' members and supporters, members of other conservation organizations, as well as other interested members of the public.

(3) How disclosure is likely to significantly contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

(i) Whether the information being requested is new:

The information being requested is new. Although the full contents of the requested records are currently unknown to us, Guardians does not request any records previously provided to us by the Government.

(ii) Whether the information would confirm or clarify data that has been released previously:

The information Guardians requests has not, to our knowledge, been released previously.

(iii) How disclosure will increase the level of public understanding of the operations or activities of the Department or a bureau that existed prior to disclosure:

Because this information is not currently in the public domain, disclosure of these records will increase the level of public understanding of the operations or activities of DOI and BLM that existed prior to disclosure. Guardians will disseminate the information obtained from this FOIA request to a large public audience, as explained above, and will help the public understand the information in a simple and informative way.

(iv) Whether the information is already publicly available:

The information Guardians requests is not, to our knowledge, publicly available. The Government may omit sending us requested records that are available in publicly accessible forums such as on the internet or that are routinely available at public or university libraries. However, please provide us with adequate references and/or website links so that we may obtain these materials on our own.

(4) How the public's understanding of the subject in question will be enhanced

to a significant extent by the disclosure:

The public's understanding of the federal government's management of public lands will be enhanced to a significant extent by the disclosure of these records. The directives in Executive Order No. 13783 and Secretarial Order No. 3349 have the potential to create a dramatic shift in the way the Department of the Interior manages energy development on public lands. For example, depending on which policies or actions are deemed to "burden" energy development, public access, wildlife, and a range of public land recreation activities could be at risk. The public currently does not have the ability to evaluate the actions or inactions of DOI or BLM regarding management decisions on public lands as directed by Executive Order No. 13783 and Secretarial Order No. 3349.

Guardians' dissemination of the information obtained pursuant to this FOIA request will enhance the public's understanding of this issue because this information is not currently available to the public. *See Federal CURE*, 602 F. Supp. 2d at 205 (the existing public availability of the information is weighed when determining the degree of significance that will be derived from the disclosure of the information) (citing *Forest Guardians*, 416 F.3d at 1181). As described above, Guardians will disseminate the information it obtains pursuant to this FOIA in various effective ways, including through its website, newsletter, press releases, Facebook page, and public education events. Furthermore, the information obtained through this FOIA request will be used to contribute to one or more of the following: public interest litigation, petitions, newsletters, public presentations, e-mail and postal mail publications, press releases, and local and national news stories.

Given Guardians' positions and abilities, disclosure will lead to a significant enhancement of the public's understanding of the Government operations and activities at issue.

(5) Any commercial interest that would be furthered by the requested disclosure:

Guardians has no commercial, trade, or profit interest that would be furthered by the requested disclosure. Guardians is a tax-exempt organizations under section 501(c)(3) of the Internal Revenue Code. As such, Guardians has no commercial interests. The requested records will be used in the furtherance of Guardians' mission as an education and advocacy group to protect and restore the natural environment.

Guardians, a non-profit organization, has no commercial interests and will realize no commercial benefit from the release of the requested information. Therefore, no assessment of the magnitude of the interest is required. *See* 43 C.F.R. § 2.48(b)(2)-(3).

Conclusion

Given Guardians' demonstrably successful efforts at educating the public on environmental issues, and the fact that their education programs have significantly contributed to an understanding of Government operations and activities, it is clear that Guardians is entitled to a fee waiver. *See* 43 C.F.R § 2.48. In the event that your agency denies Guardians a fee waiver,

please send a written explanation for the denial along with a cost estimate. Please contact us for authorization before incurring any costs in excess of $50.

I look forward to your determination on this FOIA request within twenty days, as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i). The twenty-day statutory deadline is also applicable to Guardians' fee waiver request. *See, e.g.*, *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003) (finding where an agency "fails to answer the [fee waiver] request within twenty days," judicial review is appropriate).

Please direct all correspondence and responsive records to counsel for WildEarth Guardians:

Laura King, Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
king@westernlaw.org

Thank you for your attention to this request. If you have any questions about the requested documents or the requested fee waiver, please do not hesitate to contact me at the phone number or email address below.

Sincerely,



Laura King, Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
Email: king@westernlaw.org
Phone: (406) 204-4852

Attorney for WildEarth Guardians

From:	Laura King
To:	CO_FOIA@blm.gov
Cc:	"Jeremy Nichols"; "Erik Schlenker-Goodrich"
Subject:	FOIA Request
Date:	Monday, May 22, 2017 6:40:13 PM
Attachments:	FOIA Request_Trump EO and Zinke SO CRVFO and CO SO.pdf

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Dear Ms. Fisher,

On behalf of WildEarth Guardians, I submit the attached FOIA request for records related to Executive Order 13783 and Secretarial Order 3349 from the BLM's Colorado River Valley Field Office and the BLM Colorado State Office. This request will also be arriving by certified mail, return receipt requested. We look forward to your determination on this request and the associated fee waiver request within FOIA's 20-day determination deadline.

Please let me know if you have any questions or if I can be of any assistance in the processing of this FOIA request.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder's Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org

www.westernlaw.org

Western Environmental Law Center

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1216 Lincoln Street
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Defending the West www.westernlaw.org

May 22, 2017

Sent via Email and USPS Certified Mail Return Receipt Requested

Diana Fisher
FOIA Officer
2850 Youngfield Street
Lakewood, CO 80215
Phone: (303) 239-3688
FAX: (303) 239-3933
CO_FOIA@blm.gov

FREEDOM OF INFORMATION ACT REQUEST

Dear Ms. Fisher:

This is a request under the Freedom of Information Act (FOIA), 5 U.S.C. § 552, as amended. I make this request on behalf of WildEarth Guardians ("Guardians") for the following records from the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office:

- All agency records produced by the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office in the course of complying with Executive Order No. 13783, "Promoting Energy Independence and Economic Growth," which was published on March 28, 2017.
- All agency records produced by the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office in the course of complying with Secretarial Order No. 3349, "American Energy Independence," which was published on March 29, 2017, under Secretary of the Interior Ryan Zinke.

For purposes of this request, "agency records" is consistent with the meaning of the term under FOIA. This includes, but is not limited to, documents of any kind including electronic as well as paper documents, emails, writings (handwritten, typed, electronic or otherwise produced, reproduced, or stored), correspondence, letters, memoranda, reports, consultations, notes, recordings, telephone conversation recordings, voice mails, telephone logs, messages, instant messages, G-chats, text messages, chats, telefaxes, photographs, videos, meeting notes or minutes, and electronic and magnetic recordings of meetings. All of the foregoing is included in

this request if it is in BLM's possession and control. If such recordings are no longer under the control of BLM but were at any time, please refer this request to the relevant federal agency or agencies.

This request is not meant to exclude any other records that, although not specially requested, are reasonably related to the subject matter of this request. Please provide responsive records in digital format whenever possible.

*** * ***

Please identify and inform us of all responsive or potentially responsive records within 20 working days as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i), and the basis of any claimed exemptions or privilege, including the specific responsive or potentially responsive records(s) to which such exemption or privilege may apply. *See Citizens for Responsibility and Ethics in Washington v. Federal Election Com'n*, 711 F.3d 180, 182-183 (D.C. Cir. 2013) (holding that the agency must identify the exemptions it will claim with respect to any withheld documents within the time frame prescribed by FOIA). The Supreme Court has stated that FOIA establishes a "strong presumption in favor of disclosure" of requested information, and that the burden is on the government to substantiate why information may not be released under FOIA's limited exemptions. *Department of State v. Ray*, 502 U.S. 164, 173 (1991). Congress affirmed these tenets of FOIA in legislation as recently as December 2007, stating that government remains accessible to the American people and "is always based not upon the 'need to know' but upon the fundamental 'right to know.'" Public Law 110-175, 121 Stat. 2524, 2525 (Dec. 31, 2007).

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Guardians, a non-commercial and public-interest requester, hereby requests a waiver of all fees associated with this request because disclosure "is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester." 5 U.S.C. § 552(a)(4)(A)(iii); *see also* 43 C.F.R § 2.45. This request satisfies both statutory and regulatory requirements for granting a fee waiver, including fees for search, review, and duplication.[1] Below, stated first in bold, are the criteria the BLM considers in assessing requests for fee waivers, followed by an explanation of Guardians' satisfaction of those requirements. *See* 43 C.F.R § 2.48.[2] Fee waiver requests must be evaluated based on the face of the request. *See Citizens for Responsibility & Ethics in Washington v. U.S. Dep't of Justice*, 602 F. Supp. 2d 121, 125 (D.D.C. 2009).

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The subject matter of the requested records directly and specifically concerns identifiable operations or activities of the federal government, with a connection that is direct and clear, not remote. Guardians requests documents related to Executive Order No. 13783 and Secretarial

[1] Pursuant to FOIA, 5 U.S.C. § 552(a)(4)(A)(iv), no fee may be charged for the first two hours of search time or for the first one hundred pages of duplication.

[2] *See also* Department of Justice Fee Waiver Guidance to Agency Heads From Stephan Markman, Assistant Att'y Gen. (Apr. 2, 1987) (advising agencies of factors to consider when construing fee waivers), *available at* http://www.justice.gov/oip/foia_updates/Vol_VIII_1/viii1page2.htm.

Order No. 3349, which was designed to implement the directive in the Executive Order No. 13783, to, *inter alia*, "review all existing regulations, orders, guidance documents, policies, and any other similar agency actions . . . that potentially burden the development or use of domestically produced energy resources."

The Department of Justice Freedom of Information Act Guide expressly concedes that "in most cases records possessed by a federal agency will meet this threshold" of identifiable operations or activities of the government. *See* Department of Justice Guide to the FOIA (2009), p. 25. This requirement is clearly met in this case.

(2) How disclosure is likely to contribute to public understanding of those operations or activities:

Disclosure of these records is likely to contribute to public understanding of the operations and activities of the federal government. BLM "must not make value judgments about whether the information at issue is 'important' enough to be made public; it is not the bureau's role to attempt to determine the level of public interest in requested information." 43 C.F.R. § 2.45(f).

(i) How the contents of the records are meaningfully informative:

The requested records are meaningfully informative about government operations or activities and are likely to contribute to an increased public understanding of those operations or activities. The records requested will provide Guardians with the ability to communicate to the public about the activities of the BLM, and, more broadly, of the federal government. The documents will give Guardians, and therefore the public, crucial insight into the way the federal government intends to manage energy development on public lands. Regarding this issue, the actions and assessments of the BLM, and the actions and assessments of other branches of the federal government which would be revealed by records in the possession of BLM, are of concern to the public. Disclosure of the requested records will enhance the public's knowledge of this issue and support public oversight of federal agency operations.

These documents are not currently in the public domain. Their release is "likely to contribute" to better public understanding of federal government's management of public lands. The public is always well served when it knows how government activities, particularly matters touching on legal and ethical questions, have been conducted. *See Judicial Watch*, 326 F.3d at 1314 ("[T]he American people have as much interest in knowing that key [agency] decisions are free from the taint of conflict of interest as they have in discovering that they are not.").

(ii) The logical connection between the content of the records and the operations or activities:

The requested records directly concern the operations or activities of the federal government.

(iii) How disclosure will contribute to the understanding of a reasonably

broad audience of persons interested in the subject, as opposed to your individual understanding:

The public currently does not have the ability to fully evaluate the actions or inactions of the federal government regarding the management of public lands. Disclosure of these records will contribute to the understanding of a reasonably broad audience of persons interested in the subject because we will disseminate the information we receive to a large audience of interested persons. Once the information is made available, it will be analyzed and presented to the public in a manner that will meaningfully enhance the public's understanding of this issue.

(iv) Your identity, vocation, qualifications, and expertise regarding the requested information and information that explains how you plan to disclose the information in a manner that will be informative to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

WildEarth Guardians is a nonprofit organization dedicated to environmental protection. WildEarth Guardians protects and restores wild places, wildlife, and wild rivers in the American West. Through its Climate and Energy Program, Guardians works to sustain a transition from fossil fuels to clean energy in order to safeguard the American West.

WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding BLM actions and policy. For example, WildEarth Guardians has utilized FOIA to obtain records related to BLM's federal coal leasing activities in Wyoming and has disseminated this information through the media, its own website, and through other forms of public commentary. Guardians most recently utilized FOIA to obtain and disseminate information regarding BLM management of oil and gas resources in New Mexico. This information was related to the agency's decision to abruptly change the location of a planned oil and gas lease sale. The responsive FOIA documents have been shared with the media and have been reported on in various news stories.

Further, WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding other federal agency actions and is consistently granted fee waivers from these agencies. Just in the last five years, Guardians has been granted fee waivers in conjunction with FOIA requests to the U.S. Environmental Protection Agency, U.S. Office of Surface Mining Reclamation and Enforcement, U.S. Forest Service, U.S. Fish and Wildlife Service, and U.S. Bureau of Reclamation. In granting WildEarth Guardians' requests for fee waivers, these agencies have acknowledged Guardians' ability to obtain, analyze, and disseminate information to a reasonably broad audience.

(v) Your ability and intent to disseminate the information to a reasonably broad audience of persons interested in the subject (for example, how and to whom do you intend to disseminate the information):

Guardians has the ability and intention to disseminate the information requested to the public and its many members and supporters. Therefore, the disclosure of the requested

documents will contribute to the understanding of a reasonably broad audience of persons interested in the subject.

Guardians plans to disseminate the information it obtains pursuant to this FOIA request in various effective ways, including through its website, newsletter, press releases, Facebook page, public education events, comments on proposed agency actions, and other public interest advocacy. Guardians' staff will first analyze and digest the documents. The information will then be disseminated to Guardians' members and supporters, members of other conservation organizations, as well as other interested members of the public.

(3) How disclosure is likely to significantly contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

(i) Whether the information being requested is new:

The information being requested is new. Although the full contents of the requested records are currently unknown to us, Guardians does not request any records previously provided to us by the Government.

(ii) Whether the information would confirm or clarify data that has been released previously:

The information Guardians requests has not, to our knowledge, been released previously.

(iii) How disclosure will increase the level of public understanding of the operations or activities of the Department or a bureau that existed prior to disclosure:

Because this information is not currently in the public domain, disclosure of these records will increase the level of public understanding of the operations or activities of DOI and BLM that existed prior to disclosure. Guardians will disseminate the information obtained from this FOIA request to a large public audience, as explained above, and will help the public understand the information in a simple and informative way.

(iv) Whether the information is already publicly available:

The information Guardians requests is not, to our knowledge, publicly available. The Government may omit sending us requested records that are available in publicly accessible forums such as on the internet or that are routinely available at public or university libraries. However, please provide us with adequate references and/or website links so that we may obtain these materials on our own.

(4) How the public's understanding of the subject in question will be enhanced to a significant extent by the disclosure:

The public's understanding of the federal government's management of public lands will be enhanced to a significant extent by the disclosure of these records. The directives in Executive Order No. 13783 and Secretarial Order No. 3349 have the potential to create a dramatic shift in the way the Department of the Interior manages energy development on public lands. For example, depending on which policies or actions are deemed to "burden" energy development, public access, wildlife, and a range of public land recreation activities could be at risk. The public currently does not have the ability to evaluate the actions or inactions of DOI or BLM regarding management decisions on public lands as directed by Executive Order No. 13783 and Secretarial Order No. 3349.

Guardians' dissemination of the information obtained pursuant to this FOIA request will enhance the public's understanding of this issue because this information is not currently available to the public. *See Federal CURE*, 602 F. Supp. 2d at 205 (the existing public availability of the information is weighed when determining the degree of significance that will be derived from the disclosure of the information) (citing *Forest Guardians*, 416 F.3d at 1181). As described above, Guardians will disseminate the information it obtains pursuant to this FOIA in various effective ways, including through its website, newsletter, press releases, Facebook page, and public education events. Furthermore, the information obtained through this FOIA request will be used to contribute to one or more of the following: public interest litigation, petitions, newsletters, public presentations, e-mail and postal mail publications, press releases, and local and national news stories.

Given Guardians' positions and abilities, disclosure will lead to a significant enhancement of the public's understanding of the Government operations and activities at issue.

(5) Any commercial interest that would be furthered by the requested disclosure:

Guardians has no commercial, trade, or profit interest that would be furthered by the requested disclosure. Guardians is a tax-exempt organizations under section 501(c)(3) of the Internal Revenue Code. As such, Guardians has no commercial interests. The requested records will be used in the furtherance of Guardians' mission as an education and advocacy group to protect and restore the natural environment.

Guardians, a non-profit organization, has no commercial interests and will realize no commercial benefit from the release of the requested information. Therefore, no assessment of the magnitude of the interest is required. *See* 43 C.F.R. § 2.48(b)(2)-(3).

Conclusion

Given Guardians' demonstrably successful efforts at educating the public on environmental issues, and the fact that their education programs have significantly contributed to an understanding of Government operations and activities, it is clear that Guardians is entitled to a fee waiver. *See* 43 C.F.R § 2.48. In the event that your agency denies Guardians a fee waiver, please send a written explanation for the denial along with a cost estimate. Please contact us for authorization before incurring any costs in excess of $50.

I look forward to your determination on this FOIA request within twenty days, as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i). The twenty-day statutory deadline is also applicable to Guardians' fee waiver request. *See, e.g.*, *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003) (finding where an agency "fails to answer the [fee waiver] request within twenty days," judicial review is appropriate).

Please direct all correspondence and responsive records to counsel for WildEarth Guardians:

Laura King, Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
king@westernlaw.org

Thank you for your attention to this request. If you have any questions about the requested documents or the requested fee waiver, please do not hesitate to contact me at the phone number or email address below.

Sincerely,



Laura King, Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
Email: king@westernlaw.org
Phone: (406) 204-4852

Attorney for WildEarth Guardians

From: Laura King
To: WY_FOIA@blm.gov
Cc: "Jeremy Nichols"; "Erik Schlenker-Goodrich"
Subject: FOIA Request
Date: Monday, May 22, 2017 6:41:46 PM
Attachments: FOIA Request_Trump EO and Zinke SO Buffalo FO and Wyoming SO.pdf

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Dear Ms. Litman,

On behalf of WildEarth Guardians, I submit the attached FOIA request for records related to Executive Order 13783 and Secretarial Order 3349 from the BLM's Buffalo Field Office and the BLM Wyoming State Office. This request will also be arriving by certified mail, return receipt requested. We look forward to your determination on this request and the associated fee waiver request within FOIA's 20-day determination deadline.

Please let me know if you have any questions or if I can be of any assistance in the processing of this FOIA request.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder's Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org

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May 22, 2017

Sent via Email and USPS Certified Mail Return Receipt Requested

Jennifer Litman
FOIA Officer
BLM Wyoming State Office
5353 Yellowstone Rd
Cheyenne, WY 82009
(307) 775-6180
FAX (307) 775-6058
WY_FOIA@blm.gov

FREEDOM OF INFORMATION ACT REQUEST

Dear Ms. Litman:

This is a request under the Freedom of Information Act (FOIA), 5 U.S.C. § 552, as amended. I make this request on behalf of WildEarth Guardians ("Guardians") for the following records from the Bureau of Land Management's Buffalo Field Office and the Bureau of Land Management's Wyoming State Office:

- All agency records produced by the Bureau of Land Management's Buffalo Field Office and the Bureau of Land Management's Wyoming State Office in the course of complying with Executive Order No. 13783, "Promoting Energy Independence and Economic Growth," which was published on March 28, 2017.
- All agency records produced by the Bureau of Land Management's Buffalo Field Office and the Bureau of Land Management's Wyoming State Office in the course of complying with Secretarial Order No. 3349, "American Energy Independence," which was published on March 29, 2017, under Secretary of the Interior Ryan Zinke.

For purposes of this request, "agency records" is consistent with the meaning of the term under FOIA. This includes, but is not limited to, documents of any kind including electronic as well as paper documents, emails, writings (handwritten, typed, electronic or otherwise produced, reproduced, or stored), correspondence, letters, memoranda, reports, consultations, notes, recordings, telephone conversation recordings, voice mails, telephone logs, messages, instant messages, G-chats, text messages, chats, telefaxes, photographs, videos, meeting notes or

minutes, and electronic and magnetic recordings of meetings. All of the foregoing is included in this request if it is in BLM's possession and control. If such recordings are no longer under the control of BLM but were at any time, please refer this request to the relevant federal agency or agencies.

This request is not meant to exclude any other records that, although not specially requested, are reasonably related to the subject matter of this request. Please provide responsive records in digital format whenever possible.

*** * ***

Please identify and inform us of all responsive or potentially responsive records within 20 working days as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i), and the basis of any claimed exemptions or privilege, including the specific responsive or potentially responsive records(s) to which such exemption or privilege may apply. *See Citizens for Responsibility and Ethics in Washington v. Federal Election Com'n*, 711 F.3d 180, 182-183 (D.C. Cir. 2013) (holding that the agency must identify the exemptions it will claim with respect to any withheld documents within the time frame prescribed by FOIA). The Supreme Court has stated that FOIA establishes a "strong presumption in favor of disclosure" of requested information, and that the burden is on the government to substantiate why information may not be released under FOIA's limited exemptions. *Department of State v. Ray*, 502 U.S. 164, 173 (1991). Congress affirmed these tenets of FOIA in legislation as recently as December 2007, stating that government remains accessible to the American people and "is always based not upon the 'need to know' but upon the fundamental 'right to know.'" Public Law 110-175, 121 Stat. 2524, 2525 (Dec. 31, 2007).

If your office takes the position that any portion of the requested records is exempt from disclosure, we request that you provide us with an index of those records as required under *Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973), with sufficient specificity "to permit a reasoned judgment as to whether the material is actually exempt under FOIA." *Founding Church of Scientology v. Bell*, 603 F.2d 945, 959 (D.C. Cir. 1979). A *Vaughn* index must (1) identify each document or portion of document withheld; (2) state the statutory exemption claimed; and (3) explain how disclosure of the document or portion of document would damage the interests protected by the claimed exemption. *See Citizens Comm'n on Human Rights v. FDA*, 45 F.3d 1325, 1326 n.1 (9th Cir. 1995). "The description and explanation the agency offers should reveal as much detail as possible as to the nature of the document," in order to provide "the requestor with a realistic opportunity to challenge the agency's decision." *Oglesby v. U.S. Dept. of Army*, 79 F.3d 1172, 1176 (D.C. Cir. 1996). Such explanation will be helpful in deciding whether to appeal a decision to withhold documents and may help to avoid unnecessary litigation.

In the event that some portions of the requested records are properly exempt from disclosure, please disclose any reasonably segregable, non-exempt portions of the requested records. *See* 5 U.S.C. §552(b). If it is your position that a document contains non-exempt segments and that those non-exempt segments are so dispersed throughout the documents as to make segregation impossible, please state what portion of the document is non-exempt and how the material is dispersed through the document. *See Mead Data Central v. U.S. Department of*

the Air Force, 455 F.2d 242, 261 (D.C. Cir. 1977). Claims of non-segregability must be made with the same detail as required for claims of exemption in a *Vaughn* index. If a request is denied in whole, please state specifically that it is not reasonable to segregate portions of the record for release.

FOIA requires federal agencies to make their records "promptly available" to any person who makes a proper request for them. 5 U.S.C. § 552(a)(3)(A) (as amended by OPEN Government Act of 2007, Pub. L. No. 110-175, 121 Stat. 2524).

Presumption of Openness and "Foreseeable Harm" Standard

On his first full day in office President Obama demonstrated his commitment to the ideals of transparency and openness by issuing a Memorandum to the heads of all Executive Branch Departments and agencies by calling on them to "renew their commitment to the principles embodied in FOIA." *See* Presidential Memorandum for Heads of Executive Departments and Agencies Concerning the FOIA, 74 Fed. Reg. 4683 (Jan. 21, 2009). The President directed all agencies to administer the FOIA with a clear presumption in favor of disclosure, to resolve doubts in favor of openness, and to not withhold information based on "speculative or abstract fears." *Id.* In addition, the President called on agencies to ensure that requests are responded to in "a spirit of cooperation," that disclosures are timely made, and that modern technology is used to make information available to the public even before a request is made. *Id.*

In accordance with the President's directives, on March 19, 2009, Attorney General Holder issued new FOIA guidelines, calling on all agencies to reaffirm the government's "commitment to accountability and transparency." Memorandum from Att'y Gen. Eric Holder for Heads of Executive Departments and Agencies (Mar. 19, 2009), *available at* http://www.justice.gov/ag/foia-memo-march2009.pdf. The Guidelines stress that the FOIA is to be administered with the presumption of openness called for by the President. *Id*. at p. 1.

The Attorney General "strongly encourage[d] agencies to make discretionary disclosures of information." *Id*. He specifically directed agencies not to withhold information simply because they may do so legally and to consider making partial disclosures when full disclosures are not possible. *Id*. He also comprehensively addressed the need for each agency to establish effective systems for improving transparency. *Id*. at p. 2. In doing so he emphasized that "[e]ach agency must be fully accountable for its administration of the FOIA." *Id*.

In issuing these new guidelines, Attorney General Holder established a new "foreseeable harm" standard for defending agency decisions to withhold information. Under this new standard, the U.S. Department of Justice will defend an agency's denial of a FOIA request "only if (1) the agency reasonably foresees that disclosure would harm an interest protected by one of the statutory exemptions, or (2) disclosure is prohibited by law." *Id*. As a result, "agencies must now include the 'foreseeable harm' standard as part of the FOIA analysis at the initial request stage and the administrative appeal stage." Department of Justice Guide to the FOIA (2009), p. 25, available at http://www.justice.gov/oip/foia_guide09.htm.

Request for Fee Waiver

FOIA was designed to grant a broad right of access to government information, with a focus on the public's "right to be informed about what their government is up to," thereby "open[ing] agency action to the light of public scrutiny." *U.S. Dep't of Justice v. Reporters Comm. for Freedom of Press*, 489 U.S. 749, 773-74 (1989) (internal quotation and citations omitted). A key component of providing public access to those records is FOIA's fee waiver provision, 5 U.S.C. § 552(a)(4)(A)(iii), which provides that "[d]ocuments shall be furnished without any charge or at a [reduced] charge . . . if disclosure of the information is in the public interest because it is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester."

FOIA's fee waiver requirement is to be "liberally construed." *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003); *Forest Guardians v. U.S. Dept. of Interior*, 416 F.3d 1173, 1178 (10th Cir. 2005). The fee waiver amendments of 1986 were designed specifically to provide organizations such as Guardians access to government documents without the payment of fees. As one Senator stated, "[a]gencies should not be allowed to use fees as an offensive weapon against requesters seeking access to Government information . . ." 132 Cong. Rec. S. 14298 (statement of Senator Leahy). Indeed, FOIA's waiver provision was intended "to prevent government agencies from using high fees to discourage certain types of requesters and requests, in clear reference to requests from journalists, scholars, and . . . non-profit public interest groups." *Better Gov't Ass'n v. Dep't of State*, 780 F.2d 86, 93-94 (D.C. Cir. 1986) (quoting *Ettlinger v. FBI*, 596 F. Supp. 867, 876 (D. Mass. 1984)).

Guardians, a non-commercial and public-interest requester, hereby requests a waiver of all fees associated with this request because disclosure "is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester." 5 U.S.C. § 552(a)(4)(A)(iii); *see also* 43 C.F.R § 2.45. This request satisfies both statutory and regulatory requirements for granting a fee waiver, including fees for search, review, and duplication.[1] Below, stated first in bold, are the criteria the BLM considers in assessing requests for fee waivers, followed by an explanation of Guardians' satisfaction of those requirements. *See* 43 C.F.R § 2.48.[2] Fee waiver requests must be evaluated based on the face of the request. *See Citizens for Responsibility & Ethics in Washington v. U.S. Dep't of Justice*, 602 F. Supp. 2d 121, 125 (D.D.C. 2009).

(1) The subject of Guardians' request concerns identifiable operations or activities of the Federal Government:

The subject matter of the requested records directly and specifically concerns identifiable operations or activities of the federal government, with a connection that is direct and clear, not

[1] Pursuant to FOIA, 5 U.S.C. § 552(a)(4)(A)(iv), no fee may be charged for the first two hours of search time or for the first one hundred pages of duplication.

[2] *See also* Department of Justice Fee Waiver Guidance to Agency Heads From Stephan Markman, Assistant Att'y Gen. (Apr. 2, 1987) (advising agencies of factors to consider when construing fee waivers), *available at* http://www.justice.gov/oip/foia_updates/Vol_VIII_1/viii1page2.htm.

remote. Guardians requests documents related to Executive Order No. 13783 and Secretarial Order No. 3349, which was designed to implement the directive in the Executive Order No. 13783, to, *inter alia*, "review all existing regulations, orders, guidance documents, policies, and any other similar agency actions . . . that potentially burden the development or use of domestically produced energy resources."

The Department of Justice Freedom of Information Act Guide expressly concedes that "in most cases records possessed by a federal agency will meet this threshold" of identifiable operations or activities of the government. *See* Department of Justice Guide to the FOIA (2009), p. 25. This requirement is clearly met in this case.

(2) How disclosure is likely to contribute to public understanding of those operations or activities:

Disclosure of these records is likely to contribute to public understanding of the operations and activities of the federal government. BLM "must not make value judgments about whether the information at issue is 'important' enough to be made public; it is not the bureau's role to attempt to determine the level of public interest in requested information." 43 C.F.R. § 2.45(f).

(i) How the contents of the records are meaningfully informative:

The requested records are meaningfully informative about government operations or activities and are likely to contribute to an increased public understanding of those operations or activities. The records requested will provide Guardians with the ability to communicate to the public about the activities of the BLM, and, more broadly, of the federal government. The documents will give Guardians, and therefore the public, crucial insight into the way the federal government intends to manage energy development on public lands. Regarding this issue, the actions and assessments of the BLM, and the actions and assessments of other branches of the federal government which would be revealed by records in the possession of BLM, are of concern to the public. Disclosure of the requested records will enhance the public's knowledge of this issue and support public oversight of federal agency operations.

These documents are not currently in the public domain. Their release is "likely to contribute" to better public understanding of federal government's management of public lands. The public is always well served when it knows how government activities, particularly matters touching on legal and ethical questions, have been conducted. *See Judicial Watch*, 326 F.3d at 1314 ("[T]he American people have as much interest in knowing that key [agency] decisions are free from the taint of conflict of interest as they have in discovering that they are not.").

(ii) The logical connection between the content of the records and the operations or activities:

The requested records directly concern the operations or activities of the federal government.

(iii) How disclosure will contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

The public currently does not have the ability to fully evaluate the actions or inactions of the federal government regarding the management of public lands. Disclosure of these records will contribute to the understanding of a reasonably broad audience of persons interested in the subject because we will disseminate the information we receive to a large audience of interested persons. Once the information is made available, it will be analyzed and presented to the public in a manner that will meaningfully enhance the public's understanding of this issue.

(iv) Your identity, vocation, qualifications, and expertise regarding the requested information and information that explains how you plan to disclose the information in a manner that will be informative to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

WildEarth Guardians is a nonprofit organization dedicated to environmental protection. WildEarth Guardians protects and restores wild places, wildlife, and wild rivers in the American West. Through its Climate and Energy Program, Guardians works to sustain a transition from fossil fuels to clean energy in order to safeguard the American West.

WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding BLM actions and policy. For example, WildEarth Guardians has utilized FOIA to obtain records related to BLM's federal coal leasing activities in Wyoming and has disseminated this information through the media, its own website, and through other forms of public commentary. Guardians most recently utilized FOIA to obtain and disseminate information regarding BLM management of oil and gas resources in New Mexico. This information was related to the agency's decision to abruptly change the location of a planned oil and gas lease sale. The responsive FOIA documents have been shared with the media and have been reported on in various news stories.

Further, WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding other federal agency actions and is consistently granted fee waivers from these agencies. Just in the last five years, Guardians has been granted fee waivers in conjunction with FOIA requests to the U.S. Environmental Protection Agency, U.S. Office of Surface Mining Reclamation and Enforcement, U.S. Forest Service, U.S. Fish and Wildlife Service, and U.S. Bureau of Reclamation. In granting WildEarth Guardians' requests for fee waivers, these agencies have acknowledged Guardians' ability to obtain, analyze, and disseminate information to a reasonably broad audience.

(v) Your ability and intent to disseminate the information to a reasonably broad audience of persons interested in the subject (for example, how and to whom do you intend to disseminate the information):

Guardians has the ability and intention to disseminate the information requested to the

public and its many members and supporters. Therefore, the disclosure of the requested documents will contribute to the understanding of a reasonably broad audience of persons interested in the subject.

Guardians plans to disseminate the information it obtains pursuant to this FOIA request in various effective ways, including through its website, newsletter, press releases, Facebook page, public education events, comments on proposed agency actions, and other public interest advocacy. Guardians' staff will first analyze and digest the documents. The information will then be disseminated to Guardians' members and supporters, members of other conservation organizations, as well as other interested members of the public.

(3) How disclosure is likely to significantly contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

(i) Whether the information being requested is new:

The information being requested is new. Although the full contents of the requested records are currently unknown to us, Guardians does not request any records previously provided to us by the Government.

(ii) Whether the information would confirm or clarify data that has been released previously:

The information Guardians requests has not, to our knowledge, been released previously.

(iii) How disclosure will increase the level of public understanding of the operations or activities of the Department or a bureau that existed prior to disclosure:

Because this information is not currently in the public domain, disclosure of these records will increase the level of public understanding of the operations or activities of DOI and BLM that existed prior to disclosure. Guardians will disseminate the information obtained from this FOIA request to a large public audience, as explained above, and will help the public understand the information in a simple and informative way.

(iv) Whether the information is already publicly available:

The information Guardians requests is not, to our knowledge, publicly available. The Government may omit sending us requested records that are available in publicly accessible forums such as on the internet or that are routinely available at public or university libraries. However, please provide us with adequate references and/or website links so that we may obtain these materials on our own.

(4) How the public's understanding of the subject in question will be enhanced to a significant extent by the disclosure:

The public's understanding of the federal government's management of public lands will be enhanced to a significant extent by the disclosure of these records. The directives in Executive Order No. 13783 and Secretarial Order No. 3349 have the potential to create a dramatic shift in the way the Department of the Interior manages energy development on public lands. For example, depending on which policies or actions are deemed to "burden" energy development, public access, wildlife, and a range of public land recreation activities could be at risk. The public currently does not have the ability to evaluate the actions or inactions of DOI or BLM regarding management decisions on public lands as directed by Executive Order No. 13783 and Secretarial Order No. 3349.

Guardians' dissemination of the information obtained pursuant to this FOIA request will enhance the public's understanding of this issue because this information is not currently available to the public. *See Federal CURE*, 602 F. Supp. 2d at 205 (the existing public availability of the information is weighed when determining the degree of significance that will be derived from the disclosure of the information) (citing *Forest Guardians*, 416 F.3d at 1181). As described above, Guardians will disseminate the information it obtains pursuant to this FOIA in various effective ways, including through its website, newsletter, press releases, Facebook page, and public education events. Furthermore, the information obtained through this FOIA request will be used to contribute to one or more of the following: public interest litigation, petitions, newsletters, public presentations, e-mail and postal mail publications, press releases, and local and national news stories.

Given Guardians' positions and abilities, disclosure will lead to a significant enhancement of the public's understanding of the Government operations and activities at issue.

(5) Any commercial interest that would be furthered by the requested disclosure:

Guardians has no commercial, trade, or profit interest that would be furthered by the requested disclosure. Guardians is a tax-exempt organizations under section 501(c)(3) of the Internal Revenue Code. As such, Guardians has no commercial interests. The requested records will be used in the furtherance of Guardians' mission as an education and advocacy group to protect and restore the natural environment.

Guardians, a non-profit organization, has no commercial interests and will realize no commercial benefit from the release of the requested information. Therefore, no assessment of the magnitude of the interest is required. *See* 43 C.F.R. § 2.48(b)(2)-(3).

Conclusion

Given Guardians' demonstrably successful efforts at educating the public on environmental issues, and the fact that their education programs have significantly contributed to an understanding of Government operations and activities, it is clear that Guardians is entitled to a fee waiver. *See* 43 C.F.R § 2.48. In the event that your agency denies Guardians a fee waiver, please send a written explanation for the denial along with a cost estimate. Please contact us for

authorization before incurring any costs in excess of $50.

I look forward to your determination on this FOIA request within twenty days, as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i). The twenty-day statutory deadline is also applicable to Guardians' fee waiver request. *See, e.g., Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003) (finding where an agency "fails to answer the [fee waiver] request within twenty days," judicial review is appropriate).

Please direct all correspondence and responsive records to counsel for WildEarth Guardians:

Laura King, Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
king@westernlaw.org

Thank you for your attention to this request. If you have any questions about the requested documents or the requested fee waiver, please do not hesitate to contact me at the phone number or email address below.

Sincerely,



Laura King, Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
Email: king@westernlaw.org
Phone: (406) 204-4852

Attorney for WildEarth Guardians

From: Nathan Matthews
To: agbrown@blm.gov
Subject: Fwd: Fourth Quarter 2017 Lease Parcels
Date: Thursday, May 25, 2017 1:03:41 AM
Attachments: SierraClub_Comment_Q4_2017_WY_Leases.pdf

I have repeatedly tried to submit the below comments regarding the Fourth Quarter 2017 Wyoming Oil and Gas Lease Sale to BLM_WY_HDD_Nov_Parcels@blm.gov, following the instructions at https://www.blm.gov/press-release/blm-high-desert-district-seeks-public-comments-fourth-quarter-2017-oil-gas-lease. However, my emails have bounced back as undeliverable. Please accept these comments on behalf of Sierra Club.

---------- Forwarded message ----------
From: Nathan Matthews <nathan.matthews@sierraclub.org>
Date: Wed, May 24, 2017 at 9:31 PM
Subject: Fourth Quarter 2017 Lease Parcels
To: BLM_WY_HDD_Nov_Parcels@blm.gov

Please accept the attached comment of Sierra Club, and please let me know if you have any difficulty opening the attachment.

--

Nathan Matthews
Staff Attorney
Sierra Club Environmental Law Program

2101 Webster Street, Suite 1300
Oakland, CA 94612
(415) 977-5695 <tel:(415)%20977-5695>
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SIERRA CLUB

May 24, 2017

Tyler Morrison
Bureau of Land Management
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Email: BLM_WY_HDD_Nov_Parcels@blm.gov

Submitted via email

Re: Fourth Quarter 2017 Lease Parcels

The Sierra Club's submits the following comments regarding the Bureau of Land Management ("BLM") High Desert District's proposed fourth quarter 2017 oil and gas lease sale and the Environmental Assessment ("EA") and Finding of No Significant Impact ("FONSI") for this sale. The EA fails to take the hard look that the National Environmental Policy Act ("NEPA") requires, and fails to support the conclusion that the leases will not have significant impacts. BLM must provide a more thorough analysis, including a full Environmental Impact Statement ("EIS"), before conducting the lease sale.

Sierra Club is America's largest and most influential grassroots environmental organization, with more than 2.4 million members and supporters nationwide. Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives.

I. BLM Has Not Demonstrated A Need for the Leases

The EA states that it is offering the leases "to provide for exploration and development of additional oil and gas resources to help meet the nation's need for energy sources." EA at 2. BLM does not appear to have conducted or provided any analysis of whether oil and gas that might be produced from these leases, from the High Desert District, or from BLM lands in

general is, in fact, necessary to meet the nation's energy needs. Absent any showing of a need for this oil and gas, BLM cannot claim that the leases are necessary to satisfy that need.

Furthermore, the EA is mistaken in asserting that the leases are "needed to meet the requirements of" the Federal Land Management Policy Act ("FLPMA"), the Mineral Leasing Act ("MLA"), or the governing resource management plans. FLPMA's incorporation of "the principles of multiple use and sustained yield", 43 U.S.C. 1712(c)(1), does not preclude BLM from declining to offer leases for any particular planning area or portion thereof. The Tenth Circuit has squarely held that FLPMA does not even permit BLM to refuse to consider closing even large portions of planning units to leasing:

> BLM's obligation to manage for multiple use does not mean that development *must* be allowed on [a particular piece of public lands]. Development is a *possible* use, which BLM must weigh against other possible uses – including conservation to protect environmental values, which are best assessed through the NEPA process. Thus, an alternative that closes the [proposed public lands] to development does not necessarily violate the principle of multiple use, and the multiple use provision of FLPMA is not a sufficient reason to exclude more protective alternatives from consideration.

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The keystone of multiple use is to "take[] into account the long-term needs of future generations for renewable and nonrenewable resources." 43 U.S.C. § 1702(3). Here, withholding the leases is consistent with, rather than contrary to, the long-term needs. In addition, substantial portions of the High Desert District area are already leased. Insofar as FLPMA requires some accommodation of fossil fuel extraction on federal lands, that accommodation has already been provided, as the planning areas have been open to such extraction throughout their history, substantial portions are already leased, and development of those leases will likely continue even if areas are entirely closed to further leasing. FLPMA's principle of "multiple use" must be understood in light of the FLPMA obligation to prevent "unnecessary or undue degradation," 43 U.S.C. § 1732(b). Because BLM has not shown any need for additional fossil fuel leasing and development, and degradation caused by such development would be unnecessary and undue.

Nor does the Mineral Leasing Act preclude no-lease alternatives. Courts have consistently held that section 226 of the MLA provides BLM with the discretion to decline to issue leases. *See, e.g., Udall v. Tallman*, 30 U.S. 1, 4 (1965), *Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1229-30 (9th Cir. 1988). *See also Ash Creek Min. Co. v. Lujan*, 969 F.2d 868, (10th Cir. 1992) (affirming

that federal courts lack authority to order federal lands to be leased and "the decision to offer the lands in question for competitive leasing would be in the sole discretion of the Secretary. MLA § 2(a), [30] U.S.C. § 201").

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NEPA requires BLM to "'rigorously explore and objectively evaluate' all reasonable alternatives to a proposed action, in order to compare the environmental impacts of all available courses of action." *New Mexico ex rel. Richardson*, 565 F.3d at 703 (quoting 40 C.F.R. § 1502.14). NEPA analysis must clearly delineate the consequences of choosing one action over another.

Here, the no action alternative will prevent all oil and gas drilling on 72,884.37 acres of federal land with a range of important environmental values, including the fact that more than half of this land is within "priority habitat management areas." EA at 2. On the other hand, offering these leases for sale will foreseeably lead to development of this acreage; at a minimum, it will allow drillers to require rights that limit BLM's future ability to prohibit or control oil and gas extraction.

The EA, however, inappropriately suggests that the choice between these alternatives may have little impact on the level of development. BLM argues that the no action alternative would not actually prevent development, because it would not prevent *future* leasing in these areas. EA at 6. Such future leasing is in no way a foregone conclusion: any such future leasing proposal would require the same hard look and reasoned choice BLM must undertake now. BLM cannot fatalistically claim that it will allow harms to occur eventually, so it might as well allow them now.

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NEPA requires federal agencies to take a hard look at environmental impacts at the earliest possible time, and this analysis must include all reasonably foreseeable impacts. The EA here falls short, because it provides, in its own words, only a "generic" discussion of the impacts of developing the leases. Most notably, the EA does not provide any estimate of the number of wells likely to be drilled if the offered parcels are leased.

The EA argues that "the number of wells that could potentially be put into production under a full field development scenario as a result of offering the leases is unknown" because "[d]evelopment density (i.e., wells per square mile) and number of wells installed annually depend on a number of variables including market trends, technology available (vertical, directional, or horizontal), the geology of the hydrocarbon-bearing zone, and the application of Controlled Surface Use and No Surface Occupancy stipulations." EA at 68. However, BLM has a number of tools to predict—or in the case of stipulations, control—these factors. Indeed, BLM has already done so, in its reasonably foreseeable development scenario, which BLM continues to endorse as "accurate" and validated by "[c]urrent APD permitting trends." *Id.*

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[1] http://www.nrel.gov/docs/fy16osti/62820.pdf; *but see* https://www.epa.gov/sites/production/files/2016-08/documents/revision_under_consideration_for_ghgi_ng_and_petro_uncertainty_4_2016.pdf at 2 ("For natural gas systems, calculations are commonly more complex than simply multiplying an emission factor by an activity factor.").

[2] EPA, Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry: Background Technical Support Document at 47 (Apr. 12, 2010), *available at* https://www.epa.gov/sites/production/files/2015-05/documents/subpart-w_tsd.pdf.

[3] *See, e.g*., *See* Allen, *et al.*, Measurements of methane emissions at natural gas production sites in the United States, Proceedings of the National Academy of Sciences 110:44 (Oct. 29, 2013) at 17,768-17,773, *available at* http://www.pnas.org/content/110/44/17768.full.pdf+html (supplemental appendices and tables *available at* http://www.pnas.org/content/suppl/2013/09/11/1304880110.DCSupplemental/sapp.pdf); Prasino Group, *Final Report For Determining Bleed Rates for Pneumatic Devices in British*

Columbia (Dec. 18, 2013), at 15, available at http://scek.ca/sites/default/files/ei-2014-01-final-report20140131.pdf.

[4] EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: Revisions under Consideration for Natural Gas and Petroleum Systems Uncertainty Estimates at 7, (April 2016), https://www.epa.gov/sites/production/files/2016-08/documents/revision_under_consideration_for_ghgi_ng_and_petro_uncertainty_4_2016.pdf

the oil and gas sector rose by 34%, relative to the prior estimate—which was itself far more recent than BLM's calculations.[5]

Even EPA's revised inventory likely underestimates the total amount of methane that is emitted by the oil and gas sector, because "bottom-up" analyses, such as the one BLM refers to here and EPA's inventory, consistently produce estimates far lower than those indicated by "top-down" studies that measure atmospheric concentrations of methane in areas with heavy oil and gas development, and estimate the oil and gas sector's contribution to those levels using isotopic analysis. One top-down analysis of emissions of Colorado's Denver-Julesberg Basin estimates that 2.6% to 5.6%. of all methane extracted during natural gas drilling is emitted to the atmosphere.[6] Another study of Utah's Uinta Basin indicated an emission rate of 6% to 12%.[7] Peer-reviewed studies that have compared bottom-up and top-down studies have recognized that top-down studies consistently produce higher estimates, and indicate likely underestimates in bottom-up studies.[8]

BLM recalculate its emission estimates using more recent data, and BLM must address whether the resulting estimates are consistent with the emissions estimates provided by these top-down studies.

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[5] See, e.g., Envt'l Def. Fund, New EPA Stats Confirm: Oil & Gas Methane Emissions Far Exceed Prior Estimates (Apr. 15, 2016), https://www.edf.org/media/new-epa-stats-confirm-oilgas-methane-emissions-far-exceed-prior-estimates; Gina McCarthy, Remarks on Climate Action at CERA in Houston, Texas (Feb. 24, 2016), available at https://yosemite.epa.gov/opa/admpress.nsf/8d49f7ad4bbcf4ef852573590040b7f6/5c432a7068e191e985257f630054fea8!OpenDocument (acknowledging that "methane emissions from existing sources in the oil and gas sector are substantially higher than we previously understood").

[6] Gabrielle Pétron et al., A New Look at Methane & Non-Methane Hydrocarbon Emissions from Oil and Natural Gas Operations in the Colorado Denver-Julesburg Basin, 119 J. Geophysical Research 6836, 6850 (2014), available at http://onlinelibrary.wiley.com/doi/10.1002/2013JD021272/epdf.

[7] Anna Karion et al., Methane Emissions Estimate from Airborne Measurements Over a Western United States Natural Gas Field, 40, Geophysical Research Letters 4393, 4393 (2013), available at http://onlinelibrary.wiley.com/doi/10.1002/grl.50811/full.

[8] A.R. Brandt et al., Methane Leaks from North American Natural Gas Systems, 343 Science 733 (2014), available at http://www.novim.org/images/pdf/ScienceMethane.02.14.14.pdf (comaring top-down and bottom-up estimates); *see also* Clean Air Task Force, NRDC, and Sierra Club, *Waste Not*: Common Sense Ways to Reduce Methane Pollution from the Oil and Natural Gas Industry at 9-11 (Jan. 2015), http://catf.us/resources/publications/files/WasteNot.pdf

V. The EA Improperly Relies on Best Management Practices without Assessing Their Efficacy

The EA contends that the "stipulations and Best Management Practices… developed through the RMP process" will "reduce/minimize the anticipated impacts associated with the projected development to acceptable levels below the significance thresholds." EA at 3. BLM states that it "*may*" require compliance with BMPs as conditional of approval of future applications for permits to drill. EA at 75.

However, BLM has never taken a hard look at the efficacy in practice of these BMPs, nor the rate of adherence thereto, even when BMPs are incorporated into conditions of approval. As explained by BLM's Handbook on Planning for Fluid Mineral Resources, it is not enough for BLM to identify mitigation measures: BLM must take a hard look at "The residual impacts that would remain following the application of the mitigation measures ... *i.e.*, effectiveness of mitigation measures in ameliorating potential impacts."[9] *See New York v. Nuclear Regulatory Comm'n*, 681 F.3d 471, 481 (D.C. Cir. 2012) ("merely pointing to [a] compliance program is in no way sufficient to support a scientific finding" of no "significant environment[al] impact."). BLM has not provided such an analysis. Even in formulating Onshore Order #8, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," BLM's NEPA analysis was "not intended to analyze the effects that may result from actual hydraulic fracturing activities," and instead only considered the incremental effects of the "procedures" the rule would require "prior to, during, and subsequent to hydraulically fracturing an oil and gas well," such as performing a cement evaluation log.[10] Of course, even that order has been stayed by litigation and is subject to separate agency review.

VI. The Finding of No Significant Impact Is Unsupported, and A Full EIS Is Required

The EA fails to even offer an estimate of the number of well that would foreseeably be drilled on the 73,000 acres at issue, and provides no reasoned analysis of the potential severity of impacts. The EA asserts that any impacts will be mitigated, but neither the EA nor the material incorporated by reference provide an investigation of the potential mitigations' efficacy. Without discussing what the impacts will be or how well they will be reduced, BLM offers no basis for affirmatively and definitively concluding that they will be insignificant. Accordingly, a full EIS is required.

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[9] Planning for Fluid Mineral Resources at III-8.

[10] BLM, Environmental Assessment: Proposed Hydraulic Fracturing Rule, at 4, https://www.regulations.gov/contentStreamer?documentId=BLM-2013-0002-0003.

Sincerely,

Nathan Matthews
Staff Attorney
Sierra Club
2101 Webster Street, Suite 1300
Oakland, CA 94612
415.977.5695
nathan.matthews@sierraclub.org

From: Nathan Matthews
To: BLM_WY_HDD_Nov_Parcels@blm.gov
Subject: Fourth Quarter 2017 Lease Parcels
Date: Thursday, May 25, 2017 12:32:19 AM
Attachments: SierraClub_Comment_Q4_2017_WY_Leases.pdf

Please accept the attached comment of Sierra Club, and please let me know if you have any difficulty opening the attachment.

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SIERRA CLUB

May 24, 2017

Tyler Morrison
Bureau of Land Management
P.O. Box 2407
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Email: BLM_WY_HDD_Nov_Parcels@blm.gov

Submitted via email

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[1] http://www.nrel.gov/docs/fy16osti/62820.pdf; *but see* https://www.epa.gov/sites/production/files/2016-08/documents/revision_under_consideration_for_ghgi_ng_and_petro_uncertainty_4_2016.pdf at 2 ("For natural gas systems, calculations are commonly more complex than simply multiplying an emission factor by an activity factor.").

[2] EPA, Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry: Background Technical Support Document at 47 (Apr. 12, 2010), *available at* https://www.epa.gov/sites/production/files/2015-05/documents/subpart-w_tsd.pdf.

[3] *See, e.g*., *See* Allen, *et al.*, Measurements of methane emissions at natural gas production sites in the United States, Proceedings of the National Academy of Sciences 110:44 (Oct. 29, 2013) at 17,768-17,773, *available at* http://www.pnas.org/content/110/44/17768.full.pdf+html (supplemental appendices and tables *available at* http://www.pnas.org/content/suppl/2013/09/11/1304880110.DCSupplemental/sapp.pdf); Prasino Group, *Final Report For Determining Bleed Rates for Pneumatic Devices in British*

Columbia (Dec. 18, 2013), at 15, available at http://scek.ca/sites/default/files/ei-2014-01-final-report20140131.pdf.

[4] EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: Revisions under Consideration for Natural Gas and Petroleum Systems Uncertainty Estimates at 7, (April 2016), https://www.epa.gov/sites/production/files/2016-08/documents/revision_under_consideration_for_ghgi_ng_and_petro_uncertainty_4_2016.pdf

the oil and gas sector rose by 34%, relative to the prior estimate—which was itself far more recent than BLM's calculations.[5]

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BLM recalculate its emission estimates using more recent data, and BLM must address whether the resulting estimates are consistent with the emissions estimates provided by these top-down studies.

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[7] Anna Karion et al., Methane Emissions Estimate from Airborne Measurements Over a Western United States Natural Gas Field, 40, Geophysical Research Letters 4393, 4393 (2013), available at http://onlinelibrary.wiley.com/doi/10.1002/grl.50811/full.

[8] A.R. Brandt et al., Methane Leaks from North American Natural Gas Systems, 343 Science 733 (2014), available at http://www.novim.org/images/pdf/ScienceMethane.02.14.14.pdf (comaring top-down and bottom-up estimates); *see also* Clean Air Task Force, NRDC, and Sierra Club, *Waste Not*: Common Sense Ways to Reduce Methane Pollution from the Oil and Natural Gas Industry at 9-11 (Jan. 2015), http://catf.us/resources/publications/files/WasteNot.pdf

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The EA contends that the "stipulations and Best Management Practices… developed through the RMP process" will "reduce/minimize the anticipated impacts associated with the projected development to acceptable levels below the significance thresholds." EA at 3. BLM states that it "*may*" require compliance with BMPs as conditional of approval of future applications for permits to drill. EA at 75.

However, BLM has never taken a hard look at the efficacy in practice of these BMPs, nor the rate of adherence thereto, even when BMPs are incorporated into conditions of approval. As explained by BLM's Handbook on Planning for Fluid Mineral Resources, it is not enough for BLM to identify mitigation measures: BLM must take a hard look at "The residual impacts that would remain following the application of the mitigation measures ... *i.e.*, effectiveness of mitigation measures in ameliorating potential impacts."[9] *See New York v. Nuclear Regulatory Comm'n*, 681 F.3d 471, 481 (D.C. Cir. 2012) ("merely pointing to [a] compliance program is in no way sufficient to support a scientific finding" of no "significant environment[al] impact."). BLM has not provided such an analysis. Even in formulating Onshore Order #8, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," BLM's NEPA analysis was "not intended to analyze the effects that may result from actual hydraulic fracturing activities," and instead only considered the incremental effects of the "procedures" the rule would require "prior to, during, and subsequent to hydraulically fracturing an oil and gas well," such as performing a cement evaluation log.[10] Of course, even that order has been stayed by litigation and is subject to separate agency review.

VI. The Finding of No Significant Impact Is Unsupported, and A Full EIS Is Required

The EA fails to even offer an estimate of the number of well that would foreseeably be drilled on the 73,000 acres at issue, and provides no reasoned analysis of the potential severity of impacts. The EA asserts that any impacts will be mitigated, but neither the EA nor the material incorporated by reference provide an investigation of the potential mitigations' efficacy. Without discussing what the impacts will be or how well they will be reduced, BLM offers no basis for affirmatively and definitively concluding that they will be insignificant. Accordingly, a full EIS is required.

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[9] Planning for Fluid Mineral Resources at III-8.

[10] BLM, Environmental Assessment: Proposed Hydraulic Fracturing Rule, at 4, https://www.regulations.gov/contentStreamer?documentId=BLM-2013-0002-0003.

Sincerely,

Nathan Matthews
Staff Attorney
Sierra Club
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415.977.5695
nathan.matthews@sierraclub.org

From:	Nathan Matthews
To:	BLM_WY_HDD_Nov_Parcels@blm.gov
Subject:	Fwd: Fourth Quarter 2017 Lease Parcels
Date:	Thursday, May 25, 2017 12:58:35 AM
Attachments:	SierraClub_Comment_Q4_2017_WY_Leases.pdf

---------- Forwarded message ----------
From: Nathan Matthews <nathan.matthews@sierraclub.org>
Date: Wed, May 24, 2017 at 9:31 PM
Subject: Fourth Quarter 2017 Lease Parcels
To: BLM_WY_HDD_Nov_Parcels@blm.gov

Please accept the attached comment of Sierra Club, and please let me know if you have any difficulty opening the attachment.

--

Nathan Matthews
Staff Attorney
Sierra Club Environmental Law Program

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(415) 977-5695 <tel:(415)%20977-5695>
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SIERRA CLUB

May 24, 2017

Tyler Morrison
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407
Email: BLM_WY_HDD_Nov_Parcels@blm.gov

Submitted via email

Re: Fourth Quarter 2017 Lease Parcels

The Sierra Club's submits the following comments regarding the Bureau of Land Management ("BLM") High Desert District's proposed fourth quarter 2017 oil and gas lease sale and the Environmental Assessment ("EA") and Finding of No Significant Impact ("FONSI") for this sale. The EA fails to take the hard look that the National Environmental Policy Act ("NEPA") requires, and fails to support the conclusion that the leases will not have significant impacts. BLM must provide a more thorough analysis, including a full Environmental Impact Statement ("EIS"), before conducting the lease sale.

Sierra Club is America's largest and most influential grassroots environmental organization, with more than 2.4 million members and supporters nationwide. Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives.

I. BLM Has Not Demonstrated A Need for the Leases

The EA states that it is offering the leases "to provide for exploration and development of additional oil and gas resources to help meet the nation's need for energy sources." EA at 2. BLM does not appear to have conducted or provided any analysis of whether oil and gas that might be produced from these leases, from the High Desert District, or from BLM lands in

general is, in fact, necessary to meet the nation's energy needs. Absent any showing of a need for this oil and gas, BLM cannot claim that the leases are necessary to satisfy that need.

Furthermore, the EA is mistaken in asserting that the leases are "needed to meet the requirements of" the Federal Land Management Policy Act ("FLPMA"), the Mineral Leasing Act ("MLA"), or the governing resource management plans. FLPMA's incorporation of "the principles of multiple use and sustained yield", 43 U.S.C. 1712(c)(1), does not preclude BLM from declining to offer leases for any particular planning area or portion thereof. The Tenth Circuit has squarely held that FLPMA does not even permit BLM to refuse to consider closing even large portions of planning units to leasing:

> BLM's obligation to manage for multiple use does not mean that development *must* be allowed on [a particular piece of public lands]. Development is a *possible* use, which BLM must weigh against other possible uses – including conservation to protect environmental values, which are best assessed through the NEPA process. Thus, an alternative that closes the [proposed public lands] to development does not necessarily violate the principle of multiple use, and the multiple use provision of FLPMA is not a sufficient reason to exclude more protective alternatives from consideration.

New Mexico ex rel. Richardson v. Bureau of Land Mgmt., 565 F.3d 683, 710 (10th Cir. 2009).

The keystone of multiple use is to "take[] into account the long-term needs of future generations for renewable and nonrenewable resources." 43 U.S.C. § 1702(3). Here, withholding the leases is consistent with, rather than contrary to, the long-term needs. In addition, substantial portions of the High Desert District area are already leased. Insofar as FLPMA requires some accommodation of fossil fuel extraction on federal lands, that accommodation has already been provided, as the planning areas have been open to such extraction throughout their history, substantial portions are already leased, and development of those leases will likely continue even if areas are entirely closed to further leasing. FLPMA's principle of "multiple use" must be understood in light of the FLPMA obligation to prevent "unnecessary or undue degradation," 43 U.S.C. § 1732(b). Because BLM has not shown any need for additional fossil fuel leasing and development, and degradation caused by such development would be unnecessary and undue.

Nor does the Mineral Leasing Act preclude no-lease alternatives. Courts have consistently held that section 226 of the MLA provides BLM with the discretion to decline to issue leases. *See, e.g., Udall v. Tallman*, 30 U.S. 1, 4 (1965), *Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1229-30 (9th Cir. 1988). *See also Ash Creek Min. Co. v. Lujan*, 969 F.2d 868, (10th Cir. 1992) (affirming

that federal courts lack authority to order federal lands to be leased and "the decision to offer the lands in question for competitive leasing would be in the sole discretion of the Secretary. MLA § 2(a), [30] U.S.C. § 201").

II. The EA Mischaracterizes and Fails to Meaningfully Compare the Action and No-Action Alternatives.

NEPA requires BLM to "'rigorously explore and objectively evaluate' all reasonable alternatives to a proposed action, in order to compare the environmental impacts of all available courses of action." *New Mexico ex rel. Richardson*, 565 F.3d at 703 (quoting 40 C.F.R. § 1502.14). NEPA analysis must clearly delineate the consequences of choosing one action over another.

Here, the no action alternative will prevent all oil and gas drilling on 72,884.37 acres of federal land with a range of important environmental values, including the fact that more than half of this land is within "priority habitat management areas." EA at 2. On the other hand, offering these leases for sale will foreseeably lead to development of this acreage; at a minimum, it will allow drillers to require rights that limit BLM's future ability to prohibit or control oil and gas extraction.

The EA, however, inappropriately suggests that the choice between these alternatives may have little impact on the level of development. BLM argues that the no action alternative would not actually prevent development, because it would not prevent *future* leasing in these areas. EA at 6. Such future leasing is in no way a foregone conclusion: any such future leasing proposal would require the same hard look and reasoned choice BLM must undertake now. BLM cannot fatalistically claim that it will allow harms to occur eventually, so it might as well allow them now.

Equally inappropriately, the EA repeatedly downplays the impact of issuing the leases. The EA contends that drilling "an oil or gas well on a lease is not permitted until the lessee or operator secures approval of an Application for Permit to Drill," such that "issuance of oil and gas leases is strictly an administrative action, which, in and of itself, does not cause or directly result in any surface disturbance." EA at 4; *see also* EA at 62. Leasing—especially where, as here, the leases do not have broad "no surface occupancy" stipulations—does. however grant rights to the lessees, and limits BLM's sweeping authority to condition or flatly prohibit future activity. EA at 7. Relinquishing this authority is an "irretrievable commitment of resources" that requires a full NEPA analysis. *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 937 F. Supp. 2d 1140, 1153 (N.D. Cal. 2013).

III. NEPA Requires A Hard Look at Foreseeable Quantitative and Site-Specific Impacts

NEPA requires federal agencies to take a hard look at environmental impacts at the earliest possible time, and this analysis must include all reasonably foreseeable impacts. The EA here falls short, because it provides, in its own words, only a "generic" discussion of the impacts of developing the leases. Most notably, the EA does not provide any estimate of the number of wells likely to be drilled if the offered parcels are leased.

The EA argues that "the number of wells that could potentially be put into production under a full field development scenario as a result of offering the leases is unknown" because "[d]evelopment density (i.e., wells per square mile) and number of wells installed annually depend on a number of variables including market trends, technology available (vertical, directional, or horizontal), the geology of the hydrocarbon-bearing zone, and the application of Controlled Surface Use and No Surface Occupancy stipulations." EA at 68. However, BLM has a number of tools to predict—or in the case of stipulations, control—these factors. Indeed, BLM has already done so, in its reasonably foreseeable development scenario, which BLM continues to endorse as "accurate" and validated by "[c]urrent APD permitting trends." *Id.*

Here, BLM can use information about the leased parcels—including acreage, estimated oil and gas potential, proximity to necessary existing infrastructure, etc.—to provide useful predictions of the likely or potential scale of development. NEPA imposes an affirmative obligation to engage in "reasonable forecasting;" the existence of uncertainty does not justify BLM's broad refusal to provide more than "generic" discussion of the impacts of the action at issue.

IV. The EA Uses Outdated and Too Low Estimates of Air Emissions from Oil and Gas Activity

As noted above, the EA fails to estimate the amount of air pollution that would foreseeably result from development of the offered leases. The EA does refer to the discussion of air impacts in the ARMPA FEIS. EA at 67. That referenced discussion is not a substitute for NEPA review here, because it fails to describe the effects of the action actually under consideration: leasing these nearly 73,000 acres.

The one exception is that the EA offers some discussion of potential greenhouse gas emissions that would result from development of the leased acreage. EA at 71. This estimate does not appear to account for available information about the nominated parcels, such as BLM's assessment of the potential for oil and gas recovery. In addition, that discussion is flawed because it relies on outdated estimates of the amount of pollution emitted per unit of oil and gas activity.

Specifically, the EA—and the ARMPA portions it cites—rely on emissions estimates BLM published in 2010. *See* EA at 67. Since that time, EPA and other authoritative observers have drastically increased their emission estimates. EPA, like BLM, typically estimates emissions using a "bottom up" methodology that principally functions by multiplying "emission factor" estimates of emissions from individual activities, such as venting associated with completion of a single well, by "activity factors," estimates of those events' frequency. *See* Garvin Heath, *et al*., National Renewable Energy Laboratory, Estimating U.S. Methane Emissions from the Natural Gas Supply Chain at iv (August 2015) (describing these terms and methodology).[1]

However, the "emission factor" inputs BLM has used are taken from a *1995* EPA document. As EPA has recognized, those estimates were developed "when the industry practices were much different from now. In some cases, the emissions factors were developed using limited sample data and knowledge about the industry's operations (e.g., wells, compressors)."[2] More recent and accurate is available, and should have been used here. There have been numerous published, peer-reviewed studies providing more recent measurements of emissions, which BLM should have used.[3] For example, EPA, in preparing its most recent nationwide inventory of greenhouse gas emissions, "used multiple recently published studies as well as [greenhouse gas reporting program] Subpart W data to revise the [1990s era] emission factors and activity data for majority of the natural gas systems emission sources and many petroleum systems production segment emission sources."[4] Reflecting this improved data, EPA's estimate of methane emissions from

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the oil and gas sector rose by 34%, relative to the prior estimate—which was itself far more recent than BLM's calculations.[5]

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Sincerely,

Nathan Matthews
Staff Attorney
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From: Laura King
To: blm_wo_foia@blm.gov
Subject: FOIA Request: Notice of 20-Day Response Deadline Violation/Offer to Assist
Date: Thursday, May 25, 2017 12:16:24 PM
Attachments: Notice of Violation Zinke SO BLM WO.pdf

Dear Mr. Witt,

I am writing regarding the April 25, 2017 FOIA request by WildEarth Guardians seeking BLM records related to Secretary Zinke's Secretarial Order 3349. We have not received any communication from your office regarding this FOIA request. BLM is currently in violation of the FOIA's requirement to provide a "determination" within 20 days of receipt of the request. Please let us know if we can assist your office in any way in processing this request. I have attached a letter detailing our concerns and BLM's legal obligations. This letter will also be arriving by certified mail, return receipt requested. Thank you for your attention to this request.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

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Defending the West www.westernlaw.org

Via Electronic Mail and Certified Mail, Return Receipt Requested

May 25, 2017

Ryan Witt, FOIA Officer
Bureau of Land Management
IRM Governance Division
Attn: FOIA, Washington Office Coordinators
MS-WO-640
1849 C Street, NW
Washington, DC 20240
blm_wo_foia@blm.gov

RE: Freedom of Information Act Request; Notice of 20-day Response Deadline Violation/Offer to Assist

Dear Mr. Witt:

I am writing regarding the April 25, 2017 FOIA request by WildEarth Guardians ("Guardians") seeking BLM records related to Secretary of the Interior Ryan Zinke's Secretarial Order 3349 ("SO 3349"). This FOIA request was sent by email and certified mail.

Guardians requested all agency records pertaining to:

- Section 5(c)(ii) of SO 3349, ordering the Director of the BLM to "review the final rule entitled, 'Waste Prevention, Production Subject to Royalties, and Resource Conservation,' 81 Fed. Reg. 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O."
- Section 5(c)(v) of SO 3349, ordering that "[w]ithin 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources."; and
- Section 5(b)(i) of SO 3349, ordering that "[w]ithin 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O. . . ."

Pursuant to FOIA, 5 U.S.C. § 552(a)(6)(A)(i), a "determination" on Guardians' FOIA request is due 20 business days after your receipt of the request. A determination consists of (1) a decision to comply or not comply with the request, (2) the reasons for the decision, (3) and, in the case of an adverse decision, a description of the requester's rights to an appeal. *Id.* BLM has not yet provided a determination. Indeed, we have not received any communication from your office regarding this FOIA request.

FOIA allows an agency to extend the determination deadline beyond 20 workdays only with "written notice to the person making such request setting forth unusual circumstances for the requested extension and the date on which a determination is expected to be made. No such notice shall specify a date that would result in an extension for more than ten working days . . . ." 5 U.S.C. § 552(a)(6)(B)(i). "Unusual circumstances" may exist if the agency must search for or collect records from field offices or other establishments; in the case of voluminous records; or in cases requiring consultation with another agency or between components of the same agency. 5 U.S.C. § 552(a)(6)(B)(iii). Here, BLM has provided neither an assertion of an "unusual circumstance" that would delay a decision on this request, nor an estimated date of completion.

At this time, Guardians is not exercising our legal option under FOIA to file suit to compel BLM's compliance with FOIA's time limits. 5 U.S.C. § 552(a)(6)(C). However, be informed that time is of the essence in this matter. SO 3349 is designed to implement the March 28, 2017 Executive Order, which, among other things, instructs that agencies "review all existing regulations, orders, guidance documents, policies, and other similar agency actions . . . that potentially burden the development or use of domestically produced energy resources," Section 2(a), and specifically directs the Department of the Interior to review the BLM's Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule, Section 7(b)(iv). These and other directives, implemented by SO 3349, have the potential to radically change the way that the Department of the Interior manages energy development on public lands. Guardians intends to use the requested information to better understand the potentially enormous changes in public lands policy and management that will flow from the Executive Order and the Secretarial Order, and to educate the public on these matters. The rationale driving this request is to inform the public about these present issues, and Guardians' need to access the requested records is therefore very time sensitive.

As you are aware, the FOIA reflects a "profound national commitment to ensuring an open Government." Presidential Memorandum for Heads of Executive Departments and Agencies Concerning the Freedom of Information Act, 74 Fed. Reg. 4683 (Jan. 21 2009). Agencies are to "adopt a presumption in favor of disclosure." *Id.* Specifically:

> The Freedom of Information Act should be administered with a clear presumption: In the face of doubt, openness prevails. The Government should not keep information confidential merely because public officials might be embarrassed by disclosure, because errors and failures might be revealed, or because of speculative or abstract fears. Nondisclosure should never be based on an effort to protect the personal interests of Government officials at the expense of those they are supposed to serve. In responding to requests under the FOIA, executive branch agencies should act promptly and in a spirit of cooperation,

> recognizing that such agencies are servants of the public. . . . The presumption of disclosure should be applied to all decisions involving FOIA.

Id.

If your office takes the position that any portion of the requested records is exempt from disclosure, we request that you provide us with an index of those records as required under *Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973), with sufficient specificity "to permit a reasoned judgment as to whether the material is actually exempt under FOIA." *Founding Church of Scientology v. Bell*, 603 F.2d 945, 959 (D.C. Cir. 1979). A *Vaughn* index must (1) identify each document or portion of document withheld; (2) state the statutory exemption claimed; and (3) explain how disclosure of the document or portion of document would damage the interests protected by the claimed exemption. *See Citizens Comm'n on Human Rights v. FDA*, 45 F.3d 1325, 1326 n.1 (9th Cir. 1995). "The description and explanation the agency offers should reveal as much detail as possible as to the nature of the document," in order to provide "the requestor with a realistic opportunity to challenge the agency's decision." *Oglesby v. U.S. Dept. of Army*, 79 F.3d 1172, 1176 (D.C. Cir. 1996).

Notably, it is black-letter FOIA law that the burden is on the agency to show that any withheld information is exempt from disclosure. 5 U.S.C. § 552(a)(4)(B) ("[T]he burden is on the agency to sustain its action [of withholding documents under any of the FOIA exemptions]."); *Jordan v. DOJ*, 591 F.2d 753, 772-73 (D.C. Cir. 1978 (en banc) ("The agency bears the full burden of proof when an exemption is claimed to apply."). The quality of an agency's *Vaughn* index has been found to be essential to the agency's ability to meet this obligation. *See, e.g., Rein v. U.S. Patent & Trademark Office*, 553 F.3d 353, 368 (4th Cir. 2009) ("Our review leads us to conclude the Agencies' descriptions of many of the challenged documents lack the specificity and particularity required for a proper determination of whether they are exempt from disclosure."); *People of Cal. ex rel. Brown v. EPA*, No. 07-2055, 2009 WL 273411, at *4 (N.D. Cal. Feb. 4, 2009) (ordering in camera review where agency's *Vaughn* index did not provide enough information for court to evaluate agency's use of privilege).

Additionally, BLM is obligated to release any reasonably segregable, non-exempt portions of the requested records. 5 U.S.C. § 552(b) ("Any reasonably segregable portion of a record shall be provided to any person requesting such record after deletion of the portions which are exempt under this subsection."); *see, e.g., EPA v. Mink*, 410 U.S. 73, 91 (1973) (refusing to extend deliberative process privilege protection to "factual material otherwise available on discovery merely [on the basis that] it was placed in a memorandum with matters of law, policy or opinion").

By this letter, we are offering to assist your office in any way possible to facilitate the BLM's prompt and open determination on our request. Please let us know if we can provide any additional information or answer any questions to help facilitate the processing of this FOIA request.

However, please be aware that legal action may be required if a determination is not promptly forthcoming. Again, it is our client's legal option under FOIA to file suit to compel compliance

with the FOIA's time limits and/or to challenge the constructive denial of the request. 5 U.S.C. § 552(a)(6)(A)(i), (a)(6)(C)(i), (a)(4)(B).

As we evaluate the need to seek judicial review of this matter, it would be useful to know whether you have implemented a "first-in/first-out" system for processing a backlog of FOIA requests and, if so, the number of requests in line ahead of this one.

Thank you for your attention to this matter. Again, please do not hesitate to contact us if you have any questions or need any assistance in the processing of our FOIA request.

Sincerely,



Laura King
Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, MT 59601
(406) 204-4852
king@westernlaw.org

On behalf of:

Jeremy Nichols
Climate & Energy Program Director
WildEarth Guardians
2590 Walnut Street
Denver, CO 80205
(303) 437-7663
jnichols@wildearthguardians.org

From: Crockett, Allen
To: Peter Hart
Cc: Tibbetts, Gloria; Sloan Shoemaker; Michael Freeman; Nada Culver; matt.hccacb
Subject: Re: FW: DOI-BLM-CO-N040-2017-0084-CX
Date: Tuesday, May 30, 2017 2:49:59 PM

Received.

On Tue, May 30, 2017 at 12:27 PM, Peter Hart <peter@wildernessworkshop.org> wrote:

Allen – Please accept these comments on Gunnison Energy's request for a suspension of oil and gas leases COC 69999, 70000, and 70002. For reasons stated in the comments, the request should be denied.

Please send confirmation of receipt, and please keep us updated on any BLM decision related to this suspension request.

Thanks,

Peter Hart
Staff Attorney/Conservation Analyst

Wilderness Workshop
PO Box 1442
Carbondale, CO 81623
www.wildernessworkshop.org <http://www.wildernessworkshop.org/>
970.963.3977 (office)
303.475.4915 (cell)

Cc- Gloria Tibbetts, Sloan Shoemaker, Mike Freeman, Nada Culver, Matt Reed

--

Allen B. Crockett, Ph.D., J.D.

Bureau of Land Management

Colorado River Valley Field Office

2300 River Frontage Road

Silt, Colorado 81652

Phone 970-876-9005

Fax 970-876-9090

From:	maadams@blm.gov
To:	nada_culver@tws.org
Cc:	Ilse Harrison
Subject:	RE: Nevada Instruction Memorandum 2016-037
Date:	Thursday, June 8, 2017 12:34:51 PM
Attachments:	2017_00664_Final_Response.pdf IM NV-2016-037 Attachment 1 WO_IM 2010-117 Leasing Reform 3.28.pdf IM NV-2016-037 Attachment 2 Lease Process Table 2.18.pdf IM NV-2016-037 Attachment 3 Lease Sale District Office Checklist.pdf IM NV-2016-037 Attachment 4 Lease Sale Schedule 2017.pdf IM NV-2016-037 Attachment 5 Deferral Memorandum (example).pdf IM NV-2016-037 Attachment 6 DEFERRAL SPREADSHEET.pdf IM NV-2016-037_Final_Leasing_Review.pdf

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Ms. Culver,

The responsive records and final response letter for your request are attached.

Please let me know you are able to open these attachments.

Thank you,

Marguerite Adams
Acting for:

Michelle Piland
FOIA/PA Coordinator
Bureau of Land Management
Nevada State Office
1340 Financial Blvd. Reno, NV 89502
Phone: 775-861-6496
Fax: 775-861-6688

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Nevada State Office
1340 Financial Boulevard
Reno, Nevada 89502-7147
http://www.blm.gov/nv

In Reply Refer To:
1278 (NV954)
EFTS No. BLM-2017-00664

JUN 07 2017

Via Electronic Mail

Nada Culver
1660 Wynkoop Street, #850.
Denver, CO 80202

Dear Ms. Culver:

This letter is the final response to your Freedom of Information Act (FOIA) submitted to the Bureau of Land Management on June 1, 2017, and assigned tracking number BLM-2017-00664; please cite this number on future correspondence. You requested:

"Nevada Instruction Memorandum 2016-037 (IM NV-2016-037)."

We have attached 30 pages responsive to your request, which are being released to you in their entirety.

Fees

We do not bill requesters for FOIA processing fees when their fees are less than $50.00, because the cost of collection would be greater than the fee collected. See 43 C.F.R. § 2.37(g). Therefore, there is no billable fee for the processing of this request.

Office of Government Information Services

The 2007 FOIA amendments created the Office of Government Information Services (OGIS) to offer mediation services to resolve disputes between FOIA requesters and Federal agencies as a non-exclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation. You may contact OGIS in any of the following ways: OGIS, NARA, 8601 Adelphi Road, College Park, Maryland 20740.6001; Email: ogis@nara.gov; Website; https://ogis.archives.gov; Telephone: 202.741.5770; Fax: 202.741.5769 or Toll.free: 1.877.684.6448. You also may seek dispute resolution services from our FOIA Public Liaison, Ryan Witt at (202) 912.7562. Using OGIS services does not affect the timing of filing an appeal with the Department's FOIA & Privacy Act Appeals Officer.

Records Not Covered by the FOIA (FOIA Exclusions)

Beginning October 1, 2012, the inclusion of the following statement is mandatory for all BLM FOIA response letters: For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

Should you have any questions, please contact Michelle Piland, BLM Nevada's FOIA Specialist at (775) 861.6496, or via email at NV_FOIA@blm.gov.

Sincerely,

Holly J. Vinall
Deputy State Director
Support Services

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240
http://www.blm.gov
May 17, 2010

In Reply Refer To:
1610/3100 (210/310) P

EMS TRANSMISSION 05/17/2010
Instruction Memorandum No. 2010-117
Expires: 09/30/2011

To: All Field Officials

From: Director

Subject: Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews

DD: 07/02/2010; 08/16/2010; 05/18/2011

Program Areas: Oil and Gas, Planning, and National Environmental Policy Act (NEPA).

Purpose: This Instruction Memorandum (IM) establishes a process for ensuring orderly, effective, timely, and environmentally responsible leasing of oil and gas resources on Federal lands. The leasing process established in this IM will create more certainty and predictability, protect multiple-use values when the Bureau of Land Management (BLM) makes leasing decisions, and provide for consideration of natural and cultural resources as well as meaningful public involvement.

Policy/Action: The following policy applies to the leasing of Federal minerals under BLM-administered surface,[i] state-owned surface, and private surface estates. The BLM does not manage leasing on tribal lands; therefore, this policy does not apply to tribal lands. In addition, sections I through III. F of this policy do not apply to the leasing of Federal minerals under lands managed by other Federal surface management agencies. Those sections, however, do apply to split estate lands within National Forest System (NFS) units if leasing decisions for such lands have not been analyzed in documentation prepared jointly by the U.S. Forest Service (FS) and the BLM for lands within the external boundaries[ii] of NFS units.

This policy (1) addresses land use plan review, state office standardization of lease stipulations, and adaptive management; (2) introduces the Master Leasing Plan concept; and (3) identifies process requirements for reviewing oil and gas leasing expressions of interest.[iii]

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future. The Department fulfills its broad-ranging missions through the work of its bureaus and offices,

including the BLM, the Bureau of Indian Affairs, the Bureau of Reclamation (BOR), the National Park Service (NPS), and the U.S. Fish and Wildlife Service (FWS).

As a land management agency with a multiple-use mission, the BLM will make land use decisions that sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The BLM recognizes that, in some cases, leasing of oil and gas resources may not be consistent with protection of other important resources and values, including units of the National Park System; national wildlife refuges; other specially designated areas; wildlife; and cultural, historic, and paleontological values. Under applicable laws and policies, there is no presumed preference for oil and gas development over other uses. In making its oil and gas leasing and development decisions, the BLM will consult and coordinate with other land and resource managers (Federal and non-Federal), as appropriate.

It is BLM policy to exercise its discretionary authorities, including its oil and gas leasing authority, through the use of an informed, deliberative process that includes—

- Communication with the public, tribal governments, and Federal, state, and local agencies;
- Consideration of current science and other available data;
- Compliance with existing laws, regulations, and policies; and
- Consideration of important resources and values.

To that end, state offices will continue to respond to expressions of interest from industry in leasing particular parcels, but will also take the initiative to strategically plan for leasing and development in areas that have the potential for oil and gas development but have not been fully leased.

Upon issuance, this policy will guide land use planning and leasing procedures for future parcels not currently under review by the field offices as of the date of this IM. For parcels currently under review by the field offices, State Directors will determine whether it is appropriate to apply any part of this policy to those parcels (i.e., a Master Leasing Plan or the Interdisciplinary Review of Lease Sale Parcels process, including potential site visits and a closer look at program-specific guidance).

Each state office will develop an implementation plan and timeline to execute this IM, as explained in section IV of this IM, and will submit this implementation plan and timeline to the Director for review and approval by August 16, 2010. Lease parcels undergoing review in conformance with this IM and a Director-approved implementation plan will no longer be subject to the leasing briefing paper process set forth in the memorandum from the Acting Director, dated February 13, 2009. State offices will also submit a post-implementation report**,** as explained in section IV of this IM, to the Washington Office (WO) by May 18, 2011.

I. Land Use Planning – Adequacy, Consistency, and Adaptive Management

A. <u>Resource Management Plan Adequacy</u>

As outlined in the Land Use Planning Handbook (H-1601-1), the Resource Management Plan (RMP) underlies fluid minerals leasing decisions. Through RMP effectiveness monitoring and periodic RMP evaluations, state and field offices will examine resource management decisions to determine whether the RMPs adequately protect important resource values in light of changing circumstances, updated policies, and new information (H-1601-1, section V, A, B). The results of such reviews and evaluations may require field office resource information updates and land use plan maintenance, amendment, or revision. In some cases state and field office staff may determine that the public interest would be better served by further analysis and planning prior to making any decision whether or not to lease. For instance, new information may be available or relevant environmental conditions may have changed (e.g., species habitat and population levels may have decreased or wilderness characteristics may have become evident). In such circumstances, additional review may better inform the decisionmaker. While an RMP may designate land as "open" to possible leasing, such a designation does not mandate leasing.

B. Stipulation Consistency

Each state office will form an Interdisciplinary Consistency Review Team(s) (IDCR Team) for lands under its jurisdiction. The primary purpose of the IDCR Team is to ensure that lease stipulations are written in a WO-approved format, stipulation language is consistent within each state office for the protection of similar resources or resource settings,[iv] and stipulations edge-match across administrative boundaries. As part of this consistency review, state offices will request review by the Office of the Solicitor, usually the Regional Solicitor's Office, to ensure the enforceability of existing, new, or revised lease stipulations.

To establish a baseline for this task and to aid the WO in development of updated stipulation consistency guidance, state offices are to provide copies of all lease stipulations currently used within the state to the WO, including RMP lease stipulations not currently in statewide stipulation databases. Stipulations must be provided in Microsoft Word format, organized by protected resource, and submitted to WO-310 (Jim Perry) via email by July 2, 2010.

The IDCR Teams will work with the field offices within their state(s) and across state administrative boundaries to ensure lease stipulations edge-match appropriately across BLM administrative boundaries and other appropriate units such as a species range or an ecoregion. Edge-matching will ensure similar stipulations align on each side of the boundary, except in the circumstances described in endnote 4. Coordination may be necessary with appropriate Federal, state, and local resource management agencies as well as BLM national program leads to help ensure common resource issues are addressed appropriately and consistently.

Field offices will maintain or amend RMPs to accommodate any changes in lease stipulations in accordance with the guidance found in the Land Use Planning Handbook (H-1601-1, sections 6H and 7B).

C. Adaptive Management

In applying an Adaptive Management approach[v] to oil and gas related activities to address changing resource conditions, RMPs and associated lease stipulations, including those lease stipulations developed at the national level, must conform to the *Exceptions, Waivers, and Modifications of Fluid Minerals Stipulations and Conditions of Approval, and Associated Rights-of-way Terms and Conditions* (WO-IM-2008-032, dated November 27, 2007, incorporated by reference into this IM).[vi] As appropriate, stipulations will use Adaptive Management principles, incorporate the best available science, and address changing resource conditions. Additionally, plan and lease stipulation "modification" criteria must also allow for an increasing level of environmental protection when changing circumstances warrant stronger measures to meet goals, objectives, and outcomes identified in RMPs.

Successful adaptive management is dependent on active monitoring. On September 30, 2009, the WO issued WO-IM-2009-224, *Use and Application of the Fluid Minerals Surface and Environmental Monitoring Program Element – MW,* incorporated by reference into this IM. The purpose of the WO-IM-2009-224 is to ensure adequate monitoring of oil and gas development. The IM requires field offices to conduct monitoring in conformance with approved decision documents and their associated NEPA documentation, assess environmental impacts from development, determine whether the BLM's standards are being met, and evaluate whether permit requirements are effective in achieving their desired intent. Congress has provided substantial monitoring funding to the BLM through the oil and gas program. Oil and gas environmental protection specialists, wildlife biologists, archaeologists, soil scientists, air resource specialists, and hydrologists are some of the resource specialists that are expected to be funded from 1310, 1711, 9131, or 9141 accounts to conduct program element MW monitoring site visits in support of the oil and gas program.

II. Master Leasing Plans

RMPs identify oil and gas planning decisions, such as areas closed to leasing, open to leasing, or open to leasing with major or moderate constraints (lease stipulations) based on known resource values and reasonably foreseeable oil and gas development scenarios. Many of the BLM's RMPs completed since 2005 also establish resource condition objectives and the general/typical best management practices that will be employed to accomplish these objectives in areas open to leasing. In some areas, however, additional planning and analysis may be necessary prior to new oil and gas leasing because of changing circumstances, updated policies, and new information. Criteria for determining whether such additional planning and analysis is warranted are listed below.

This policy introduces the Master Leasing Plan (MLP) concept as a mechanism for completing the additional planning, analysis, and decisionmaking that may be necessary for areas meeting the listed criteria. Field offices may be familiar with Master Development Plans (MDP) (e.g., Plans of Development (POD), Full-Field Development analysis documents, etc.), that support individual post-lease development decisions. Unlike the MDP, the MLP process will be conducted before lease issuance and will reconsider RMP decisions pertaining to leasing. Similar to the MDP, the MLP will analyze likely development scenarios and varying mitigation levels,

but at a less site-specific level than would typically be conducted in an MDP where a development plan has been fully defined by the operator(s).

The MLP process will be conducted through the NEPA process using an interdisciplinary team that will coordinate and/or consult with the public and other stakeholders that may be affected by the BLM's MLP decisions. The MLP will ordinarily be initiated as a land use plan amendment. However, if it is anticipated that the likely outcome of the MLP will not result in the creation of new lease stipulations or changes to existing RMP decisions warranting a plan amendment, it may not be necessary to initiate the MLP as a plan amendment. The MLP process may also be combined with a plan revision process if schedules permit.

The preparation of an MLP is required when all four of the following criteria are met:

- A substantial portion of the area to be analyzed in the MLP is not currently leased.
- There is a majority Federal mineral interest.
- The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.
- Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:
    - multiple-use or natural/cultural resource conflicts;
    - impacts to air quality;
    - impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or
    - impacts on other specially designated areas.

An MLP may also be completed under other circumstances at the discretion of the Field Manager, District Manager, or State Director.

The MLP should enable field offices to (1) evaluate in-field considerations, such as optimal parcel configurations and potential development scenarios; (2) identify and address potential resource conflicts and environmental impacts from development; (3) develop mitigation strategies; and (4) consider a range of new constraints, including prohibiting surface occupancy or closing areas to leasing.

A. <u>Identifying and Evaluating Potential Resource Conflicts in an MLP</u>

The following is a non-exhaustive list of important national and local resource issues that should be considered when developing an MLP:

- Ambient air quality and potential impacts, including cumulative impacts, to air quality from development.

- The effect of oil and gas leasing on lands that the BLM may identify as having wilderness characteristics and lands with special designations such as lands within the National Landscape Conservation System and Areas of Critical Environmental Concern.
- Special Recreation Management Areas.
- Nearby state, tribal, or other Federal agency lands, including NPS and FWS lands that could be adversely affected by BLM-authorized oil and gas development.
- Important cultural resources, including traditional cultural properties of importance to Native American tribes and historic trails.
- Scientifically significant paleontological resources.
- Fisheries and wildlife habitat, migration corridors, and rare plants.
- Status of visual resource inventories and appropriate designations of Visual Resource Management Classes.
- Watershed conditions, steep slopes, and fragile soils.
- Municipal watersheds and aquifers.
- Public health and safety (e.g., management of fluids and emissions).
- The ability to achieve interim and final reclamation standards (Gold Book, Chapter 6).

B. Potential MLP Decisions

As a general rule, resource protections identified through the MLP process will be addressed as new or modified plan decisions that may include lease stipulations for new leases and/or closing certain areas to leasing. For existing leases in the MLP area, new or modified plan decisions should be applied as conditions of approval, provided they are consistent with rights granted under the existing leases.[vii] The following are examples of other planning decisions that may be made through the MLP process with supporting NEPA analysis:

- Phased leasing.
- Lease stipulations including No Surface Occupancy, Timing Limitation, and Controlled Surface Use.
- Planned or required unitization of Federal lands.
- Phased development.
- Caps on new surface disturbance, pending acceptable interim or final reclamation.
- Best management practices, such as:
    - Use of existing infrastructure.
    - Multiple wells on a single pad.
    - Requirements to reduce or capture emissions.
    - Liquids gathering systems to centralized offsite production facilities.
    - Placement of all linear disturbances in corridors.
    - Extensive interim reclamation of roadway disturbance to the road surface and of pads to the wellhead.
    - Final reclamation restoring the landform and native plant community.

III. Lease Parcel Review and Lease Issuance Process

The purpose of lease parcel review by the field offices is to determine the conditions under which leasing and eventual development should occur if allowed to proceed. Lease parcel reviews for expressions of interest will be conducted and documented simultaneously with the NEPA compliance process. The goal of the parcel review and NEPA compliance process is to (1) determine parcel availability; (2) evaluate existing stipulations; (3) identify new stipulations, if applicable; (4) provide for public involvement; and (5) develop detailed background information for the NEPA compliance process.

A. Parcel Review Timeframes

State offices will continue to hold lease sales four times per year, as required by the Mineral Leasing Act, section 226(b)(1)(A), and 43 CFR 3120.1-2(a), when eligible lands are determined by the state office to be available for leasing.[viii] However, state offices will develop a sales schedule with an emphasis on rotating lease parcel review responsibilities among field offices throughout the year to balance the workload and to allow each field office to devote sufficient time and resources to implementing the parcel review policy established in this IM. State offices will extend field office review timeframes, as necessary, to ensure there is adequate time for the field offices to conduct comprehensive parcel reviews.

B. State Office Leasing Targets

When developing leasing performance targets/units of accomplishment for program element EI (Develop and Issue Federal Fluid Mineral Leases), state and field offices will take into account the process requirements identified in this IM and adjust the targets/units of accomplishment as appropriate. State and field offices will ensure that the parcel review process is efficient, yet allows adequate time for a thorough and complete review.

C. Interdisciplinary Review of Lease Sale Parcels

Field offices will form an Interdisciplinary Parcel Review Team (IDPR Team) of resource specialists to review lease sale parcels and ensure compliance with NEPA (see III. E. NEPA Compliance Documentation, below) and other legal and policy requirements. The IDPR Team will include subject matter experts for the resources potentially affected by leasing. When appropriate, the IDPR Team should consider including staff specialists from other agencies when lands and/or resources that are administered by those agencies could be impacted by future development on the lease parcels under review. To benefit from the team's skills, experience, and expertise, the parcel reviews should be conducted in a group setting, thereby encouraging group discussion and interaction. Data and recommendations should be reviewed and discussed as a team, allowing parcels to be compared and contrasted in an open discussion. The IDPR Team must be familiar with current oil and gas development technologies and impacts, and should periodically visit areas of existing oil and gas development as a team to gain a better understanding of the potential impacts of development on prospective lease sale parcels. The IDPR Team will ensure the following steps are performed for the review of parcels in each lease sale, including review of split estate parcels where the mineral estate is federally owned. In instances where an MLP has been completed, the IDPR Team may determine that the MLP

constituted a sufficient review. Managers will ensure team members have sufficient time to conduct these reviews.

1. Gather and Assess Existing Information:

Field offices will gather and evaluate existing environmental resource information and compliance documentation (e.g., NEPA analysis, Endangered Species Act (ESA) and National Historic Preservation Act (NHPA) resource data and consultation) upon which a leasing decision may be based. The field offices will then determine the need for additional information and develop strategies to obtain any data that may be required to support a leasing decision. Generally speaking, it is anticipated that this information will have been developed at the land use planning stage or subsequently, such as through an MLP process, if any has been conducted. However, in some circumstances it may be necessary to defer parcels from leasing while additional resource information is collected and analyzed.

2. Plan Conformance and Adequacy:

Field offices will determine whether leasing the parcel is in conformance with the RMP. In addition, the field office will evaluate whether oil and gas management decisions identified in the RMP (including lease stipulations) are still appropriate and provide adequate protection of resource values (including, but not limited to, biological, cultural, visual, and socioeconomic resource values). If the lease stipulations do not provide adequate resource protection, it may be necessary to develop new lease stipulations or revise existing ones. A lease stipulation may be revised consistent with modification criteria found in the RMP, or as necessary given conditions or issues not anticipated in the RMP.

Generally, the creation or revision of a lease stipulation that is not clearly consistent with the terms, conditions, and decisions of the approved RMP, or a stipulation that is revised to change from a moderate constraint to a major constraint may not be in conformance with the RMP (43 CFR 1601.0-5(b)); therefore, a plan amendment may be necessary. New or revised stipulations must be based on best available information and science and must be reviewed by the Department of the Interior, Office of the Solicitor.

Planning decisions for oil and gas leasing are defined in the Land Use Planning Handbook as (1) open to leasing; (2) open to leasing subject to moderate constraints; (3) open to leasing subject to major constraints; or (4) closed to leasing (H-1601-1, Land Use Planning Handbook, Appendix C, 23). If a proposed modification to the terms of a stipulation changes the extent, but does not result in a new planning decision (e.g., the timing limitation protective radius increases from 2 miles to 3 miles, but the stipulation remains a moderate constraint), no plan amendment is required. The site-specific NEPA compliance documentation for the lease, however, may need to analyze the proposed stipulation modification if this analysis has not already been conducted in the NEPA documentation associated with the land use plan (see section III.E below; see also WO-IM-2008-032). Conversely, if a proposed change in the terms of a stipulation would change the degree of the constraint from moderate to major or would result in the creation of a new lease stipulation not contemplated in the RMP, a plan amendment would likely be required and, if necessary, the parcel(s) should be withheld from leasing until the plan is amended. For example,

if nesting habitat formerly identified in the RMP for protection with a timing limitation stipulation (moderate) would now be protected with a No Surface Occupancy (NSO) stipulation (major), a NEPA analysis appropriate for a land use plan amendment would be required. Similarly, if a proposed restriction would limit development to 1 well location per 640 acres when the RMP analyzed development of 16 well locations per 640 acres (substantial change not analyzed in the RMP and its associated NEPA documentation), NEPA analysis appropriate for a land use plan amendment would also be required in this instance.

Resources on the ground change over time (e.g., new leks are occupied while others are abandoned). Prior to the lease sale, the field office will review its latest inventory information and apply protective lease stipulations to new leases as provided for in the RMP. Applying an existing RMP lease stipulation (e.g., NSO around a lek) to a proposed new lease, based on new inventory data (e.g., the discovery of a new lek), is considered to be in conformance with the RMP and is addressed through plan maintenance. Plan maintenance is the appropriate planning tool even if the land area where the new resource is found (e.g., new lek) had been designated in the RMP as covered by standard lease terms. See oil and gas plan maintenance examples in H-1601-1, Land Use Planning Handbook, VI, (H), 44.

3. Program-Specific Guidance:

Field offices will review parcels in light of the most current national and local program-specific guidance to determine availability of parcels for leasing and/or applicable stipulations (e.g., to address conservation strategies and protect archaeological resources, traditional cultural properties, paleontological resources, specially designated areas on or near BLM-administered lands, sensitive species, watersheds, fisheries and wildlife habitat, visual resources, air quality, and wilderness qualities).

4. Other Considerations:

There are other considerations that should be taken into account when determining the availability of parcels for lease. The following is a non-exhaustive list of considerations, further refinement of which may depend on the IDPR Team's review and site visits. Field offices should consider whether:

- There is a risk of drainage to Federal mineral resources due to development of nearby non-Federal parcels if the parcel is not leased (based upon a determination made by a Petroleum Engineer or Petroleum Geologist).
- In undeveloped areas, non-mineral resource values are greater than potential mineral development values.[ix]
- Stipulation constraints in existing or proposed leases make access to and/or development of the parcel or adjacent parcels operationally infeasible, such as an NSO parcel blocking access to parcels beyond it or consecutive and overlapping timing restrictions that do not allow sufficient time to drill or produce the lease without harm to affected wildlife resources.
- Parcel configurations would lead to unacceptable impacts to resources on the parcels or on surrounding lands and cannot be remedied by reconfiguring.

- The topographic, soils, and hydrologic properties of the surface will not allow successful final landform restoration and revegetation in conformance with the standards found in Chapter 6 of the Gold Book, as revised.
- Construction and use of new access roads or upgrading existing access roads to an isolated parcel would have unacceptable impacts to important resource values.
- Leasing would result in unacceptable impacts to the resources or values of any unit of the National Park System or national wildlife refuge.
- Leasing would result in unacceptable impacts to specially designated areas (whether Federal or non-Federal) and would be incompatible with the purpose of the designation.

5. Site Visits:

In light of changing resource values, new information, and current policy, the IDPR Team or a subset of the team will usually conduct site visits to validate existing data or gather new information in order to make an informed leasing recommendation. However, the site visits are not a substitute for acquiring the site-specific cultural or wildlife data that is typically gathered during the permit approval stage. Site visits are highly recommended in any case involving new leasing in an area not already under oil and gas development. It is anticipated that, at least initially, the majority of lease sale parcels under review will require site visits. For a parcel that is inaccessible due to location or other factors, it may be sufficient to conduct a review from a nearby vantage point or to use remote-sensing data (e.g., aerial photos, satellite imagery, and topographic maps). The IDPR Team will use data collected from site visits to evaluate the RMP oil and gas leasing management decisions, identify the resource values, evaluate the adequacy of associated stipulations in the RMP, and provide information for the NEPA compliance process. If there is a high level of confidence in the data available to evaluate the parcel, such as would result from the recent completion of an MLP, a site visit may not be necessary. The IDPR Team will document whether site visits occurred, or why not, and any findings as part of the administrative file.

6. Internal and External Coordination:

In order to achieve greater coordination and communication in managing shared landscapes, such as airsheds, viewsheds, watersheds, and soundscapes, state and field offices will coordinate and/or consult on the parcel review and NEPA analysis with stakeholders that may be affected by the BLM's leasing decisions.[x] Stakeholders may include parties such as:

- Federal agencies (e.g., FS, NPS, FWS, BOR, and U.S. Department of Defense).
- Adjacent BLM state and field offices, if lease nominations span or are close to administrative boundaries.
- National Landscape Conservation System managers.
- Tribal governments.
- State and local agencies (e.g., fish and game, environmental quality, and historic preservation).
- Local community stakeholders (e.g., managers of municipal watersheds and local parks).

7. Public Participation:

State and field offices will provide for public participation as part of the review of parcels identified for potential leasing through the NEPA compliance documentation process (see section III.E). State and field offices will identify groups and individuals with an interest in local BLM oil and gas leasing, including surface owners of split estate lands where Federal minerals are being considered for leasing. Interested groups, individuals, and potentially affected split estate surface owners[xi] will be kept informed of field office leasing and NEPA activities through updated websites and email lists, and will be invited to comment during the NEPA compliance process.

D. ESA, NHPA, and Tribal Consultation Compliance Documentation

State and field offices will meet the ESA, NHPA, and General Procedural Guidance for Native American Consultation requirements for lease issuance, and will attach, at a minimum, the standard ESA and NHPA lease stipulations (Attachment 1) to any lease that is offered. Generally, it is anticipated that the information necessary to meet this compliance requirement will have been developed at the land use planning stage (see Gather and Assess Existing Information, III. C. 1 above). If state or field offices determine that current information is inadequate to support the decision about whether to lease, the processes for fulfilling the BLM's obligations under the ESA, NHPA, and tribal consultation requirements should be synchronized, tracked, and coordinated with the NEPA compliance process.

E. NEPA Compliance Documentation

The IDPR Team will complete site-specific NEPA compliance documentation for all BLM surface and split estate[xii] lease sale parcels. The IDPR Team may include the review of multiple parcels in a single document. Site-specific NEPA compliance documentation must incorporate appropriate information gained through the lease parcel review process described above. In accordance with this IM, the NEPA compliance documentation for oil and gas leasing must include an opportunity for public review, as described below, and the field office must verify that all legal requirements have been met (e.g., ESA and NHPA).

If, through the lease parcel IDPR Team review process, the authorizing official confirms that the proposed leasing action is adequately analyzed in an existing NEPA document, such as that prepared during the MLP process, and is in conformance with the approved RMP, a Determination of NEPA Adequacy (DNA) may be used to document NEPA compliance for the leasing decision (H-1790-1, National Environmental Policy Act Handbook, section 5.1).[xiii] Although not required by law or regulation, field offices will provide a 30-day public review and comment period for the DNA. After consideration of any public comments received on the document, the field office will either finalize the DNA or initiate other appropriate NEPA compliance review. It is expected that the DNA process will only be appropriate in cases where the existing NEPA documentation has adequately incorporated the most current program-specific guidance. If a DNA is not appropriate, then the field office will determine the appropriate NEPA compliance documentation (e.g., environmental assessment (EA) or environmental impact statement (EIS)) to be prepared.

Most parcels that the field office determines should be available for lease will require site-specific NEPA analysis. This analysis will typically take the form of an EA, which would be tiered, as appropriate, to the RMP/EIS or a MLP/EA or EIS, if one has been completed for any of the parcels. Scoping for these EAs is optional; however, the interdisciplinary review of lease sale parcels will provide input on the issues, impacts, and potential alternatives to be addressed in the EA. The EA will analyze a no action alternative (no leasing), a proposed leasing action (leasing the parcel(s) in conformance with the land use plan), and any alternatives to the proposed action that may address unresolved resource conflicts. In cases where the field office determines that the necessary terms and conditions under which leasing would be appropriate are not in conformance with the RMP, it will be necessary to amend the RMP before leasing is appropriate. If it is necessary to amend the RMP, the leasing EA (or EIS) must either meet the standards for NEPA documentation to support a plan amendment (see 43 CFR part 1600), or the affected lease parcels must be withdrawn or deferred from leasing until a plan amendment or revision can be completed at a later date.

Although not required by law or regulation, field offices will provide a 30-day public review and comment period for the EA and unsigned Finding of No Significant Impact (FONSI) for oil and gas leasing before forwarding the leasing recommendation to the State Director (see section III. F). Note: Plan amendments are subject to additional public involvement and protest requirements (43 CFR 1610.2). The field office will finalize the EA and FONSI considering any public comment received on those documents. If a FONSI is not warranted, the field office may recommend that the parcel be withheld from leasing or that an EIS be prepared to address the site-specific issues in compliance with NEPA.

F. Leasing Recommendation

The Field Manager or District Manager will forward the finalized EA and FONSI (or finalized DNA, if appropriate) and a recommendation for each parcel reviewed to the State Director. This recommendation is not an appealable or protestable decision. Field office recommendations may include:

- Offering a lease parcel with standard stipulations only.
- Offering a lease parcel with existing, revised, and/or new stipulations.
- Offering a lease parcel with modification of parcel boundaries.
- Deferring a lease parcel from leasing, in whole or in part, pending further evaluation of specified issues.
- Withholding a lease parcel from offering in an area that is already closed in the existing RMP.
- Withholding a lease parcel from offering, in whole or in part.
- Withholding a lease parcel from offering, in whole or in part, and initiating a plan amendment to close the area to future leasing.

G. Public Notification of Lease Sale

Field or state offices will post the NEPA compliance documentation on the appropriate website and make the documentation available in the public room(s). The state office will post the final sale notice at least 90 days prior to the sale date. Each sale notice will include a link to the NEPA compliance documentation.

H. Lease Sale Parcel Protests

A 30-day protest period will begin the day the sale notice is posted, as it has in the past. The earlier posting of the sale notice will provide the state and field offices with at least 60 days to review protests before the oil and gas lease sale. The process outlined in this IM—which includes site-specific parcel analysis and increased public participation—will help identify, address, and resolve most issues before the lease sale. When possible, state offices should attempt to resolve protests before the sale of the protested parcels. Protests that are not resolved do not prevent bidding on protested parcels at the auction. Protest decisions should advise the protesting parties of their right to appeal denied protests to the Interior Board of Land Appeals (IBLA), but that appeals will not automatically halt the auction or issuance of leases.

I. Lease Issuance

Before issuing a lease, the authorized officer at the state office will (1) sign decisions resolving all protests concerning the parcel, and (2) sign a decision record (or record of decision for an EIS) supporting issuance of the lease(s) that provides a rationale for the leasing decision, taking into account, among other things, the NEPA analysis. If a particular parcel or parcels are not the subject of a protest, sale or issuance of such parcels should not be held up pending resolution of protests on any other parcels proposed for sale. Field or state offices will post the NEPA compliance decision documents and protest decisions on the appropriate website and make the documentation available in the public room(s).

IV. Implementation Plan and Report

Each state office will develop an implementation plan and timeline for accomplishing the tasks outlined in this IM. The implementation plan will be submitted not later than August 16, 2010, to the WO for review and approval by the Director.

The implementation plan should identify:

- A process for ensuring that lease stipulations are written in a WO-approved format, are consistent within the state for the protection of similar resources or resource settings, and edge-match appropriately across BLM administrative boundaries.
- A process for identifying areas currently meeting the criteria for initiation of the MLP process.
- MLPs or similar focused planning efforts that have been initiated or may be appropriate to initiate in the near term and any plans for initiating MLPs.

- The formation of IDPR Teams in each field office that has a lease parcel review workload.
- A rotational parcel review schedule.
- Steps, criteria, and timeframes to address the backlog of deferred parcels.

State offices will submit a post-implementation report to the WO by May 18, 2011.

The post-implementation report should identify:

- Each aspect of implementation including the effect on workloads.
- Implementation success and recommendations for improvement.
- Actions taken to enhance internal and external coordination.
- The effect implementation of this policy has had on public involvement, including lease protests, appeals, and litigation as well as any effect on the BLM's responses, decision outcomes, and changed timeframes.
- Work products, such as one copy of a leasing EA and FONSI from each affected field office.

Timeframe: This policy is effective upon issuance. This policy will guide land use planning and leasing procedures for all future parcels not currently under review by the field offices as of the date of this IM. For parcels currently under review by the field offices, each State Director will determine whether it is appropriate to apply any part of this policy to those parcels. By July 2, 2010, state offices will provide to WO-310 (Jim Perry) via email, copies of all lease stipulations currently used in the state, including RMP lease stipulations not currently in statewide stipulation databases. By August 16, 2010, state offices will submit an implementation plan and timeline to the WO for approval by the Director. A post-implementation report will be submitted to the WO by May 18, 2011. It is expected that this policy will be fully implemented by the state offices no later than May 18, 2011.

Budget Impact: This policy will result in additional costs for NEPA review, planning, responses to protests, and associated oil and gas program costs. It is anticipated that performance targets/units of accomplishments for resource programs will need to be adjusted.

Background: On October 7, 2009, an interagency review team issued the Final Review of 77 Oil and Gas Lease Parcels Offered in BLM-Utah's December 2008 Lease Sale (UT-77 Report). The UT-77 Report was a follow-up to a report issued by the Deputy Secretary of the U.S. Department of the Interior on June 11, 2009. The report presented a number of findings and recommendations for improving the oil and gas land use planning and lease sale parcel review processes. An interdisciplinary team of program specialists and managers reviewed the UT-77 Report, and many of the report findings and recommendations are incorporated in this policy.

Manual/Handbook Sections Affected: This IM transmits policy that will be incorporated into BLM Handbooks H-1790-1, National Environmental Policy Act; H-1624-1, Planning for Fluid Mineral Resources; H-3101-1, Issuance of Leases; and H-3120-1, Competitive Leases.

Coordination: This policy was coordinated with the U.S. Department of the Interior Office of the Solicitor, and the Renewable Resources and Planning, National Landscape Conservation System, and Minerals and Realty Management directorates.

Contact: If there are any questions concerning this IM, please contact Michael D. Nedd, Assistant Director, Minerals and Realty Management, at 202-208-4201. Your staff may contact Jim Perry, Senior Natural Resource Specialist, Washington Office Division of Fluid Minerals (WO-310), at 202-912-7145 or jim_perry@blm.gov; Robyn Shoop, Senior Mineral Leasing Specialist, Washington Office Division of Fluid Minerals (WO-310), at 202-912-7157 or robyn_shoop@blm.gov; or Shannon Stewart, Planning and Environmental Analyst, Washington Office Division of Decision Support, Planning and NEPA (WO-210), at 202-912-7219 or shannon_stewart@blm.gov.

Signed by:
Robert V. Abbey
Director

Authenticated by:
Robert M. Williams
Division of IRM Governance,WO-560

2 Attachments

1 - Standard Endangered Species Act and National Historic Preservation Act Lease Stipulations (1 p)

2 - Endnotes (2 pp)

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[i] This policy will be implemented across the BLM as described above. Certain parts of this policy, however, will not apply to the National Petroleum Reserve Alaska (NPR-A) because the BLM manages that area under some statutory authorities, such as the Naval Petroleum Reserves Production Act of 1976, 42 U.S.C. 6501 et seq., that apply only to that area. The Alaska State Office's plan for implementing this policy will identify those parts of the policy that will not apply to leasing in the NPR-A.

[ii] The external boundary of an NFS unit is defined as the outer boundary of an area encompassing all the National Forest System lands administered by a single administrative unit. The area often encompasses private lands and other governmental agency lands.

[iii] The term expression of interest also includes Pre-sale Offers.

[iv] Stipulations for protection of identical resource values may differ if such variance is substantiated by ecological, cultural, or other resource-specific factors that are scientifically validated (e.g., all mule deer winter habitat timing limitation stipulations in a state should be worded similarly unless there are, for example, ecological reasons for varying the effective seasonal closure date of the stipulation across the field office or state).

[v] Adaptive Management: The U.S. Department of the Interior Technical Guide Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC. See also the Department of the

Interior regulations regarding implementation of NEPA at 43 CFR 46.145, as well as associated guidance issued by the Department's Office of Environmental Policy and Compliance.

[vi] WO-IM-2008-032 provides guidance for (1) incorporating exception, waiver, and modification criteria into a land use plan; (2) making changes to leasing decisions/stipulations in the land use plan; and (3) reviewing and approving lease stipulation exceptions, waivers, and modifications for leases that have already been issued.

[vii] See 43 CFR 1610.5-3(b) ("the field manager shall take appropriate measures, subject to valid existing rights, to make operations and activities under existing permits [and] contracts, … conform to the approved plan or amendment within a reasonable period of time.")

[viii] Eligible lands include those identified in 43 CFR 3120.1-1 as being available for leasing (BLM Manual 3120, Competitive Leases). They are considered available for leasing when all statutory requirements have been met, including compliance with the NEPA, appropriate reviews have been conducted, and lands have been allocated for leasing in the RMP (BLM Handbook H-3101-1, Issuance of Leases).

[ix] This consideration is a policy decision that is not dependent upon the economic values that may be assigned to competing resources.

[x] The process for internal and external coordination outlined in this IM is in addition to the direction under the existing regulations, handbooks, and desk guide that require consultation, coordination, and cooperation with other Federal agencies, Tribal governments, and state and local governments for all BLM planning and NEPA efforts from initiation of the land use plan through the planning, leasing, and permitting decisions, as appropriate (43 CFR 1610.3-1; 43 CFR 46.155; BLM Land Use Planning Handbook H-1601-1 I.E; BLM NEPA Handbook H-1790-1 Chapter 12; BLM Desk Guide to Cooperating Agency Relationships 2005).

[xi] In addition to the notification sent to surface owners, as required in WO-IM-2009-184, *Courtesy Notification of Surface Owners When Split-Estate Lands are Included in an Oil and Gas Notice of Competitive Lease Sale* (July 24, 2009), incorporated by reference into this IM, the state or field office will also invite affected split estate surface owners to comment during the 30-day public review and comment period for the Environmental Assessment and unsigned Finding of No Significant Impact.

[xii] This requirement does not apply to split estate lands within NFS units if leasing decisions for such lands are analyzed in documentation prepared jointly by the FS and the BLM for lands within the external boundaries of NFS units.

[xiii] The NEPA document to which the DNA refers must contain sufficient detail to address the potential direct, indirect, and cumulative effects of the proposed action(s). Consideration must be given to new information, new or revised program-specific guidance, and new or revised lease stipulations contemplated for the lease parcel that may or may not be analyzed in the existing NEPA document.

Lease Process Table-Roles and Responsibilities

Lease Parcel Review and Lease Issuance Process

Process Step	Leasing Policy Process Requirements and Required Timeframes	State Office Specific Process Requirements and Timeframes
(Stage 1) Expressions of Interest (EOIs) are received in the State Office (SO)	SO establishes a cutoff date for incorporating EOIs into sale packages for individual District Offices (DO)/Field Offices (FO).	Cutoff date set for 270 days prior to sale
	SO reviews EOIs. Schedules **Pre-planning Coordination Call** with DSD and DMs within 3 weeks after EOI submission deadline.	5 weeks allowed to overlay GIS to check for conflicts – Complete by 235 days prior to sale
	SO sends preliminary parcel lists to designated DO/FOs (on a rotational basis). SO does a follow-**up Management Coordination Call** with DO/FO staff after internal scoping (1 to 2 weeks after parcel list is sent to DO/FO).	1 week allowed to create GIS shape files – Complete by 228 days prior to sale
Leasing Process		
(Stage 2) FO begins parcel review process	FO Interdisciplinary Parcel Review (IDPR) Team initiates parcel review through the National Environmental Policy Act (NEPA) process. DSD schedules a **Mid-point NEPA status Call** of NEPA process with DO/FO, before NEPA document goes out for public comment.	16 weeks total time allowed for FO parcel review – Complete by 110 days prior to sale.
	1. Gather Existing Information 2. Review for Resource Management Plan (RMP) conformance and adequacy 3. Review for program-specific guidance requirements 4. Identify other considerations 5. Conduct parcel site visits with appropriate IDPR Team members 6. Ensure internal and external coordination 7. Ensure public participation 8. Identify/address consultation needs 9. Review parcels to determine if any parcel has more than a 75% NSO stipulation attached to it. Submit list of affected parcels to the SO and any shapefile that helped make the +75%	

Process Step	Leasing Policy Process Requirements and Required Timeframes	State Office Specific Process Requirements and Timeframes
	determination. The SO will review these parcels to determine if a "take" would occur if the parcel is leased and make recommendations to the DO on whether the parcel should be leased or not leased.	
	NEPA Document (EA or DNA) 1. Optional Scoping 2. **30-day** public comment period on the Environmental Assessment (EA) and unsigned Finding of No Significant Impact (FONSI) (or unsigned Determination of NEPA Adequacy (DNA)) Plan amendments and Environmental Impact Statements (EIS) will have additional requirements.	
	As necessary, update the EA and unsigned FONSI based on public comments.	
	FO sends the EA and unsigned FONSI (or the unsigned DNA) along with the parcel recommendations to the SO or to the District Office who in turn reviews and forwards to the SO. The State Director may require the district and/or field manager's signature along with his/her recommendations through methods such as a transmittal memorandum, email, or separate "Recommended by:" signature page that accompanies the FONSI and Decision Record.	
(Stage 3) SO reviews FO parcel recommendations and NEPA documents	Reviews FO submittals and removes deferred lands or parcels and lands closed to leasing. Finalize parcels and add stipulations to create final Sale Notice	20 days
SO begins the Lease Sale process	SO posts the Sale Notice in the SO Public room and on the SO website at least **90 days** prior to the lease sale date with a link to the EA and unsigned FONSI (or the unsigned DNA).	Sale notice posted at least 90 days prior to sale

Process Step	Leasing Policy Process Requirements and Required Timeframes	State Office Specific Process Requirements and Timeframes
	30-day protest period begins.	61 to 90 days prior to sale
	60-day protest review period begins after the protest period ends. **Note:** When possible, state offices should attempt to resolve protests before the sale of the protested parcels and publish the decisions on the SO website. As appropriate, update the EA and unsigned FONSI (or the unsigned DNA) taking into account the protest(s) or protest resolution. If <u>all</u> of the protests have been resolved prior to the lease sale, the authorized officer at the SO may sign the FONSI and then the decision record (or DNA) prior to holding the lease sale.	1 to 60 days prior to sale
	A **30-day** Interior Board of Land Appeals (IBLA) appeal period begins for the protestant upon denial of their protest.	
Lease sale	Conduct the lease sale.	Scheduled date of Sale
Issue the Lease(s)	Prior to issuing a lease for a parcel, the authorized officer at the SO must: 1) resolve any protest on the parcel(s) that was not resolved before the lease sale and post the decision on the SO website; and, 2) sign the FONSI (or the DNA) and then the separate decision record (decision to issue or not to issue a lease(s); and, 3) post the updated and signed documents on the SO website and in the SO Information Access Center. 4) Issue the lease(s) **Note:** Leases shall be issued in a timely manner (**60 days or less**) following payment by the successful bidder of the remainder of the bonus bid (bonus bid to be remitted within 10 working days after the sale). A decision not to lease should be issued within the same timeframe.	**60 days allowed**

Process Step	Leasing Policy Process Requirements and Required Timeframes	State Office Specific Process Requirements and Timeframes
	Decisions affecting leases are issued by the SO. A **30-day** IBLA appeal period begins upon receipt of a decision. **Note:** To bring an appeal to IBLA, the appellant must have taken part in the process, either by making a comment or filing a protest. Otherwise the appellant does not have standing to bring an administrative appeal.	

Updated:
7/8/2016

Oil and Gas Lease Sale District Office Checklist:

Field Office (FO)
District Office (DO)
Lease Sale Date:

Step:	Date Completed:	Action:
1		Pre-Planning Coordination meeting with Deputy State Director, Minerals Management (DSD), Branch Chief Minerals Resources Fluids (BCMRF) and District Manager (DM). (DSD will decide if a pre-planning call is needed)
2		DO and FO receive parcel list and shapefiles from Nevada State Office (NVSO)
3		DO sets timeline dates for project: Tribal Consultation; Draft Environmental Assessment (EA); 30-day public comment period; EA/Decision Record (DR)/Finding of No Significant Impact (FONSI) to meet (NVSO) deadline. (BE SURE TO ACCOUNT FOR ADDITIONAL TIME DUE TO THE INCREASE IN PUBLIC COMMENTS)
4		Hold internal scoping meetings for appropriate FOs
5		Management coordination call with DSD/BCMRF
6		Complete District wide Cultural Resources Inventory Needs Assessment (CRINA)
7		Create a parcel map for scoping and tribal consultation
8		Send out tribal consultation letters (30 day reply)
9		Create parcel areas based on similar geographical locations
10		Specialists conducts site inspection visits for each parcel group and completes parcel site inspection forms (created by each District). Documents site inspection forms with comments, photos and Geographic Information System (GIS) photo stops shapefile and completes forms to include information for questions that cannot be answered by using just field notes, GIS, Resources Management Plans, etc.
11		National Environmental Policy Act (NEPA) status (Mid-point) call with DSD/BCMRF
12		Submit a list of any parcels that have more than 75% No surface Occupancy (NSO) stipulation (via email) to the NVSO for a "takings" determination.
13		Prepare parcel stipulations and notices for NVSO.
14		Begin drafting proposed action for EA
15		Hold Interdisciplinary Parcel Review Team (IDPR) meeting to discuss issues and decide which specialist is to write respective sections of the EA.
16		Send draft EA out for 2 week internal review
17		Post draft EA in ePlanning for 30 day public comment period and send link or EA copy to people directly affected by sale. Notify Branch Chief of Minerals Resources Fluids and Lead Land Law Examiner (via email) that it is posted.
18		Incorporate and or address all substantive comments in EA document.
19		Submit final EA, DR, FONSI (unsigned) (per section 1790, 40 CFR 1501.4 Delegation of Authority)) with stipulations and suggested parcel deferral list to NVSO by due date.

DRAFT

BLM - Nevada Competitive Oil and Gas Lease Sale Schedule 2017

	SALE DATE	March 14, 2017	June 13, 2017	September 12, 2017	October 24, 2017	December 12, 2017
	Oil & Gas/ Geothermal	Oil & Gas	Oil & Gas	Oil & Gas	Geothermal	Oil & Gas
	District Office(s)	Elko/Southern Nevada	Battle Mountain	Winnemucca/Carson City	Statewide	Ely
Stage 1: NVSO	EOI/Presale Offers by the Public End Date	June 17, 2016	September 16, 2016	December 16, 2016	January 27, 2017	March 17, 2017
	Pre-planning Coordination with NV920 & DM(s)*	July 7, 2016	October 6, 2016	January 5, 2017	February 16, 2017	April 6, 2017
	Overlay GIS to Check for Conflicts	July 22, 2016	October 21, 2016	January 20, 2017	March 3, 2017	April 21, 2017
	Due Date to Submit Preliminary List and Memo to DO(s)	August 3, 2016	November 2, 2016	February 1, 2017	March 15, 2017	May 3, 2017
	Management Coordination Call*	August 8, 2016	November 7, 2016	WDO: February 07, 2017 CCDO: February 08, 2017	March 20, 2017	May 8, 2017
Stage 2: DO(s)	District Office(s) NEPA Review	08/03/2016 to 11/18/2016	11/02/2016 to 02/17/2017	02/01/2017 to 05/19/2017	03/15/2017 to 06/30/2017	05/03/2017 to 08/18/2017
	NEPA Status Call*	August 29, 2016	November 28, 2016	WDO: February 28, 2017 CCDO: March 01, 2017	April 10, 2017	May 29, 2017
	Final NEPA Due Date to Submit to NVSO	November 18, 2016	February 17, 2017	May 19, 2017	June 30, 2017	August 18, 2017
Stage 3: NVSO	Due Date for Posting Sale Notice	December 14, 2016	March 15, 2017	June 14, 2017	July 26, 2017	September 13, 2017
	Protest Due Date	January 13, 2017	April 14, 2017	July 14, 2017	August 25, 2017	October 13, 2017
	Adjudication Issue Leases within 60 days of all monies receipted					
		Barry	Dean	Barry	Marina	Marina

* Proposed or Suggested Dates (Placeholders)

(Internal Use Only)

Color Legend	
	Nevada State Office Due Dates
	District Offices Due Dates
	Coordination; Proposed or Suggested Dates: NVSO & DO's

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Nevada State Office
1340 Financial Boulevard
Reno, Nevada 89502-7147
http://www.blm.gov/nv

In Reply Refer To:
3100 (NVL0000)

Memorandum

To: John F. Ruhs
State Director, Nevada

Through: Brian C. Amme
Deputy State Director, Minerals Management, Nevada

From: Michael Herder
Ely District Manager, Ely District Office, Nevada

Subject: Deferral of Nominated Parcels for Oil and Gas Leases in the Ely District

The Ely District Manager requests that the State Office defer any and all nominated lands for oil and gas leasing located within the proposed Duckwater Reservation Expansion boundary until tribal consultations and a Resource Management Plan Amendment have been completed. The Duckwater Tribe has begun the process of expanding their reservation boundary from 3,100 acres to over 235,000 acres. The current RMP (2008) must be amended to support and reflect this new planning decision. The Ely District anticipates having their RMP amended by December 2017. A shapefile of the proposed boundary has been placed in the Geographic Information System (GIS) shared folder: ***GIS Drive:\NV\GIS_Work\Multi-District_Project\Minerals\O+G*** for Branch of Minerals Adjudication to use as a tool to screen out nominated lands within the proposed reservation boundary.

The Deputy State Director, Minerals Management concurs with the Ely District Office's recommendation and requests the State Director's approval as required by Nevada Instruction Memorandum 2016-037.

Concurrence: _____ Date: _____
Deputy State Director, Minerals Management

Approved: _____ Date: _____
State Director, Nevada

Disapproved: _____ Date: _____
State Director, Nevada

Attachment
Proposed Duckwater Reservation Expansion Boundary Map

cc: Michael Herder, Ely District Manager
Jill Moore, Egan Field Manager
Mindy Seal, Ely District Minerals Program Lead
NV922

SAMPLE

DEFERRAL SPREADSHEET

LEASE SALE DATE:		12/10/2013		DISTRICT OFFICE:		ELY
Parcel #	All or Part of Parcel	Legal Lands Description	Deferred Acreage	Presale Offer (Y/N)	Deferral Rationale	Projected Date of Resolution
NV-13-12-174	Part	T.0210N, R.0640E, 21 MDM, NV Sec. 19 LOTS 3 and 4, Sec. 19 SESW, S2SE Sec. 20 S2SW.	158	No	The following parcel is within lands designated for disposal in the Ely Resource Management Plan (RMP). We request that the parcel listed below be permanently removed from this sale list and all future sale lists.	2019? RMP Amendment
NV-13-12-118	Part	T.0060N, R.0610E, 21 MDM, NV Sec. 001 LOT 4; Sec. 001 SWNW; Sec. 014 NW.	912	Yes	Parcel overlaps the Kirch Wildlife Management Area (WMA), which is currently stipulated as No Surface Occupancy. The Ely District is requesting the following parcel be deferred in part in order to help protect sensitive wetlands and lakes within the WMA, per the request of NDOW. We request that this parcel be permanently removed from this sale list and all future sale lists. The deferral would remain until the Ely RMP can be amended to change the No Surface Occupancy designation to "closed".	2019? RMP Amendment
NV-13-12-119	Part	T.0060N, R.0610E, 21 MDM, NV Sec. 002 LOTS 3,4; Sec. 002 SWNW; Sec. 003 S2; Sec. 004 NESW, S2SW,SE; Sec. 005 SESE.	737	Yes	Parcel overlaps the Kirch (WMA), which is currently stipulated as No Surface Occupancy. The Ely District is requesting the following parcel be deferred in part in order to help protect sensitive wetlands and lakes within the WMA, per the request of NDOW. We request that this parcel be permanently removed from this sale list and all future sale lists. The deferral would remain until the Ely RMP can be amended to change the No Surface Occupancy designation to "closed".	2019? RMP Amendment
NV-13-12-118	Part	T.0060N, R.0610E, 21 MDM, NV Sec. 001 LOTS 1-3; Sec. 001 SENW, S2NE, SW, E2SE; Sec. 012 W2W2; Sec. 014 NE; S2.	980	Yes	Parcel is within ½ mile of the Kirsch WMA. Originally, there was a buffer implemented around the WMA in the Schell Management Framework Plan to help protect the sensitive wetlands and lakes that exist within the WMA. This buffer was not carried forward into the Ely RMP although the rationale for maintaining the previous buffer remains the same. Please defer this parcel that is within ½ mile of the WMA from this and all future sale lists.	
NV-13-12-213	All	T.0240N, R.0680E, 21 MDM, NV Sec. 001 PROT E2; Sec. 012 PROT E2; Sec. 013 PROT E2;	1920	No	The Ely District has been in negotiations with the Confederated Tribes of the Goshute Reservation for the past two years concerning the leasing of Federal lands surrounding their reservation. The Tribe has requested a	2019? RMP Amendment

		Sec. 024 PROT E2; Sec. 025 PROT E2; Sec. 036 PROT E2.			½-mile NSO buffer around the perimeter of the reservation to help protect their tribal lands from impacts caused by surface disturbing activities, as well as, subsurface exploration of solid and fluid minerals. We request the parcel listed below be deferred from this sale list and all future sale lists until such time that the Tribes' request can be formally addressed.	
NV-13-12-150	All	T.0250N, R.0610E, 21 MDM, NV Sec. 008 SW,W2SE.	240	No	The following parcel is known to be important sage grouse habitat. It is currently classified as PGH, but should be reclassified as PPH, based on data collected through on the ground observations. The Ely District requests this parcel be deferred in accordance with WO-IM-2012-043.	SG EIS decision date

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Nevada State Office
1340 Financial Boulevard
Reno, Nevada 89502-7147
http://www.blm.gov/nv

July 06, 2016

In Reply Refer To:
3100/1610/1790 (NV922) I

EMS TRANSMISSION 7/11/2016
Instruction Memorandum: No. NV-2016-037
Expires: 9/30/2018

To: Deputy State Directors, District Managers, Field Managers, Nevada

From: State Director

Subject: Bureau of Land Management (BLM) Oil and Gas Competitive Lease Parcel Review Process

Program Area: Oil and Gas, Planning, National Environmental Policy Act (NEPA)

Purpose: This Instruction Memorandum (IM) establishes a process for ensuring orderly, effective, timely, and environmentally responsible leasing of oil and gas (O&G) resources on Federal lands (surface and subsurface) in Nevada and procedures for long term deferral.

Objectives:

- Define roles and responsibilities for Nevada's O&G leasing process;
- Establish a "checks and balances" approach to the leasing process to ensure successful competitive O&G lease sales; and
- Implement procedures for deferring lands from O&G leasing for more than one (1) year.

Land Use Planning Policy

Existing Land Use Plan (LUP) decisions remain in effect until an amendment or revision is completed and approved; however, District Managers have the discretion to defer or modify proposed implementation-level actions and require appropriate conditions of approval, stipulations, relocations, or redesigns to reduce the effect of the action on the resource values being considered through the amendment or revision process. A decision to temporarily defer O&G leasing can be made where a different land use or allocation is currently being considered in the preferred alternative of a draft or proposed Resource Management Plan (RMP) revision or amendment. The decision to defer lands must not lead to an area-wide moratorium during the planning process.

NEPA Process:

Districts Offices (DOs) and Field Offices (FOs) shall conduct a thorough NEPA analysis on **all** preliminary parcels received from the State Office as the "Proposed Action". If the DOs/FOs remove or defer parcels from the preliminary parcel list, then the remaining parcels to be offered should be analyzed as an Action Alternative to the Proposed Action. This would result in a minimum of three alternatives to be analyzed in the NEPA document - the Proposed Action, the Partial Deferral Alternative Action and the No Leasing Alternative Action. All parcels being temporarily deferred from leasing should be deferred based on NEPA analysis that would require additional consultation or data collection, a LUP amendment, or would require additional resource protection currently not available to the district and or field offices. The DO/FOs should only be deferring "portions of parcels" that are impacting a resource that doesn't have adequate resource protection. Parcels should not be deferred if existing stipulations are sufficient to protect resource values.

During parcel reviews, DO/FOs are required to offer aliquot portions of parcels, down to the 40-acre quarter-quarter of a section using legal land descriptions (LLDs), that do not directly affect the resource of concern, instead of removing or deferring the whole parcel due to the resource of concern. Likewise, the DO/FOs should only apply stipulations and lease notices to parcels, or aliquot portions of parcels, where there is a resource of concern that requires additional protection, similarly described down to the quarter-quarter section of the LLD, for only the affected portion of the parcel consistent with providing the minimum lease stipulations necessary for resource protection.

DO/FOs must complete their NEPA and parcel review within the allotted timeframe and submit deliverables to the State office by the assigned due date (Attachment 2).

DO/FOs should only be deferring the aliquot portions of parcels for resources of concern that do not have adequate resource protection in the form of stipulations or other statutory or regulatory restrictions.

Leasing and/or Deferral Process:

This IM implements guidance in Manual Section, MS-3120 *Competitive Leases*, and Handbook, H-3120-1 *Competitive Leases*, which incorporated guidelines set-forth in WO-IM-2010-117, *Oil and Gas Leasing Reform - Land Use Planning and Lease Parcel Review* (*See* Attachment 1, WO-IM-2010-117).

The leasing and/or deferral process established in this IM creates open communication and provides consistency in monitoring the leasing process between the Nevada State Office, Branch of Mineral Resources (Fluids) and the DOs and FOs (*See* Attachment 2, Lease Process Table-Roles and Responsibilities). A checklist (*See* Attachment 3, Oil and Gas Lease Sale District Office Checklist) has also been developed to aid the DOs in tracking their O&G leasing

process and enable them to report on their benchmarks to the Deputy State Director, Minerals Management (DSD).

Attachment 2, Lease Process Table-Roles and Responsibilities, explains the three stages of the parcel review and lease issuance process that consists of 270 days for each competitive O&G lease sale (refer to Attachment 4, BLM-Nevada Competitive Oil and Gas Lease Sale Schedule):

- Stage 1: The Branch of Mineral Resources (Fluids) role includes, but are not limited to, pre-planning coordination call with the DOs, a second coordination call with DOs, and initiates an Oil and Gas Lease Sale District Office Checklist (*See* Attachment 3);
- Stage 2: DO and FO role includes approximately 16 weeks of National Environmental Policy Act (NEPA) analysis (now must include a link to a Geographic Information System (GIS) shapefile reflecting the deferment request and also must coordinate a status call with DSD); and
- Stage 3: The Branch of Mineral Resources (Fluids) role-finalizes parcel list, prepares competitive O&G lease sale and issues leases.

Parcels deferred for less than one (1) year through the NEPA process, will be tracked and automatically included on the next annual sale. For parcels deferred more than one (1) year, refer to Long Term Deferral Process below.

Long Term Deferral Process:

In considering long-term deferrals, refer to the *Land Use Planning Handbook*, H-1601-1, Sections VI and VII, which provides direction on how to proceed when new information is provided regarding issues to be addressed in pending or upcoming land use planning efforts, or may indicate a need to supplement existing NEPA analyses. All DOs and FOs are expected to follow their respective approved LUPs when offering parcels with Expressions of Interest or Presale Offers for lease.

This IM provides procedures for recommending approval to defer parcels from leasing for more than one (1) year. For resource issues not addressed in the RMP's decision, the DOs and FOs can recommend that lands be deferred until the issue(s) has been resolved by either amending their RMP and/or by working through the issue(s) without changes to the RMP decision. For sage grouse issues refer to the Nevada BLM guidance.[1]

These deferrals require a Deferral Memorandum (*See* Attachment 5, Deferral Memorandum (example)). All Deferral Memorandums must be requested through the DSD, with a concurrence line for the DSD and an approval line for State Director (SD) signature. The Deferral Memorandum must include the following:

[1] For current guidance on leasing in sage grouse habitats, refer to current RODs and Nevada and Washington IMs.

Completed Deferral Spreadsheet (*See* Attachment 6, Deferral Spreadsheet), which will have the:

- Parcel number(s);
- LLD of affected lands for each parcel down to the quarter-quarter of a section;
- Rationale for parcel deferment, or removal; and
- Proposed date the issue(s) will be resolved.

Shapefile of affected area:

- Shapefiles submitted will be confidential and used for the Branch of Mineral Resources (Fluids) internal purposes only; and
- Shapefiles submitted should come from specialist collected data and vetted through DO management team before sending to the Branch of Mineral Resources (Fluids).

The Branch of Mineral Resources (Fluids) will retain long term deferred parcels from future DOs/FO's Preliminary Parcel List with proper justification, supporting documentation with a Deferral Memorandum approval from the SD. The Branch of Mineral Resources (Fluids) will track long term deferrals and will include previously deferred parcels based on resolution dates submitted in the Deferral Memorandum or when notification from the DOs/FO's is received that the issue(s) associated with the deferred parcels has been resolved. The Branch of Mineral Resources (Fluids) will screen out nominated land from parcel lists by overlaying the GIS shapefiles provided by the DOs/FOs in the Deferral Memorandum.

Summary of deliverables:

1. District's Lease Sale Point of Contact
2. Provide dates that EA will be out for public comment
3. Final Oil and Gas Lease Sale Environmental Assessment
4. Unsigned Final Draft of Decision Record
5. Unsigned Final Draft of FONSI
6. Deferral Memorandum
7. Deferral Spreadsheet
8. Shapefile(s) for any resource that warrants deferring parcel(s)

Time Frame: This IM is in effect upon issuance.

Budget Impacts: This IM may have a positive impact on budgets because it streamlines the review and deferral process to exclude parcels that will be deferred for more than one (1) year.

Coordination: Preparation of the IM was coordinated with Deputy State Director, Minerals Management, Chief, Branch of Mineral Resources (Fluids) and District Managers.

Contact: Brian Amme, Deputy State Director, Minerals Management (775) 861-6585.

Signed by:	Authenticated by:
John F. Ruhs	Pam Collins
State Director	Staff Assistant

6 Attachments

1 -WO-IM-2010-117 (16 pp)
2 - Lease Process Table-Roles and Responsibilities (4 pp)
3 - Oil and Gas Lease Sale District Office Checklist (1 pp)
4 - BLM-Nevada Competitive Oil and Gas Lease Sale Schedule (1 pp)
5 - Deferral Memorandum (example) (2 pp)
6 -Deferral Spreadsheet (2 pp)

From: Nada Culver
To: kit_muller@blm.gov; gtoevs@blm.gov
Subject: FW: The Wilderness Society"s Comments -EO 13781 (Reorganization)
Date: Tuesday, June 13, 2017 10:01:44 AM
Attachments: EO 13781 WildernessSociety_etal_EO13781_June12.pdf

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Hi Kit and Gordon – I thought these might be of interest.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org

Submitted electronically via regulations.gov

June 12, 2017

Mr. Mick Mulvaney, Director
Office of Management and Budget
725 17th St., NW
Washington, DC 20503

Re: Notice of Request for Comment on Government-wide Reform

Dear Director Mulvaney:

As representatives of the undersigned conservation organizations, we write to you today to express our strong support for continued and robust investment in the land management agencies[1] -- the U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service, and the Bureau of Land Management (BLM) – and their conservation programs. Together, these agencies administer on behalf of the American people more than one billion acres of public lands and waters that attract over half a billion visitors annually.[2] The undersigned organizations represent millions of Americans who deeply care about our public forests, grasslands, deserts and waters. Our members and supporters value these priceless public assets for the water and clean air they provide to communities, the outdoor recreation they offer, the wildlife they harbor, and the resources they contain.

On March 13 2017, the President signed Executive Order 13781 directing you, as Director of the Office of Management and Budget (OMB), to develop a plan for reorganizing the executive branch, including recommending agencies, programs, and functions for elimination. Subsequently, you launched a 28-day comment period asking the American public to weigh in on how to reorganize, reduce, and eliminate federal agencies.[3] While we disagree with the premise that drastic changes to our federal resource management agencies are necessary, to the extent that you intend to reorganize and possibly eliminate agencies, we respectfully request that you consider the economic importance of these agencies and their conservation programs – and not only retain them, but also ensure they are sufficiently funded.

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[1] While we use the term "land management agencies" we note that it reflects more broadly public lands and waters, including marine refuges.
[2] *See* US Forest Service, 2012. National Visitor Use Monitoring Report. Available at: https://www.fs.fed.us/recreation/programs/nvum/2012%20National_Summary_Report_061413.pdf. Page 24; National Park Service. Annual Visitation Highlights. Available at: https://www.nps.gov/subjects/socialscience/annual-visitation-highlights.htm; Department of the Interior, Bureau of Land Management. 2015. Public Lands Statistics. Page 186; U.S. Fish & Wildlife Service, 2015. Annual Performance Report FY2015: National Wildlife Refuge System. Page 1.
[3] 82 Fed. Reg. 22355 (March 15, 2017).

Federal Land Conservation is a Smart Investment

Our federal public land agencies administer on behalf of the American people more than one billion acres of land and water from Alaska to Florida and Maine to the South Pacific. The Bureau of Land Management, the National Park Service, the U.S. Forest Service and the U.S. Fish and Wildlife Service derive their management direction from their individual organic acts and other relevant guiding statutes that impose specific, congressionally mandated, constraints and duties. Specific to conservation, these include, among others, the Wilderness Act, the Wild and Scenic Rivers Act, the National Landscape Conservation System Act, the National Forest Management Act, the Federal Land Management and Policy Act, the National Wildlife Refuge System Improvement Act, the Endangered Species Act, the Clean Water Act, the Clean Air Act, the Multiple Use and Sustained Yield Act, the National Trails System Act, and the National Environmental Policy Act.

Conservation of our public lands and waters is among the country's smartest investments, providing incredible value at low cost to taxpayers. The combined budget of the federal natural resource management agencies accounts for less than 0.4% of the nation's annual budget,[4] yet provides the American people with benefits worth billions of dollars. Our federal lands and waters supply this nation with clean water and air, trails and campgrounds, fishing and hunting, life-saving habitat for thousands of imperiled species, and unparalleled outdoor experiences. While these services are not bought and sold in stores, they generate immense economic returns. Consider that national forests, the single largest source of municipal water supply, services more than 66 million people in 3,400 communities. The value of this water exceeds $7.2 billion annually.[5] The National Wildlife Refuge System alone provides ecosystem services valued at $32.3 billion to nearby rural communities.[6] In direct economic terms, our nation's lands and waters are the infrastructure for an outdoor recreation industry that contributes nearly $900 billion and 7.6 million jobs to the American economy.[7]

Further, federal public lands and waters are integral to sustaining healthy local economies. In today's economy many businesses are free to choose the location for their entrepreneurial endeavors. Federal public lands – and especially protected areas -- are important for attracting

[4] Office of Management and Budget Historical Tables for Sub-Function 302. *Available at: https://obamawhitehouse.archives.gov/omb/budget/Historicals.*

[5] USDA Forest Service. Information on Water Resources. *Available at:* https://www.fs.usda.gov/wps/portal/fsinternet/cs/detail/!ut/p/z0/04_Sj9CPykssy0xPLMnMz0vMAfIjo8zijQwgwNHCwN_DI8zPyBcqYKBfkO2oCABZcx5g/?position=Contribution%20Content.Html&pname=Forest%20Service&ss=119995&navtype=SubNavigation&pnavid=110140100000000&navid=110140110000000&ttype=detail&cid=stelprdb5107778.

[6] Southwick Associates, 2011. The Economics Associated with Outdoor Recreation, Natural Resources Conservation and Historic Preservation in the United States For: The National Fish and Wildlife Foundation. *Available at:* https://www.fws.gov/refuges/news/pdfs/TheEconomicValueofOutdoorRecreation%5B1%5D.pdf.

[6] Outdoor Industry Association, 2017. The Outdoor Recreation Economy. Page 11. *Available at:* https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/.

[7] Outdoor Industry Association, 2017. The Outdoor Recreation Economy. *Available at:* https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/

and retaining talented workers, entrepreneurs and investors. Rural counties with greater proportions of protected public lands have higher incomes, higher employment levels and greater population growth than rural counties without such lands.[8]

Chronic Underfunding is Undermining Effectiveness of Natural Resource Agencies

Over the last few decades, our public lands agencies have suffered a decline in real budgets for critical programs and dwindling workforces. This has led to many difficult decisions: reduced visitor services and recreational investments, reduced scientific research and monitoring, compromised conservation and management, growing maintenance backlogs, and other impacts. For instance, between 1995 and 2015, the funding for the National Forest System has been reduced by 32% in real dollars, and the agency's staffing dropped by almost 40% between 1998 and 2015.[9] This is in part due to the growing cost of wildfire suppression, which now consumes more than 50% of the agency's budget.[10]

Recent employee surveys reflect the impacts of chronic underfunding and staffing. A recent survey by Public Employees for Environmental Responsibility (PEER), a national organization representing federal, state and local government professionals, found that 67 percent of BLM employees believe the agency does not have enough resources to accomplish its mission.[11] The survey asked how the administration could best improve the BLM. Responses included:

- *"No hiring freeze"*
- *"NOT implementing a hiring freeze – that would be a disaster"*
- *"Do not further cut our funding. I have 1.8 million acres of land in my field office to manage and I am the only natural resources staff member"*
- *"Some people are doing 2-3 jobs just to get the job done."*
- *"Funding to fill vacant positions – more than 20 in our office."*

A similar survey of national wildlife refuge managers revealed that 94 percent of respondents were concerned that staffing at their refuge was inadequate to meet their core mission:

- *"Addressing the chronic funding shortages that prevent us from adequately staffing our refuges."*
- *"Providing resources to address our maintenance backlog and better serve the members of the public"*
- *"Not do an across-the-board federal govt. cut which would devastate our tiny agency"*

[8] Headwaters Economics, 2017. Federal Public Lands in the West: Liability or Asset. *Available at:* https://headwaterseconomics.org/public-lands/federal-lands-performance/.
[9] USDA Forest Service, 2015. The Rising Cost of Fire Operations: Effects on the Forest Service's Non-Fire Work. August 4, 2015. *Available at:* https://www.fs.fed.us/sites/default/files/2015-Fire-Budget-Report.pdf.
[10] *Id.*
[11] https://www.peer.org/news/news-releases/trump-hiring-freeze-hamstrings-his-own-agenda.html.

- *"Increasing funding for the NWR system so we can hire employees to accomplish our mission"*
- *"The loss of staff has impacted all aspects of the National Wildlife Refuge System. The system no longer shines like it did 20-30 years ago"*

Specific Functions Deserving Enhanced Support and Prioritization

Given the clear importance of conservation and recreation on public lands and waters to our socio-economic well-being, we urge you not to cut – and instead bolster investment in – the following programmatic functions.

Recreation and Wilderness. Federal outdoor recreation and wilderness programs enable Americans to get outside and enjoy their national forests, wildlife refuges and other public lands through a wide variety of activities. They promote public health, enhance community well-being, unite families and friends, and foster citizenship of our nation's natural resources. Investments promote access for hunters and anglers to world class fish and game habitat, and support local economies by attracting entrepreneurs and amenity-based businesses such as outfitters and gear shops. Specific programs that should be prioritized include:

- The Forest Service **Recreation, Wilderness, and Heritage program** whose funding has shrunk by 15% since 2001, even though recreation participation continues to steadily increase and is projected to increase by 30% for most activities by 2030.[12]
- The Forest Service **Capital Improvement and Maintenance program,** which supports maintenance of ~21,600 recreation sites, ~371,000 miles of roads, and ~157,000 miles of trails, and is essential to address serious public health and safety concerns, maintain public access to rural communities, and protect clean drinking water for 66 million Americans. Since 2001, funding for roads, deferred maintenance, and facilities shrank by 46%, 95%, and 68%, respectively; funding for the **Legacy Roads and Trails program** has been halved since 2010. Such severe reductions force the agency to close recreational facilities and access roads.
- The BLM **National Landscape Conservation System** that comprises over 30 million acres of some of the most scenic and expansive landscapes in our country, including national conservation areas, wilderness areas and other designations that attract visitors and help sustain healthy local economies.
- The BLM **Recreation Resources Management program** that enhances recreation access for all visitors to BLM lands, engages youth, promotes public health, protects visitor safety and strengthens rural economies.
- The Fish and Wildlife Service **National Wildlife Refuge System** that comprises 566 national wildlife refuges with at least one in every state and territory, includes over 20

[12] USDA Forest Service. 2016. Federal Outdoor Recreation Trends: Effects of Economic Activities. PNW-GTR-945. Available at: http://www.coloradotpa.org/wp-content/uploads/2017/02/USFS-Econ-Impacts-Rec.pdf.

million acres of wilderness, and prioritizes wildlife-dependent recreation for all Americans to enjoy. Wildlife viewing, photography, hunting, fishing, environmental education and interpretation are hallmarks of the Refuge System, deemed priority public uses when compatible with wildlife conservation.

- The Fish and Wildlife Service **Urban Wildlife Conservation Program**, a visionary partnership that helps urban constituencies discover, appreciate and care for wildlife and nature in their communities.

Land planning and restoration. Resource management planning is the foundation of an agency's stewardship responsibilities. Statutorily required, planning is necessary to ensure our public lands and waters continue providing the American people an array of benefits, including wildfire management, wildlife and fish habitat, outdoor recreation, clean water, and jobs. Management planning lays the groundwork for ecological restoration that improves the health of our lands and waters while injecting funds and jobs into local communities. Reduced investment impairs stakeholder engagement and collaborative decision-making that can support enduring and science-based management. Specific programs that should be prioritized include:

- The Forest Service **Land Management Planning, Assessment, and Monitoring programs** that are crucial for better wildfire management and restoration has shrunk by 44% since 2001. Land management planning is conducted in close collaboration with a national federal advisory committee comprised of diverse stakeholders charged with advancing sound implementation of the 2012 planning rule.
- The Forest Service **Wildlife and Fisheries Habitat Management** program that conserves, restores and enhances habitat for fish, wildlife, and rare plants. It is vital to the 3,500 imperiled and at-risk species that depend on national forest lands for their survival, and supports recreational fishing, hunting and wildlife viewing on national forest lands.
- The Forest Service **Collaborative Forest Landscape Restoration Program** that incentivizes long-term collaborative forest restoration.
- The National Greater **Sage-Grouse Planning Strategy** that is predicated on the concept of "saving" a species before it requires federal protection. Continued implementation of this strategy is important for the recovery of this critical western game species and those who rely on its habitat for their livelihood.
- BLM **Master Leasing Plans,** in which BLM evaluates potential conflicts and impacts on lands prior to leasing, leading to less conflict, better resource management, and more certainty. Increasing leasing and permitting without supporting environmental review and planning, including master leasing plans, will lead to more conflict, protests and litigation, and ultimately diminish the long-term sustainable flow of benefits into local communities and regions.

Renewable energy. Support and funding should continue for BLM's smart renewable energy program that supports development of sustainable, clean energy sources that make sense for

all Americans, and reduces our nation's carbon footprint. The program helps projects succeed in low-conflict areas, reducing impacts and cutting permitting times in half.[13] Renewable energy continues to increase its market share in the energy arena as technology improves and costs continue to plummet, and drive strong job growth. A 2017 report by the Department of Energy found that solar energy supports 373,807 jobs, more than the jobs in the provision of natural gas (362,118) and over twice as many jobs in coal mining (160,119).[14] Wind energy is also seeing strong job creation, supporting 101,738 jobs. Continued strong funding for the BLM Renewable Energy Program and other related programs within DOI agencies will support these economic and clean energy opportunities in a smart and responsible way.

Transparency and Public Engagement is Integral to Long-Term Success

Federal lands and waters are owned by all Americans. The federal land management agencies administer them on our behalf following the direction prescribed in the guiding statutes and through numerous programs developed over many years, often with extensive stakeholder involvement. While there is benefit in legitimate processes designed to improve program delivery, such exploration and subsequent administrative shifts will only succeed if the public is engaged and the process is transparent. To that end, we respectfully request that you share draft reorganization plans with the public in a way that allows for meaningful review and comment, and that you publicize the decision-making criteria and evaluative process. In particular, for each agency, it would be very helpful to better understand:

- The criteria to be used by OMB to make decisions related to the reform or elimination of agencies and their functions;
- How public comments will be incorporated into the decision-making process;
- How non-market benefits and public value will be accounted for in cost-benefit analyses;
- When OMB will share a draft report with the public for meaningful comment and feedback; and
- How OMB will ensure that administrative shifts (e.g., elimination of programs, reductions in workforce) will not impair the ability of agencies to meet their statutory and regulatory responsibilities.

[13] *See* https://www.doi.gov/pressreleases/interior-department-approves-first-solar-energy-zone-projects
[14] *See* https://energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf.

Thank you for considering these comments.

With regards,



Nada Culver
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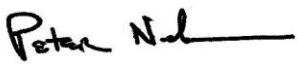

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Cc: The Honorable Ryan Zinke, Secretary of the Department of the Interior
The Honorable Sonny Perdue, Secretary of the US Department of Agriculture

From: Nada Culver
To: Chris_McAlear@blm.gov
Cc: Phil Hanceford
Subject: FW: The Wilderness Society"s Comments -EO 13781 (Reorganization)
Date: Tuesday, June 13, 2017 10:05:29 AM
Attachments: EO 13781 WildernessSociety_etal_EO13781_June12.pdf

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Hi Chris – We thought these might be of interest.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org

Submitted electronically via regulations.gov

June 12, 2017

Mr. Mick Mulvaney, Director
Office of Management and Budget
725 17th St., NW
Washington, DC 20503

Re: Notice of Request for Comment on Government-wide Reform

Dear Director Mulvaney:

As representatives of the undersigned conservation organizations, we write to you today to express our strong support for continued and robust investment in the land management agencies[1] -- the U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service, and the Bureau of Land Management (BLM) – and their conservation programs. Together, these agencies administer on behalf of the American people more than one billion acres of public lands and waters that attract over half a billion visitors annually.[2] The undersigned organizations represent millions of Americans who deeply care about our public forests, grasslands, deserts and waters. Our members and supporters value these priceless public assets for the water and clean air they provide to communities, the outdoor recreation they offer, the wildlife they harbor, and the resources they contain.

On March 13 2017, the President signed Executive Order 13781 directing you, as Director of the Office of Management and Budget (OMB), to develop a plan for reorganizing the executive branch, including recommending agencies, programs, and functions for elimination. Subsequently, you launched a 28-day comment period asking the American public to weigh in on how to reorganize, reduce, and eliminate federal agencies.[3] While we disagree with the premise that drastic changes to our federal resource management agencies are necessary, to the extent that you intend to reorganize and possibly eliminate agencies, we respectfully request that you consider the economic importance of these agencies and their conservation programs – and not only retain them, but also ensure they are sufficiently funded.

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[1] While we use the term "land management agencies" we note that it reflects more broadly public lands and waters, including marine refuges.
[2] *See* US Forest Service, 2012. National Visitor Use Monitoring Report. Available at: https://www.fs.fed.us/recreation/programs/nvum/2012%20National_Summary_Report_061413.pdf. Page 24; National Park Service. Annual Visitation Highlights. Available at: https://www.nps.gov/subjects/socialscience/annual-visitation-highlights.htm; Department of the Interior, Bureau of Land Management. 2015. Public Lands Statistics. Page 186; U.S. Fish & Wildlife Service, 2015. Annual Performance Report FY2015: National Wildlife Refuge System. Page 1.
[3] 82 Fed. Reg. 22355 (March 15, 2017).

Federal Land Conservation is a Smart Investment

Our federal public land agencies administer on behalf of the American people more than one billion acres of land and water from Alaska to Florida and Maine to the South Pacific. The Bureau of Land Management, the National Park Service, the U.S. Forest Service and the U.S. Fish and Wildlife Service derive their management direction from their individual organic acts and other relevant guiding statutes that impose specific, congressionally mandated, constraints and duties. Specific to conservation, these include, among others, the Wilderness Act, the Wild and Scenic Rivers Act, the National Landscape Conservation System Act, the National Forest Management Act, the Federal Land Management and Policy Act, the National Wildlife Refuge System Improvement Act, the Endangered Species Act, the Clean Water Act, the Clean Air Act, the Multiple Use and Sustained Yield Act, the National Trails System Act, and the National Environmental Policy Act.

Conservation of our public lands and waters is among the country's smartest investments, providing incredible value at low cost to taxpayers. The combined budget of the federal natural resource management agencies accounts for less than 0.4% of the nation's annual budget,[4] yet provides the American people with benefits worth billions of dollars. Our federal lands and waters supply this nation with clean water and air, trails and campgrounds, fishing and hunting, life-saving habitat for thousands of imperiled species, and unparalleled outdoor experiences. While these services are not bought and sold in stores, they generate immense economic returns. Consider that national forests, the single largest source of municipal water supply, services more than 66 million people in 3,400 communities. The value of this water exceeds $7.2 billion annually.[5] The National Wildlife Refuge System alone provides ecosystem services valued at $32.3 billion to nearby rural communities.[6] In direct economic terms, our nation's lands and waters are the infrastructure for an outdoor recreation industry that contributes nearly $900 billion and 7.6 million jobs to the American economy.[7]

Further, federal public lands and waters are integral to sustaining healthy local economies. In today's economy many businesses are free to choose the location for their entrepreneurial endeavors. Federal public lands – and especially protected areas -- are important for attracting

[4] Office of Management and Budget Historical Tables for Sub-Function 302. *Available at: https://obamawhitehouse.archives.gov/omb/budget/Historicals.*

[5] USDA Forest Service. Information on Water Resources. *Available at:* https://www.fs.usda.gov/wps/portal/fsinternet/cs/detail/!ut/p/z0/04_Sj9CPykssy0xPLMnMz0vMAfIjo8zijQwgwNHCwN_DI8zPyBcqYKBfkO2oCABZcx5g/?position=Contribution%20Content.Html&pname=Forest%20Service&ss=119995&navtype=SubNavigation&pnavid=110140100000000&navid=110140110000000&ttype=detail&cid=stelprdb5107778.

[6] Southwick Associates, 2011. The Economics Associated with Outdoor Recreation, Natural Resources Conservation and Historic Preservation in the United States For: The National Fish and Wildlife Foundation. *Available at:* https://www.fws.gov/refuges/news/pdfs/TheEconomicValueofOutdoorRecreation%5B1%5D.pdf.

[6] Outdoor Industry Association, 2017. The Outdoor Recreation Economy. Page 11. *Available at:* https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/.

[7] Outdoor Industry Association, 2017. The Outdoor Recreation Economy. *Available at:* https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/

and retaining talented workers, entrepreneurs and investors. Rural counties with greater proportions of protected public lands have higher incomes, higher employment levels and greater population growth than rural counties without such lands.[8]

Chronic Underfunding is Undermining Effectiveness of Natural Resource Agencies

Over the last few decades, our public lands agencies have suffered a decline in real budgets for critical programs and dwindling workforces. This has led to many difficult decisions: reduced visitor services and recreational investments, reduced scientific research and monitoring, compromised conservation and management, growing maintenance backlogs, and other impacts. For instance, between 1995 and 2015, the funding for the National Forest System has been reduced by 32% in real dollars, and the agency's staffing dropped by almost 40% between 1998 and 2015.[9] This is in part due to the growing cost of wildfire suppression, which now consumes more than 50% of the agency's budget.[10]

Recent employee surveys reflect the impacts of chronic underfunding and staffing. A recent survey by Public Employees for Environmental Responsibility (PEER), a national organization representing federal, state and local government professionals, found that 67 percent of BLM employees believe the agency does not have enough resources to accomplish its mission.[11] The survey asked how the administration could best improve the BLM. Responses included:

- *"No hiring freeze"*
- *"NOT implementing a hiring freeze – that would be a disaster"*
- *"Do not further cut our funding. I have 1.8 million acres of land in my field office to manage and I am the only natural resources staff member"*
- *"Some people are doing 2-3 jobs just to get the job done."*
- *"Funding to fill vacant positions – more than 20 in our office."*

A similar survey of national wildlife refuge managers revealed that 94 percent of respondents were concerned that staffing at their refuge was inadequate to meet their core mission:

- *"Addressing the chronic funding shortages that prevent us from adequately staffing our refuges."*
- *"Providing resources to address our maintenance backlog and better serve the members of the public"*
- *"Not do an across-the-board federal govt. cut which would devastate our tiny agency"*

[8] Headwaters Economics, 2017. Federal Public Lands in the West: Liability or Asset. *Available at:* https://headwaterseconomics.org/public-lands/federal-lands-performance/.
[9] USDA Forest Service, 2015. The Rising Cost of Fire Operations: Effects on the Forest Service's Non-Fire Work. August 4, 2015. *Available at:* https://www.fs.fed.us/sites/default/files/2015-Fire-Budget-Report.pdf.
[10] *Id.*
[11] https://www.peer.org/news/news-releases/trump-hiring-freeze-hamstrings-his-own-agenda.html.

- *"Increasing funding for the NWR system so we can hire employees to accomplish our mission"*
- *"The loss of staff has impacted all aspects of the National Wildlife Refuge System. The system no longer shines like it did 20-30 years ago"*

Specific Functions Deserving Enhanced Support and Prioritization

Given the clear importance of conservation and recreation on public lands and waters to our socio-economic well-being, we urge you not to cut – and instead bolster investment in – the following programmatic functions.

Recreation and Wilderness. Federal outdoor recreation and wilderness programs enable Americans to get outside and enjoy their national forests, wildlife refuges and other public lands through a wide variety of activities. They promote public health, enhance community well-being, unite families and friends, and foster citizenship of our nation's natural resources. Investments promote access for hunters and anglers to world class fish and game habitat, and support local economies by attracting entrepreneurs and amenity-based businesses such as outfitters and gear shops. Specific programs that should be prioritized include:

- The Forest Service **Recreation, Wilderness, and Heritage program** whose funding has shrunk by 15% since 2001, even though recreation participation continues to steadily increase and is projected to increase by 30% for most activities by 2030.[12]
- The Forest Service **Capital Improvement and Maintenance program,** which supports maintenance of ~21,600 recreation sites, ~371,000 miles of roads, and ~157,000 miles of trails, and is essential to address serious public health and safety concerns, maintain public access to rural communities, and protect clean drinking water for 66 million Americans. Since 2001, funding for roads, deferred maintenance, and facilities shrank by 46%, 95%, and 68%, respectively; funding for the **Legacy Roads and Trails program** has been halved since 2010. Such severe reductions force the agency to close recreational facilities and access roads.
- The BLM **National Landscape Conservation System** that comprises over 30 million acres of some of the most scenic and expansive landscapes in our country, including national conservation areas, wilderness areas and other designations that attract visitors and help sustain healthy local economies.
- The BLM **Recreation Resources Management program** that enhances recreation access for all visitors to BLM lands, engages youth, promotes public health, protects visitor safety and strengthens rural economies.
- The Fish and Wildlife Service **National Wildlife Refuge System** that comprises 566 national wildlife refuges with at least one in every state and territory, includes over 20

[12] USDA Forest Service. 2016. Federal Outdoor Recreation Trends: Effects of Economic Activities. PNW-GTR-945. Available at: http://www.coloradotpa.org/wp-content/uploads/2017/02/USFS-Econ-Impacts-Rec.pdf.

million acres of wilderness, and prioritizes wildlife-dependent recreation for all Americans to enjoy. Wildlife viewing, photography, hunting, fishing, environmental education and interpretation are hallmarks of the Refuge System, deemed priority public uses when compatible with wildlife conservation.

- The Fish and Wildlife Service **Urban Wildlife Conservation Program**, a visionary partnership that helps urban constituencies discover, appreciate and care for wildlife and nature in their communities.

Land planning and restoration. Resource management planning is the foundation of an agency's stewardship responsibilities. Statutorily required, planning is necessary to ensure our public lands and waters continue providing the American people an array of benefits, including wildfire management, wildlife and fish habitat, outdoor recreation, clean water, and jobs. Management planning lays the groundwork for ecological restoration that improves the health of our lands and waters while injecting funds and jobs into local communities. Reduced investment impairs stakeholder engagement and collaborative decision-making that can support enduring and science-based management. Specific programs that should be prioritized include:

- The Forest Service **Land Management Planning, Assessment, and Monitoring programs** that are crucial for better wildfire management and restoration has shrunk by 44% since 2001. Land management planning is conducted in close collaboration with a national federal advisory committee comprised of diverse stakeholders charged with advancing sound implementation of the 2012 planning rule.
- The Forest Service **Wildlife and Fisheries Habitat Management** program that conserves, restores and enhances habitat for fish, wildlife, and rare plants. It is vital to the 3,500 imperiled and at-risk species that depend on national forest lands for their survival, and supports recreational fishing, hunting and wildlife viewing on national forest lands.
- The Forest Service **Collaborative Forest Landscape Restoration Program** that incentivizes long-term collaborative forest restoration.
- The National Greater **Sage-Grouse Planning Strategy** that is predicated on the concept of "saving" a species before it requires federal protection. Continued implementation of this strategy is important for the recovery of this critical western game species and those who rely on its habitat for their livelihood.
- BLM **Master Leasing Plans,** in which BLM evaluates potential conflicts and impacts on lands prior to leasing, leading to less conflict, better resource management, and more certainty. Increasing leasing and permitting without supporting environmental review and planning, including master leasing plans, will lead to more conflict, protests and litigation, and ultimately diminish the long-term sustainable flow of benefits into local communities and regions.

Renewable energy. Support and funding should continue for BLM's smart renewable energy program that supports development of sustainable, clean energy sources that make sense for

all Americans, and reduces our nation's carbon footprint. The program helps projects succeed in low-conflict areas, reducing impacts and cutting permitting times in half.[13] Renewable energy continues to increase its market share in the energy arena as technology improves and costs continue to plummet, and drive strong job growth. A 2017 report by the Department of Energy found that solar energy supports 373,807 jobs, more than the jobs in the provision of natural gas (362,118) and over twice as many jobs in coal mining (160,119).[14] Wind energy is also seeing strong job creation, supporting 101,738 jobs. Continued strong funding for the BLM Renewable Energy Program and other related programs within DOI agencies will support these economic and clean energy opportunities in a smart and responsible way.

Transparency and Public Engagement is Integral to Long-Term Success

Federal lands and waters are owned by all Americans. The federal land management agencies administer them on our behalf following the direction prescribed in the guiding statutes and through numerous programs developed over many years, often with extensive stakeholder involvement. While there is benefit in legitimate processes designed to improve program delivery, such exploration and subsequent administrative shifts will only succeed if the public is engaged and the process is transparent. To that end, we respectfully request that you share draft reorganization plans with the public in a way that allows for meaningful review and comment, and that you publicize the decision-making criteria and evaluative process. In particular, for each agency, it would be very helpful to better understand:

- The criteria to be used by OMB to make decisions related to the reform or elimination of agencies and their functions;
- How public comments will be incorporated into the decision-making process;
- How non-market benefits and public value will be accounted for in cost-benefit analyses;
- When OMB will share a draft report with the public for meaningful comment and feedback; and
- How OMB will ensure that administrative shifts (e.g., elimination of programs, reductions in workforce) will not impair the ability of agencies to meet their statutory and regulatory responsibilities.

[13] *See* https://www.doi.gov/pressreleases/interior-department-approves-first-solar-energy-zone-projects
[14] *See* https://energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf.

Thank you for considering these comments.

With regards,



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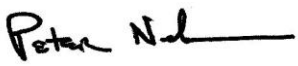

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Cc: The Honorable Ryan Zinke, Secretary of the Department of the Interior
The Honorable Sonny Perdue, Secretary of the US Department of Agriculture

From: Joel Minor
To: "blm_wo_foia@blm.gov"
Cc: Robin Cooley; "Elly Benson" (elly.benson@sierraclub.org)
Subject: Freedom of Information Act Request
Date: Friday, June 23, 2017 1:02:26 PM
Attachments: Sierra Club FOIA Request re BLM Waste Prevention Rule Waste Minimization Plans.pdf

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To whom it may concern,

Attached please find a Freedom of Information Act Request, submitted on behalf of Sierra Club, requesting Waste Minimization Plans and other documents submitted to BLM pursuant to its Waste Prevention Rule. A hard copy is also being submitted, with a return receipt requested, by certified mail.

We look forward to your prompt and timely response.

Please let me know if you have any questions,

Joel Minor

Associate Attorney

Rocky Mountain Office

633 17th Street, Suite 1600

Denver, CO 80202

T: 303-996-9628

F: 303-623-8083

earthjustice.org

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EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL

June 23, 2017

Certified Mail/Return Receipt Requested
No. 7012 3050 0000 4948 6742
Bureau of Land Management
Attn: FOIA Office (MS-WO-640)
1849 C Street NW
Washington, DC 20240
Also submitted via electronic mail to: blm_wo_foia@blm.gov

Re: Freedom of Information Act Request – Waste Minimization Plans and Other Information Submitted to BLM Pursuant to the Methane Waste Prevention Rule

Dear FOIA Officer:

This is a request for information pursuant to the Freedom of Information Act (FOIA), 5 U.S.C. § 552. This request is made on behalf of Sierra Club, the nation's oldest grassroots environmental organization.

Sierra Club is dedicated to the protection and preservation of the natural and human environment. Its purpose is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments.

Records Requested:

On January 17, 2017, the Methane Waste Prevention Rule ("the Waste Rule"), 81 Fed. Reg. 83,008 (Nov. 18, 2016), became effective. The Waste Rule is meant to reduce the amount of natural gas wasted during oil and gas production on mineral leases administered by the Bureau of Land Management (BLM). *Id.* at 83,009. According to the Waste Rule, when operators submit an Application for Permit to Drill (APD) an oil well, they must "also submit a plan to minimize waste of natural gas from that well" or a waste minimization plan. 43 C.F.R. § 3162.3-1(j). The waste minimization plan is not a part of the APD, but must accompany it. *Id.* The Rule also includes various requirements regarding royalty and royalty-free use of oil and gas, maintenance of equipment used in the drilling and production of oil and gas, and the venting and flaring of gas during drilling and production. *Id.* at §§ 3100 *et seq.*

Sierra Club requests the following records:

1. All Applications for Permit to Drill an oil well approved by all BLM field offices since the effective date (January 17, 2017) of the Methane Waste Prevention Rule. 43 C.F.R. § 3162.3-1(c). If there are more than 100 such APDs, Sierra Club alternatively requests a list of all such APDs.

2. All Waste Minimization Plans submitted to all BLM field offices since the Rule's effective date (January 17, 2017). 43 C.F.R. § 3162.3-1(j).

3. Any Sundry Notice submitted by an operator notifying the BLM about liquids unloading or well purging after January 17, 2017 under 43 C.F.R. § 3179.204(c), (e), or (f).

4. Any Sundry Notice submitted by an operator requesting approval of an alternative monitoring device and protocol after January 17, 2017 under 43 C.F.R. § 3179.302(c) and any approval by BLM of such device and protocol, pursuant to 43 C.F.R. § 3179.302(a).

5. Any requests for variances by States or tribes after January 17, 2017 under 43 C.F.R. § 3179.401, all internal and external correspondence involving BLM staff that addresses such requests, and any notifications by States or tribes of "any substantive amendments, revisions, or other changes to the State, local or tribal regulations(s) or rule(s) to be applied under the variance." 43 C.F.R. § 3179.401(e).

Sierra Club respectfully urges BLM to respond in the 20-day timeframe provided under 5 U.S.C. § 552(a)(6)(A)(i) and 43 C.F.R. § 2.16(a) to this request. Sierra Club would be happy to receive an electronic copy of the information requested in a PDF format. Please send the materials to:

Robin Cooley
Earthjustice
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633 17th Street, Suite 1600
Denver, CO 80202
303-996-9611
rcooley@earthjustice.org

Claims of Exemption from Disclosure

If you regard any of the requested records to be exempt from required disclosure under FOIA, please exercise your discretion to disclose them nevertheless, as such disclosure would serve the public interest of educating citizens.

Should you decide to invoke a FOIA exemption, please include in your full or partial denial letter sufficient information for the Club to appeal the denial. In accordance with the minimum requirements and regulations of due process, this information should include:

1. Basic factual material, including the originator, date, length, general subject matter, and location of each item;
2. Explanations and justifications for denial, including the identification of the exemption applicable to the withheld information or portions of the information found to be subject to exemption; and
3. How each exemption applies to the withheld material.

If you determine that portions of the records requested are exempt from disclosure, please segregate the exempt portions and email the remaining records within the statutory time limits after the exempted material has been redacted from the records the Club is seeking.

Fee Waiver Request

Sierra Club respectfully requests that you waive all fees in connection with this request as provided by 5 U.S.C. § 552(a)(4)(A)(iii) and 43 C.F.R. §§ 2.45 & 2.48. Sierra Club has spent years promoting the public interest through the development of policies that protect human health and the environment, and has routinely received waivers under FOIA.

Sierra Club is a national, nonprofit, environmental organization with no commercial interest in obtaining the requested information. It is dedicated to gathering and publicly distributing information related to human health and the environment in a manner that is clear, transparent, and accurate, and will make the information requested publically available.

The Club is entitled to a fee waiver because it meets each of the criteria for a fee waiver under the Department of the Interior's (DOI) FOIA regulations. *See* 43 C.F.R. §§ 2.45 & 2.48.

1. **Sierra Club Will Not Derive a Commercial Benefit from the Information Requested.**

Organizations are not eligible for a fee waiver if they will derive a commercial benefit from the requested information. 43 C.F.R. § 2.45(a)(2). Sierra Club is a non-profit corporation and thus has no commercial interest in the information requested, and will not benefit commercially from it being released.

2. **Disclosing the Information Requested Will Contribute to Public Understanding of Government Operations and Activities.**

DOI regulations require requesters to demonstrate that disclosure of the requested records is "[i]n the public interest because it is likely to contribute significantly to public understanding of government operations or activities." 43 C.F.R. § 2.45(a)(1). To evaluate this standard, BLM will consider a requester's explanation of "[h]ow disclosure is likely to contribute to public understanding of those operations or activities, including: (i) How the contents of the records are meaningfully informative; [and] (ii) The logical connection between the content of the records and the operations or activities." *Id.* § 2.48(a)(2)(i)–(ii).

The information requested is composed of information sent to the government by companies operating on federally owned lands, as well as correspondence from and between government officials, and thus is unquestionably related to government operations and activities.

The Waste Rule and the controversial attempts to use the Congressional Review Act to repeal the Waste Rule were, and continue to be, a hot-button topic, drawing the interest of

citizens across the country.[1] BLM received more than 200,000 comments in support of the Rule, including 50,000 from Sierra Club members and supporters. Many Club members also testified at public hearings regarding the rule in the states that most benefit from the Rule and the reduction of methane waste.

The records requested will contribute to the public understanding of the Rule and how and whether the oil and gas industry is following through with the Rule's new mandates. Tens of thousands of Sierra Club's members reside in the states most affected by the Rule. They, along with the rest of the public, benefit from the Rule, and will also benefit from the release of the requested information.

3. Using its Communications Expertise, Sierra Club Will Disseminate the Information Requested to a Broad Public Audience.

Under DOI's regulations, requesters seeking a fee waiver must demonstrate that they can disseminate disclosed information to a broad audience. When deciding whether to grant a fee waiver, BLM considers how disclosure will contribute to the understanding of a reasonably broad audience of persons interested in the subject, 43 C.F.R. § 2.48(a)(2)(iii), the requester's expertise regarding the requested information and how they plan to disclose the information, *id.* § 2.48(a)(2)(iv), and the requester's ability and intent to disseminate the information to a reasonably broad audience of persons interested in the subject, *id.* § 2.48(a)(2)(v).

Federal courts have held that public interest groups satisfy such requirements if they show the "ability to understand and disseminate the information." *Judicial Watch, Inc. v. Dep't of Justice*, 122 F. Supp. 2d 5, 10 (D.D.C. 2000) ("*Judicial Watch I*"). In addition, a description of past successful methods of informing the public combined with a "firm intent to disseminate" the information has been held to meet this test. *Judicial Watch, Inc. v. Dep't of Justice*, 185 F. Supp. 2d 54, 59–60 (D.D.C. 2002) ("*Judicial Watch II*") (quoting *Judicial Watch I*, 122 F. Supp. 2d at 13).

Sierra Club intends to share the information received from this FOIA request with the public. Sierra Club and its members have expertise in oil and gas development and methane waste on public lands. They participated in the public comment period for the proposed rule and are Intervenor-Respondents in the district court litigation challenge the Waste Rule. *See Wyoming v. U.S. Dep't of the Interior*, No. 2:16-cv-00285-SWS, 2:16-cv-00280-SWS (D. Wyo.). Sierra Club and its members also have long-standing experience and expertise with FOIA requests. Specifically, the Club has submitted requests for information about issues related to the Clean Air Act, Clean Water Act, the development and use of energy resources, and protection of endangered species. Sierra Club also has a long standing interest in government accountability and transparency.

[1] *See* Juliet Eilperin & Chelsea Harvey, *Senate Unexpectedly Rejects Bid to Repeal a Key Obama-Era Environmental Regulation*, The Washington Post (May 10, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/05/10/senates-poised-to-repeal-a-final-obama-era-rule-as-soon-as-wednesday/?utm_term=.9c711f789077.

Sierra Club disseminates the information it receives through FOIA requests in a variety of ways, including, but not limited to: analysis and distribution to the media, distribution through publication and mailing, posting on the Club's website, emailing and list serve distribution to their members across the U.S., and via public meetings and events. Every year the Sierra Club website receives 40,730 unique visits and 100,381 page views; on average, the site gets 104 visits per day. Sierra Magazine, which is a quarterly magazine published by Sierra Club, has a circulation of approximately 1,000,000. Sierra Club Insider, an electronic newsletter, is sent to over 850,000 people twice a month. In addition, Sierra Club disseminates information obtained by FOIA requests through comments to administrative agencies, and where necessary, through the judicial system.

4. Because the Information Requested Has Not yet Been Made Public, Disclosing It Will Contribute Significantly to Public Understanding.

Finally, DOI regulations require BLM to consider whether disclosure will significantly contribute to the public understanding of an issue and whether the public's understanding of the subject will be enhanced to a significant extent by disclosure. 43 C.F.R. § 2.48(a)(3)–(4). BLM considers whether the information requested is new, *id.* § 2.48(a)(3)(i), or already publicly available, *id.* § 2.48(a)(3)(iv), and whether disclosure will increase the level of public understanding that existed prior to disclosure, § *id.* § 2.48(a)(iii).

The information requested is not yet publically available. Its release will allow the public to ascertain how the new Methane Waste Prevention Rule has been implemented and whether operators are complying with it. Sierra Club intends to publish this information and make it widely available. This way, the Club can educate the public on the Rule and its operation now that many of its provisions have gone into effect. A large section of the public lives on or visits areas where oil and gas development occurs. Because the Rule reduces harmful air pollution, the public would benefit greatly from a deeper understanding of the Rule and whether companies are adhering to it.

Conclusion

Sierra Club looks forward to reviewing the information requested as soon as possible, but no later than twenty days from now, as required by law. 5 U.S.C. § 552(a)(6)(A)(i). Please contact the following persons with any questions you may have about this request:

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From: Nada Culver
To: mnedd@blm.gov; kbail@blm.gov
Subject: extension request for BLM streamlining planning and NEPA processes
Date: Thursday, July 13, 2017 10:05:17 AM
Attachments: BLM Streamlining Planning NEPA Extension Request.pdf

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Hi Mike and Kristin – Attached please find a letter seeking an additional 45 days to participate in this initial comment period. We are proposing this timeframe in recognition of people's desire to have more time while keeping in mind the reporting obligation that BLM has to the Secretary. We appreciate your consideration of this request and the opportunity to comment.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

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July 13, 2017

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Washington DC 20240

Kristin Bail
Assistant Director, Resources and Planning
Bureau of Land Management
1849 C Street NW, Rm. 5644
Washington, DC 20240
Phone:
Fax: 202-208-5000

Sent Via Email

Re: Request for Extension of Comment Period for the BLM Streamlining Planning and NEPA process

Dear Acting Director Nedd and Assistant Director Bail:

We the undersigned, on behalf of our members and the public, respectfully request that Bureau of Land Management (BLM) extend the comment period for input on the "BLM Streamlining Planning & National Environmental Policy Act (NEPA)" process for an additional 45 days. The comment period currently runs from July 3 to July 24, 2017. An additional 45 days will give the public and stakeholders more adequate time to provide thoughtful input on the agency's important questions around land use planning and NEPA.

As you are well aware, land use planning under the Federal Land Policy and Management Act (FLPMA) and actions that involve NEPA are two fields that require special attention when it comes to stakeholder and public engagement. A countless number of Americans have spent time to provide the BLM with their ideas and information on planning and NEPA actions. This process to revisit how the BLM can improve those processes can only benefit from meaningful engagement from as many Americans who have been though those processes as possible. Currently, the short time frame for commenting on the process will only allow for a small portion of the public to provide that input.

It is evident by the concerns raised by some stakeholders in connection with BLM's recent effort to update its planning regulations that more participation in that process for commenting on the rule was needed. There were numerous calls from stakeholders and the public for more outreach and more time to engage on the rule due to the important nature of amending the rule and the vast interest in doing so. Additionally, some interested stakeholders and members of the public do not have ready access to the internet. An extension for

submitting comments in this process will help to alleviate concerns and create more buy-in into the process going forward.

As Secretary Zinke stated in the press release accompanying the start of this 21-day comment period, "decisions made in land use plans and environmental reviews are fundamental to how public lands and resources are used for the benefit of all Americans." The Secretary also reiterated that the Department is "committed to working with state and local governments, communities, Indian tribes, and other stakeholders as true partners to determine the best ways to accomplish this, now and into the future."

In light of the importance of starting off this process with the best opportunities for BLM's many partners around the country, we respectfully request an extension of the comment period by at least 45 days, until August 17, 2017. We look forward to your prompt response to this time-sensitive matter.

Sincerely,

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Randi Spivak
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Sherry Schenk
Great Old Broads for Wilderness—Grand Junction Area Broadband leader

Kimberly Baker
Klamath Forest Alliance

Thomas Wheeler
Environmental Protection Information Center

Jimbo Buickerood
San Juan Citizens Alliance

Erik Schlenker-Goodrich
Western Environmental Law Center

Ani Kame'enui
National Parks Conservation Association

Nora Apter
National Resources Defense Council

Peter Hart
Wilderness Workshop

Kym Hunter
Southern Environmental Law Center

Mary O'Brien
Grand Canyon Trust

Brent Keith
The Nature Conservancy

From:	Boyd, David
To:	David Boyd
Subject:	News Release: BLM Colorado to hold public hearing regarding use of motorized equipment for wild horse management
Date:	Monday, July 17, 2017 12:24:52 PM
Attachments:	news release_motorized use 7-17-17.pdf

News Release
White River Field Office, Colorado

July 17, 2017

Contact: David Boyd, Public Affairs Specialist, (970) 876-9008

BLM Colorado to hold public hearing regarding use of motorized equipment for wild horse management

MEEKER, Colo. – As part of the Administration's commitment to make America great through shared conservation stewardship, the Bureau of Land Management Colorado is conducting a public hearing to discuss the use of motorized vehicles to monitor and manage wild horse populations from 5 to 6 p.m. July 28 at the White River Field Office, 220 E. Market St., Meeker, CO.

The BLM conducts an annual statewide public hearing to obtain public comment regarding the use of any motor vehicles in wild horse management as outlined in the Federal Land Policy and Management Act. Motorized equipment is used to accomplish a number of management objectives such as trapping operations, transporting horses and burros, and monitoring.

The BLM plans to use helicopter, fixed-wing aircraft and other motorized vehicles to estimate population numbers and obtain seasonal distribution information for wild horse herds throughout Colorado. Helicopters may also assist in gathering excess wild horses in Colorado this year, including a proposed gather of up to 72 wild horses from private land outside the Piceance-East Douglas Herd Management Area (HMA) southwest of Meeker.

Colorado has four herd management areas on Colorado's western slope: the Sand Wash Basin HMA in the Little Snake Field Office, Piceance-East Douglas HMA in the White River Field Office, Little Book Cliffs Wild Horse Range in the Grand Junction Field Office, and Spring Creek Basin HMA in the Tres Rios Field Office.

-BLM-

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David Boyd

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U.S. Department of the Interior
Bureau of Land Management

News Release

White River Field Office, Colorado

July 17, 2017

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-BLM-

From: Boyd, David
To: David Boyd
Subject: News Release: BLM evaluating coal proposal near Hayden
Date: Monday, July 24, 2017 11:14:34 AM
Attachments: Peabody LBA nr 7-24-17 .pdf

News Release
Little Snake Field Office, Colorado

July 24, 2017

Contact: David Boyd, BLM Public Affairs Specialist, (970) 876-9008

BLM evaluating coal proposal near Hayden

CRAIG, Colo. – As part of the Administration's priority to make America safe through energy independence, the Bureau of Land Management (BLM) is evaluating a Lease-by-Application (LBA) for Peabody Energy's Twentymile Coal Foidel Creek Mine near Hayden, Colo.

The LBA is for 640 acres of federal coal underneath private surface adjacent to the existing coal mine and lease. The coal would be mined by underground methods with no surface disturbance.

Before the BLM begins an environmental assessment of the LBA, it wants to hear about any issues or concerns the public would like to see addressed in the EA.

"The BLM supports working landscapes across the West through its various multiple-use programs like coal. We manage public lands for the benefit of current and future generations, and we welcome diverse views," said BLM Little Snake Field Manager Bruce Sillitoe.

Peabody estimates it could recover 4.1 million tons of coal, generating approximately $13 million in royalties, half of which would go to the State of Colorado. The lease would help the mine to continue at its current employment level of 365 people.

According to Yampa Valley Data Partners, Twentymile Foidel Creek accounts for more than 6 percent of the property tax revenue in Routt County and is the top taxpayer in Routt County.

The proposal, including maps, is available for review at http://bit.ly/2uQI1mU.

Public comments regarding this proposal will be most helpful to the BLM if received by Aug. 23, 2017. Comments can be e-mailed to jmaiolo@blm.gov or mailed to Jennifer Maiolo, Little Snake Field Office, 455 Emerson Street, Craig, CO 81625.

Before including your address, phone number, e-mail address, or any other personal identifying information in your comment, you should be aware that your entire comment, including personal identifying information, may be made publicly available at any time. While individuals may request BLM to withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so.

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U.S. Department of the Interior
Bureau of Land Management

News Release

Little Snake Field Office, Colorado

July 24, 2017

Contact: David Boyd, BLM Public Affairs Specialist, (970) 876-9008

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From:	Nada Culver
To:	mnedd@blm.gov; kbail@blm.gov; blm_wo_streamlining@blm.gov
Subject:	comments on Streamlining BLM Planning and NEPA
Date:	Monday, July 24, 2017 4:15:13 PM
Attachments:	Streamlining BLM Planning NEPA comments - TWS et al. 7.24.17.pdf

Dear Mike and Kristin – In addition to submitting comments through the website, the many groups on this letter are submitting these comments, which follow the format that the BLM set out for this process while providing more context, information and citations relating to the governing legal framework for the BLM's reference than could be provided through the online forum. We appreciate your consideration of these comments, as well.

Nada Culver

Senior Counsel and Director, BLM Action Center

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July 24, 2017

Mr. Mike Nedd
Acting Director
Bureau of Land Management
1849 C Street NW, Rm. 5665
Washington DC 20240

Ms. Kristin Bail
Assistant Director, Resources and Planning
Bureau of Land Management
1849 C Street NW, Rm. 5644
Washington, DC 20240

Sent Via Email to mnedd@blm.gov; kbail@blm.gov; blm_wo_streamlining@blm.gov

Re: Comments on the BLM Streamlining Planning and NEPA process

Dear Director Nedd and Assistant Director Bail:

We the undersigned, on behalf of our members and the public, submit this letter on the "Streamlining BLM Planning and NEPA" process currently underway. We are all inspired by the truly American legacy of our public lands and the opportunities they provide for clean air and water, wildlife habitat and connectivity, outdoor recreation, scientific discovery, spiritual renewal and other uses as appropriate. We also have significant experience and expertise in engaging in both BLM land use planning and NEPA efforts. Please accept and fully consider the following comments and recommendations on ways to improve these processes going forward, making them more transparent, more efficient, less contentious and thereby less costly.

These comments follow the format that the BLM set out for this process. While separate comments were filed through the BLM's online form, the following comments provide more context, information and citations relating to the governing legal framework for the BLM's reference than could be provided through the online forum.

We note at the outset that we are concerned that BLM's format—coupled with repeated public pronouncements from the Trump administration and Secretary Ryan Zinke regarding "energy dominance" and "unnecessary regulatory burdens" has fundamentally misdiagnosed the problem in search of solutions that would undermine science-based planning and management of our public lands, fail to account for intensifying threats to public lands such as from climate change, and subordinate the public's voice to the energy industry. Nonetheless, we constructively offer these comments in the hopes of shaping BLM's thinking and action.

I. FOCUSED ANALYSIS: HOW CAN THE BLM REDUCE DUPLICATIVE AND DISPROPORTIONATE ANALYSES?

Due to the complex nature and scale of many of the decisions the agency makes, the BLM land use planning process and NEPA processes are often complex, interdisciplinary processes and not for the faint-hearted. Some efforts will naturally take longer or require more information than others. This is as it should be: the true test of an effective plan is not how long it takes to complete, but how well it resolves on-the-ground management issues and builds trust, respect, and credibility across the range of multiple use stakeholders. However, there are several practices that may lead the agency to a more focused and

effective approach. The following recommendations provide insight on ways that the BLM can focus its planning and NEPA analyses to create a more efficient process:

A. Front-loading Planning and NEPA

BLM can make gains in efficiency by building more opportunity for change and input into planning or NEPA analyses up front. This has been tested and proven to work when done appropriately, building trust, credibility, and respect with public lands stakeholders. The following are comments with real-world examples and recommendations for successful implementation of strategies where earlier involvement in the process up front led to more efficiencies going forward.

1. The range of alternatives in the RMP should be broad enough to cover reasonable scenarios of change in the future so a certain amount of tiering can occur.

Under NEPA, agencies can draft programmatic reviews that allow for future decisions to tier to the broader NEPA analysis provided earlier.[1] This is true for both future site-specific projects as well as subsequent changes to planning decisions based on monitoring and triggering events. Tiering can function to improve decision-making certainty and increase the public's understanding of how plans, once completed, will be implemented. The Council on Environmental Quality's (CEQ) guidance on programmatic NEPA reviews provides:

> A well-crafted programmatic NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequent tiered reviews.[2]

The regulations implementing NEPA provide additional detail for considering adaptive management in NEPA evaluations:

> Bureaus should use adaptive management, as appropriate, particularly in circumstances where long-term impacts may be uncertain and future monitoring will be needed to make adjustments in subsequent implementation decisions. The NEPA analysis conducted in the context of an adaptive management approach should identify the range of management options that may be taken in response to the results of monitoring and should analyze the effects of such options. The environmental effects of any adaptive management strategy must be evaluated in this or subsequent NEPA analysis.[3]

By analyzing a range of management options up front, the agency can set up a more efficient adaptive management process during implementation of the plan by tiering future analysis to the broader, programmatic analysis in the plan. The DOI Adaptive Management Technical Guide provides the following:

> Alternatively, another approach to NEPA compliance that has proven successful for adaptive management programs is to prepare a "programmatic" EIS at the start, which broadly covers the likely range of actions that may be taken under the particular adaptive management program.

[1] 40 CFR 1508.28; 40 CFR 1502.20
[2] CEQ Guidance on Effective Use of Programmatic NEPA Reviews. Available at: https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_searchable.pdf
[3] 43 C.F.R. § 46.145.

> Later, any NEPA compliance needed for subsequent shifts in the management actions as a result of the adaptive management process can then "tier" off of the initial programmatic EIS, saving considerable time and work.[4]

BLM should provide guidance regarding analyzing a range of alternatives for future scenarios that could then inform and streamline future NEPA analyses. Acknowledging that the agency cannot foresee all future outcomes or options for management, the agency could establish a team and/or process that allows for additional input to provide advice on adjusting management in the future that were not covered under the range of alternatives.

As an example of setting a range of alternatives that contemplates future shifts in management, the *Pinedale RMP* incorporates an approach that analyzes several options for management changes without requiring an amendment to the RMP by articulating defined criteria for when those changes may apply.

The Pinedale RMP created 3 types of areas for oil and gas leasing: intensively developed fields, traditional leasing areas and unavailable areas, with the following framework for developable fields:

> In *Intensively Developed Fields*, lands are available for lease and are managed for intensive oil and gas leasing, exploration, development, and production. Exceptions to stipulations are also available to accommodate year-round drilling. In addition, accelerated reclamation will be implemented to reestablish habitats.
>
> In *Traditional Leasing Areas*, some lands and mineral estate are available for oil and gas leasing and exploration, but in concert with maintaining the viability of non-oil and gas resource values and land uses, including designing operations to mitigate impacts on wildlife and incorporating mitigation measures.

The Pinedale RMP incorporates flexibility in management by providing that Traditional Leasing Areas can be converted to Intensively Developed Fields when bottom-hole well density exceeds one well per 160 acres and a surface density of four well pads per 640-acre section and that this conversion will be analyzed based on: (1) a geology and reservoir analysis determination that additional well density is needed to efficiently and adequately produce the gas or oil resource; (2) that surface resources can be satisfactorily mitigated; and (3) that a project-specific environmental documentation is prepared to analyze impacts and to determine operating methods, mitigation, and BMPs to be used in the efficient and comprehensive development of the field.

Importantly, an amendment to the RMP is not required to makes this conversion if the areas are adjacent to the current Intensively Developed Fields.

2. BLM should set specific, measurable and enforceable indicators and thresholds for when a document needs adjustment.

BLM should set indicators and thresholds for change in land use plans or NEPA documents that describe and analyze when those documents should be adjusted. This will create more efficiency in addressing future adjustments to management plans since the agency should be allowed to tier to the analysis already completed. To be meaningful, these triggers should be specific, measurable and enforceable for when a change in management may be necessary.

[4] Williams, B. K., R. C. Szaro, and C. D. Shapiro. 2009. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.

Triggers do not need to be a single red line that must not be crossed; instead, triggers can be a continuum used to prevent the crossing of ecological and regulatory thresholds.[5] The key is pre-negotiating specific, measurable triggers that can be enforced, including without amending plans or NEPA documents.

As an example, most of the statewide plan amendments for the greater sage grouse[6] contain an adaptive management framework with both soft and hard triggers. Soft triggers require immediate monitoring and surveillance and may require curtailment of activities. Whereas, hard triggers require deferment of discretionary authorizations for new actions within the Biologically Significant Units for a period of 90 days and an Adaptive Management Working Group must convene within 14 days to develop an interim response strategy to be implemented within 90 days.

Another example of a comprehensive monitoring approach can be found in the *Jack Morrow Hills Coordinated Activity Plan*, Appendix 2 – "Implementation, Monitoring, and Evaluation Process." The management strategy discusses how the various surface use activities and their interactions with other planning area resources will be monitored, and how data collected in the planning area will be used to measure progress toward the goals adopted for the planning area, evaluate the effectiveness of specific practices or policies, and support decision changes.

The strategy includes objectives for individual resources; resource management indicators and possible measurements, including detailed indicator and measurement tables; and a flowchart management process that shows how monitoring could lead to management changes. The management process ensures that indicator data is appropriately used to inform management decisions, and helps BLM determine when a plan amendment would be necessary.

The following is a proposed framework for an adaptive management strategy to allow the agency to be more flexible and efficient in the future. The agency should consider providing guidance that includes all of the following components in order to make such a strategy meaningful and enforceable:

- Set specific management goals and objectives, such as biological goals and objectives to show the targeted management.
- Identify potential threats to management goals and objectives as well as potential stressors to the system.
- Set specific, enforceable and measurable indicators to gauge progress towards goals with timelines for implementation. Adjust management as appropriate when triggers are hit.
- Develop a monitoring plan with monitoring protocols, timelines for completing monitoring, and reports on the findings and conclusions.
- Provide a range of alternative management scenarios as well as a comprehensive process for additional consultation on adaptive management options when triggers are hit.
- Provide for public input, including providing information during data collection, setting triggers, and when change might be necessary to respond to triggers being hit or other unforeseeable factors.

[5] Nie, Martin A. & Schultz, Courtney A. *Decision-Making Triggers in Adaptive Management*, at 26. Conservation Bio. 1137 (April 2012).
[6] Available at: http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html

B. Planning and NEPA at the appropriate scale

Even the most complex processes and associated analyses can be focused by addressing management issues at the most appropriate scale. This scale may be defined geographically as more than one field office, more than one state, or a smaller portion of a field office. This scale may also be defined by the breadth of issues to be addressed. Programmatic NEPA and the flexibility for defining planning areas in FLPMA and BLM guidance support this approach.

Completing an initial analysis that is as thorough as possible and appropriate to the scale of the decisions is most consistent with NEPA's directive to complete analysis at the earliest possible point (40 C.F.R. § 1501.2) and can be conducted to support more streamlined decision-making down the road. Initial analysis should include a broad range of alternatives and explicitly analyze potential changes in management to best support related decision-making.

C. Suggested timelines for different types of amendments

BLM should recognize that not all amendments are created equal—different types of amendments require varying levels of time to complete. BLM should set suggested guidelines for completing amendments by each type of amendment. Below are our recommended timelines based on examples of actual amendments:

1) 6 to 12 months for a project-level amendment

Example: The Blanca Wetlands in southern Colorado's San Luis Valley was designated an Area of Critical Environmental Concern (ACEC) specifically for its recreation and wetland values, including playa and marsh habitats containing large populations of water birds, amphibians, macroinvertebrates, and 18 threated, endangered and sensitive species. The Blanca Wetlands ACEC was designated at 9,714 acres in the 1991 San Luis Valley RMP. BLM recently completed an environmental assessment (EA) to analyze the potential impacts of enlarging the Blanca Wetlands ACEC. The EA evaluated several alternatives, including two alternatives to vastly increase the size of the ACEC and a no action alternative. The proposed boundary would enlarge the ACEC from 9,714 acres to 122,762 acres, and this boundary was adopted in the Decision Record.

Scoping for the RMP Amendment began October 11, 2011. The Draft RMP Amendment and EA were released on November 20, 2013, for a 60-day public comment period. The FONSI was signed February 14, 2014. BLM found that the expansion would address the Resource Condition Objective Decision under Wildlife and Fish Habitat Management (1-12) of the San Luis Valley RMP, which states "Provide special management to improve the present acres of wetlands in the Mishak Lakes and Dry Lakes areas to the historical acres of wetlands," and thus would be an appropriate amendment to the RMP.

2) 2 to 4 years for a programmatic amendment that amends multiple plans

Example: The Solar Programmatic EIS (PEIS) was a huge undertaking. This PEIS amended around 90 RMPs to address solar development on public lands. After multiple comment period extensions, various public agencies involved and several public meetings throughout the process, the entire process only took around four years from scoping until the ROD was published. We recommend setting a suggested timeline for other such programmatic EISs based on this and other models.

3) 3 to 5 years for an RMP revision

Example: The RMP for the Grand Staircase-Escalante National Monument (GSENM) is a prime example of BLM being able to complete a comprehensive RMP revision within around 3 years. As BLM's first national monument RMP, the GSENM plan was new territory, highly controversial and involved an almost 2 million-acre landscape. It is also one of the best conservation management plans that BLM has ever issued.

II. USER-FRIENDLY PLANNING: HOW CAN THE BLM HELP STATE AND LOCAL GOVERNMENTS, TRIBAL PARTNERS, AND OTHER STAKEHOLDERS UNDERSTAND AND PARTICIPATE IN THE PLANNING PROCESS?

Land use planning is often a long and arduous process. Even with built-in comment periods and public meetings, stakeholders and the public often feel in the dark or intimidated by this massive undertaking. The following are guidelines that the BLM can follow to make the planning process more user-friendly and create more buy-in for the resulting land use plan:

- BLM should focus on maximizing opportunities for public input, which ensures that stakeholders trust the process and outcomes. BLM should also engage in regular public outreach whether there is an official opportunity to provide input or not to inform the public and stakeholders of the current and next steps in the planning process.
- BLM should encourage use of informal meetings that provide space for asking questions, learning and providing feedback. Discussion-style meetings are not inconsistent with NEPA or FLPMA and not only helps the public to better understand the process but also informs the agency about issues the public and stakeholders care about most.
- BLM should provide for a variety of ways to give input, including formal comments at meetings (in addition to the more traditional information-sharing stations), written comments that can be provided at meetings and interactive internet-based tools. It is important that BLM build in time and opportunities for stakeholders that may not have easy access to high speed internet and software.
- As displayed in Appendix F of the Land Use Planning Handbook, there are many decisions that are made prior to the official scoping notice being issued. This includes an attempt to anticipate planning issues and management concerns, setting preliminary planning criteria, evaluating data and inventory needs and preparing a public participation plan. BLM could benefit greatly by involving the public in some of these decisions from the very beginning of planning. For example, BLM could make data calls to the public and institutions to help with collection of data where or inventory information where there are gaps. BLM could also better anticipate the concerns or management issues that may come up during scoping and will be in a better position to address those issues throughout the process.

III. TRANSPARENCY: HOW CAN THE BLM FOSTER GREATER TRANSPARENCY IN THE NEPA PROCESS?

As you stated in the BLM's press release announcing this process, "we need and want input from our state and local partners as well as from the general public in this effort." As a preliminary matter, BLM should provide the public and stakeholders with ample opportunities to provide input on this process going forward, regardless of whether there are ultimately formal rulemaking processes. So far, the BLM has offered a 21-day comment period with a web format that is not user-friendly and limited to 700 characters per answer. This is inadequate for outreach to the public on such an important matter. We strongly urge you to do all that is necessary to reach out to as many members of the public as possible on these significant issues.

Regarding the overarching process for providing greater transparency in the NEPA process overall, we provide the following recommendations be incorporated in BLM's directives:

- Provide ongoing opportunities for input, such as pre-scoping and preliminary alternatives, and make information submitted available for review. These processes do not need to be formal NEPA processes, but will support BLM's decision-making and public trust in the NEPA process.
    - Involving the public during pre-scoping planning also comports with the CEQ regulations implementing NEPA which state that "[a]gencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." BLM should provide guidance about specifically and actively engaging the public prior to scoping in the planning process in order to better meet the goals of planning and create a more efficient planning process throughout.
    - Providing an opportunity for the public to review preliminary alternatives can also foster greater transparency in the NEPA process. For instance, the Arizona Strip BLM Office provided preliminary management alternatives, giving the public a chance to submit comments and giving the BLM valuable insight into their management approaches. The Las Cruces Field Office also held workshops and solicited public comments on preliminary alternatives for the Tri-County RMP. Most recently, the Moab BLM released preliminary alternatives and provided opportunities for public involvement as part of the Moab MLP process. We encourage the BLM to provide for public input into the management situation analysis and identification of planning issues, and on a preliminary range of alternatives prior to preparing draft RMPs. This allows for BLM to refine its approach prior to the next formal step in the planning process.
- Make underlying data available to stakeholders from the start of the process and throughout. It should be made clear that stakeholders should not be required to submit formal Freedom of Information Act Requests to obtain inventory data, including GIS files, or to review comments submitted, as they are sometimes required to do by the agency now. BLM can and should make this information available – as many offices already do. Provide ongoing updates on where the agency is in NEPA processes, including newsletters and posting information.
- Provide specific responses to comments on draft documents, whether environmental assessments or environmental impact statements, and make those available before final documents are issued or decisions are made.
- Provide an opportunity to receive notices of NEPA processes by notifying the BLM of areas of interest. Expecting stakeholders to hunt for updated NEPA documents in different field offices in global listings on e-planning interferes with and undermines transparency.

IV. BEING GOOD NEIGHBORS: HOW CAN THE BLM BUILD TRUST AND BETTER INTEGRATE THE NEEDS OF STATE AND LOCAL GOVERNMENTS, TRIBAL PARTNERS, AND OTHER STAKEHOLDERS?

Outreach and continuous communication should be emphasized. Stakeholders and the public want to hear from the agency on a regular basis. The following are recommendations on how to better integrate the needs of stakeholders and the public:

- Issue clarification that the agency will work throughout its planning and NEPA processes to consider state and local objectives, try to seek consistency with state and local plans and policies, and hopefully avoid the need for a formal consistency review and/or appeal in the end.
- Ensure that these efforts do not undermine BLM's role as the final decision-making authority and its obligation to manage in accordance with the multiple use mandate. While it is important for

BLM to seek to evaluate state and local government input, these decisions are ultimately to be made by the BLM and to be focused on meeting the interests and needs of the American people.
- Maintain and support the updated manual (MS-1780, 2016) and handbook (H-1780-1) on engaging tribal governments.
- Where local governments do not have expertise in planning or NEPA, provide more robust support and liaisons to assist in engagement.
- Consider how best to support state and local priorities that cross jurisdictions, such as managing wildlife migration corridors, backcountry recreation, cultural and historic resources and wildlands. Balancing other uses with energy development is vital for addressing the vitality of affected communities.

V. REDUCING LITIGATION: HOW CAN THE BLM CREATE LEGALLY DEFENSIBLE DOCUMENTS AND AVOID THE DELAYS ASSOCIATED WITH LEGAL CHALLENGES?

Ensuring that the public is informed and the planning and NEPA process is open and transparent will not only create a better outcome but will reduce conflict in the end. It is incumbent on the BLM, both legally (under NEPA and FLPMA) and as steward of our public lands, to ensure there are ongoing, meaningful opportunities for public input into the agency's decisions on the use and management of our public lands. Rather than seeking to change these fundamental laws through congressional intervention or undermining them in new directives, BLM can support their intent by clarifying the agency's commitment to multiple use management and its nation of stakeholders through regulations, policies and guidance.

"Public scrutiny" is considered "essential to implementing NEPA." 40 C.F.R. § 1500.1(b). Similarly, FLPMA is clear that during the land use planning process, there must be "an opportunity for public involvement," including "adequate notice and opportunity to comment upon and participate in the formulation of plans and programs relating to the management of the public lands."43 U.S.C. § 1712(f).

"Streamlining" is not an end in and of itself, especially if it cuts out the public and consideration of environmental harms. Ensuring the BLM fully considers what could happen before turning public lands over to potential harm and giving the public a chance to weigh in is not only the law, it is also the best thing for our public lands.

The clearest way to reduce litigation in these processes is to ensure that all of the mandates of FLPMA, NEPA and other applicable law are fully complied with and to actively build trust, credibility, and respect with public lands stakeholders. Cutting corners on key aspects of NEPA such as relying on quality data, considering a reasonable range of alternatives, and responding to substantive comments are the biggest risks for drawing legal challenges and delays from those challenges being successful. Moreover, we emphasize that signaling, through an emphasis on "energy dominance," that fossil fuels development will be prioritized over other multiple uses, and conceiving of core planning, environmental review, and conservation safeguards as "burdens," does little to engender the expansive trust, credibility, and respect with stakeholders essential to moderate public lands conflicts and the risk of litigation.

VI. "RIGHT-SIZED" ENVIRONMENTAL ANALYSIS: HOW CAN THE BLM MORE CLOSELY MATCH THE LEVEL OF NEPA ANALYSIS TO THE SCALE OF THE ACTION BEING ANALYZED?

The purpose of NEPA is to ensure that agency decisions are informed as to the environmental consequences of decisions and made with the benefit of public input. These should remain the guiding principles for NEPA processes.

Without setting specific limits on pages or range of analyses, BLM can define the right amount of analysis to match the scope of decision-making. This scope and scale may be defined geographically as more than one field office, more than one state, or a smaller portion of a field office. This scale may also be defined by the breadth of issues to be addressed. Programmatic NEPA and the flexibility for defining planning areas in FLPMA and BLM guidance support this approach.

Categorical exclusions are reserved for extreme circumstances where it is unequivocal that an environmental analysis is unnecessary. Focusing this process on creating more categorical exclusions is not necessary and not consistent with NEPA. The use of categorical exclusions should include thorough consideration of extraordinary circumstances that indicate NEPA analysis is required. Using categorical exclusions to permit drilling should be subject to heightened scrutiny given the potential for impacts.

Additionally, the use of Determinations of NEPA Adequacy (DNA) should be discouraged. Where a categorical exclusion is not appropriate, a focused environmental assessment that shows the BLM is evaluating potential impacts is more consistent with NEPA.

Conclusion

We appreciate the opportunity to comment on this important process and look forward to participating throughout. Please keep us informed of updates on this and related processes from the agency.

Sincerely,

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Agua Fria Open Space Alliance, Inc.

Sharon Buccino
Natural Resources Defense Council

Shannon Anderson
Powder River Basin Resource Council

Luke Schafer
Conservation Colorado

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Rocky Mountain Wild

Christine Canaly
San Luis Valley Ecosystem Council

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Southern Environmental Law Center

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Michael Myers, MNM
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Justin Garoutte
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Greg Hill
Friends of Big Morongo Canyon Preserve

Sharon Baur
Friends of Joshua Tree Forest

Josh Ewing
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Jim Stanger
Friends of Sloan Canyon

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Steph Wald
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Sarah Fields
Uranium Watch

Mark Salvo
Defenders of Wildlife

From:	Nada Culver
To:	kkelleh@blm.gov; Bernier, Heather; styron@blm.gov
Subject:	FW: comments on Streamlining BLM Planning and NEPA
Date:	Monday, July 24, 2017 4:21:31 PM
Attachments:	Streamlining BLM Planning NEPA comments - TWS et al. 7.24.17.pdf

Hi Karen, Heather and Steve – We wanted to share these comments with you, as well, and hope you find them useful. As noted below, we also submitted comments through the web form.

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From: Nada Culver
Sent: Monday, July 24, 2017 2:15 PM
To: 'mnedd@blm.gov' <mnedd@blm.gov>; 'kbail@blm.gov' <kbail@blm.gov>; 'blm_wo_streamlining@blm.gov' <blm_wo_streamlining@blm.gov>
Subject: comments on Streamlining BLM Planning and NEPA

Dear Mike and Kristin – In addition to submitting comments through the website, the many groups on this letter are submitting these comments, which follow the format that the BLM set out for this process while providing more context, information and citations relating to the governing legal framework for the BLM's reference than could be provided through the online forum. We appreciate your consideration of these comments, as well.

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July 24, 2017

Mr. Mike Nedd
Acting Director
Bureau of Land Management
1849 C Street NW, Rm. 5665
Washington DC 20240

Ms. Kristin Bail
Assistant Director, Resources and Planning
Bureau of Land Management
1849 C Street NW, Rm. 5644
Washington, DC 20240

Sent Via Email to mnedd@blm.gov; kbail@blm.gov; blm_wo_streamlining@blm.gov

Re: Comments on the BLM Streamlining Planning and NEPA process

Dear Director Nedd and Assistant Director Bail:

We the undersigned, on behalf of our members and the public, submit this letter on the "Streamlining BLM Planning and NEPA" process currently underway. We are all inspired by the truly American legacy of our public lands and the opportunities they provide for clean air and water, wildlife habitat and connectivity, outdoor recreation, scientific discovery, spiritual renewal and other uses as appropriate. We also have significant experience and expertise in engaging in both BLM land use planning and NEPA efforts. Please accept and fully consider the following comments and recommendations on ways to improve these processes going forward, making them more transparent, more efficient, less contentious and thereby less costly.

These comments follow the format that the BLM set out for this process. While separate comments were filed through the BLM's online form, the following comments provide more context, information and citations relating to the governing legal framework for the BLM's reference than could be provided through the online forum.

We note at the outset that we are concerned that BLM's format—coupled with repeated public pronouncements from the Trump administration and Secretary Ryan Zinke regarding "energy dominance" and "unnecessary regulatory burdens" has fundamentally misdiagnosed the problem in search of solutions that would undermine science-based planning and management of our public lands, fail to account for intensifying threats to public lands such as from climate change, and subordinate the public's voice to the energy industry. Nonetheless, we constructively offer these comments in the hopes of shaping BLM's thinking and action.

I. FOCUSED ANALYSIS: HOW CAN THE BLM REDUCE DUPLICATIVE AND DISPROPORTIONATE ANALYSES?

Due to the complex nature and scale of many of the decisions the agency makes, the BLM land use planning process and NEPA processes are often complex, interdisciplinary processes and not for the faint-hearted. Some efforts will naturally take longer or require more information than others. This is as it should be: the true test of an effective plan is not how long it takes to complete, but how well it resolves on-the-ground management issues and builds trust, respect, and credibility across the range of multiple use stakeholders. However, there are several practices that may lead the agency to a more focused and

effective approach. The following recommendations provide insight on ways that the BLM can focus its planning and NEPA analyses to create a more efficient process:

A. Front-loading Planning and NEPA

BLM can make gains in efficiency by building more opportunity for change and input into planning or NEPA analyses up front. This has been tested and proven to work when done appropriately, building trust, credibility, and respect with public lands stakeholders. The following are comments with real-world examples and recommendations for successful implementation of strategies where earlier involvement in the process up front led to more efficiencies going forward.

1. The range of alternatives in the RMP should be broad enough to cover reasonable scenarios of change in the future so a certain amount of tiering can occur.

Under NEPA, agencies can draft programmatic reviews that allow for future decisions to tier to the broader NEPA analysis provided earlier.[1] This is true for both future site-specific projects as well as subsequent changes to planning decisions based on monitoring and triggering events. Tiering can function to improve decision-making certainty and increase the public's understanding of how plans, once completed, will be implemented. The Council on Environmental Quality's (CEQ) guidance on programmatic NEPA reviews provides:

> A well-crafted programmatic NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequent tiered reviews.[2]

The regulations implementing NEPA provide additional detail for considering adaptive management in NEPA evaluations:

> Bureaus should use adaptive management, as appropriate, particularly in circumstances where long-term impacts may be uncertain and future monitoring will be needed to make adjustments in subsequent implementation decisions. The NEPA analysis conducted in the context of an adaptive management approach should identify the range of management options that may be taken in response to the results of monitoring and should analyze the effects of such options. The environmental effects of any adaptive management strategy must be evaluated in this or subsequent NEPA analysis.[3]

By analyzing a range of management options up front, the agency can set up a more efficient adaptive management process during implementation of the plan by tiering future analysis to the broader, programmatic analysis in the plan. The DOI Adaptive Management Technical Guide provides the following:

> Alternatively, another approach to NEPA compliance that has proven successful for adaptive management programs is to prepare a "programmatic" EIS at the start, which broadly covers the likely range of actions that may be taken under the particular adaptive management program.

[1] 40 CFR 1508.28; 40 CFR 1502.20
[2] CEQ Guidance on Effective Use of Programmatic NEPA Reviews. Available at: https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_searchable.pdf
[3] 43 C.F.R. § 46.145.

> Later, any NEPA compliance needed for subsequent shifts in the management actions as a result of the adaptive management process can then "tier" off of the initial programmatic EIS, saving considerable time and work.[4]

BLM should provide guidance regarding analyzing a range of alternatives for future scenarios that could then inform and streamline future NEPA analyses. Acknowledging that the agency cannot foresee all future outcomes or options for management, the agency could establish a team and/or process that allows for additional input to provide advice on adjusting management in the future that were not covered under the range of alternatives.

As an example of setting a range of alternatives that contemplates future shifts in management, the *Pinedale RMP* incorporates an approach that analyzes several options for management changes without requiring an amendment to the RMP by articulating defined criteria for when those changes may apply.

The Pinedale RMP created 3 types of areas for oil and gas leasing: intensively developed fields, traditional leasing areas and unavailable areas, with the following framework for developable fields:

> In *Intensively Developed Fields*, lands are available for lease and are managed for intensive oil and gas leasing, exploration, development, and production. Exceptions to stipulations are also available to accommodate year-round drilling. In addition, accelerated reclamation will be implemented to reestablish habitats.
>
> In *Traditional Leasing Areas*, some lands and mineral estate are available for oil and gas leasing and exploration, but in concert with maintaining the viability of non-oil and gas resource values and land uses, including designing operations to mitigate impacts on wildlife and incorporating mitigation measures.

The Pinedale RMP incorporates flexibility in management by providing that Traditional Leasing Areas can be converted to Intensively Developed Fields when bottom-hole well density exceeds one well per 160 acres and a surface density of four well pads per 640-acre section and that this conversion will be analyzed based on: (1) a geology and reservoir analysis determination that additional well density is needed to efficiently and adequately produce the gas or oil resource; (2) that surface resources can be satisfactorily mitigated; and (3) that a project-specific environmental documentation is prepared to analyze impacts and to determine operating methods, mitigation, and BMPs to be used in the efficient and comprehensive development of the field.

Importantly, an amendment to the RMP is not required to makes this conversion if the areas are adjacent to the current Intensively Developed Fields.

2. BLM should set specific, measurable and enforceable indicators and thresholds for when a document needs adjustment.

BLM should set indicators and thresholds for change in land use plans or NEPA documents that describe and analyze when those documents should be adjusted. This will create more efficiency in addressing future adjustments to management plans since the agency should be allowed to tier to the analysis already completed. To be meaningful, these triggers should be specific, measurable and enforceable for when a change in management may be necessary.

[4] Williams, B. K., R. C. Szaro, and C. D. Shapiro. 2009. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.

Triggers do not need to be a single red line that must not be crossed; instead, triggers can be a continuum used to prevent the crossing of ecological and regulatory thresholds.[5] The key is pre-negotiating specific, measurable triggers that can be enforced, including without amending plans or NEPA documents.

As an example, most of the statewide plan amendments for the greater sage grouse[6] contain an adaptive management framework with both soft and hard triggers. Soft triggers require immediate monitoring and surveillance and may require curtailment of activities. Whereas, hard triggers require deferment of discretionary authorizations for new actions within the Biologically Significant Units for a period of 90 days and an Adaptive Management Working Group must convene within 14 days to develop an interim response strategy to be implemented within 90 days.

Another example of a comprehensive monitoring approach can be found in the *Jack Morrow Hills Coordinated Activity Plan*, Appendix 2 – "Implementation, Monitoring, and Evaluation Process." The management strategy discusses how the various surface use activities and their interactions with other planning area resources will be monitored, and how data collected in the planning area will be used to measure progress toward the goals adopted for the planning area, evaluate the effectiveness of specific practices or policies, and support decision changes.

The strategy includes objectives for individual resources; resource management indicators and possible measurements, including detailed indicator and measurement tables; and a flowchart management process that shows how monitoring could lead to management changes. The management process ensures that indicator data is appropriately used to inform management decisions, and helps BLM determine when a plan amendment would be necessary.

The following is a proposed framework for an adaptive management strategy to allow the agency to be more flexible and efficient in the future. The agency should consider providing guidance that includes all of the following components in order to make such a strategy meaningful and enforceable:

- Set specific management goals and objectives, such as biological goals and objectives to show the targeted management.
- Identify potential threats to management goals and objectives as well as potential stressors to the system.
- Set specific, enforceable and measurable indicators to gauge progress towards goals with timelines for implementation. Adjust management as appropriate when triggers are hit.
- Develop a monitoring plan with monitoring protocols, timelines for completing monitoring, and reports on the findings and conclusions.
- Provide a range of alternative management scenarios as well as a comprehensive process for additional consultation on adaptive management options when triggers are hit.
- Provide for public input, including providing information during data collection, setting triggers, and when change might be necessary to respond to triggers being hit or other unforeseeable factors.

[5] Nie, Martin A. & Schultz, Courtney A. *Decision-Making Triggers in Adaptive Management*, at 26. Conservation Bio. 1137 (April 2012).
[6] Available at: http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html

B. Planning and NEPA at the appropriate scale

Even the most complex processes and associated analyses can be focused by addressing management issues at the most appropriate scale. This scale may be defined geographically as more than one field office, more than one state, or a smaller portion of a field office. This scale may also be defined by the breadth of issues to be addressed. Programmatic NEPA and the flexibility for defining planning areas in FLPMA and BLM guidance support this approach.

Completing an initial analysis that is as thorough as possible and appropriate to the scale of the decisions is most consistent with NEPA's directive to complete analysis at the earliest possible point (40 C.F.R. § 1501.2) and can be conducted to support more streamlined decision-making down the road. Initial analysis should include a broad range of alternatives and explicitly analyze potential changes in management to best support related decision-making.

C. Suggested timelines for different types of amendments

BLM should recognize that not all amendments are created equal—different types of amendments require varying levels of time to complete. BLM should set suggested guidelines for completing amendments by each type of amendment. Below are our recommended timelines based on examples of actual amendments:

1) 6 to 12 months for a project-level amendment

Example: The Blanca Wetlands in southern Colorado's San Luis Valley was designated an Area of Critical Environmental Concern (ACEC) specifically for its recreation and wetland values, including playa and marsh habitats containing large populations of water birds, amphibians, macroinvertebrates, and 18 threated, endangered and sensitive species. The Blanca Wetlands ACEC was designated at 9,714 acres in the 1991 San Luis Valley RMP. BLM recently completed an environmental assessment (EA) to analyze the potential impacts of enlarging the Blanca Wetlands ACEC. The EA evaluated several alternatives, including two alternatives to vastly increase the size of the ACEC and a no action alternative. The proposed boundary would enlarge the ACEC from 9,714 acres to 122,762 acres, and this boundary was adopted in the Decision Record.

Scoping for the RMP Amendment began October 11, 2011. The Draft RMP Amendment and EA were released on November 20, 2013, for a 60-day public comment period. The FONSI was signed February 14, 2014. BLM found that the expansion would address the Resource Condition Objective Decision under Wildlife and Fish Habitat Management (1-12) of the San Luis Valley RMP, which states "Provide special management to improve the present acres of wetlands in the Mishak Lakes and Dry Lakes areas to the historical acres of wetlands," and thus would be an appropriate amendment to the RMP.

2) 2 to 4 years for a programmatic amendment that amends multiple plans

Example: The Solar Programmatic EIS (PEIS) was a huge undertaking. This PEIS amended around 90 RMPs to address solar development on public lands. After multiple comment period extensions, various public agencies involved and several public meetings throughout the process, the entire process only took around four years from scoping until the ROD was published. We recommend setting a suggested timeline for other such programmatic EISs based on this and other models.

3) 3 to 5 years for an RMP revision

Example: The RMP for the Grand Staircase-Escalante National Monument (GSENM) is a prime example of BLM being able to complete a comprehensive RMP revision within around 3 years. As BLM's first national monument RMP, the GSENM plan was new territory, highly controversial and involved an almost 2 million-acre landscape. It is also one of the best conservation management plans that BLM has ever issued.

II. USER-FRIENDLY PLANNING: HOW CAN THE BLM HELP STATE AND LOCAL GOVERNMENTS, TRIBAL PARTNERS, AND OTHER STAKEHOLDERS UNDERSTAND AND PARTICIPATE IN THE PLANNING PROCESS?

Land use planning is often a long and arduous process. Even with built-in comment periods and public meetings, stakeholders and the public often feel in the dark or intimidated by this massive undertaking. The following are guidelines that the BLM can follow to make the planning process more user-friendly and create more buy-in for the resulting land use plan:

- BLM should focus on maximizing opportunities for public input, which ensures that stakeholders trust the process and outcomes. BLM should also engage in regular public outreach whether there is an official opportunity to provide input or not to inform the public and stakeholders of the current and next steps in the planning process.
- BLM should encourage use of informal meetings that provide space for asking questions, learning and providing feedback. Discussion-style meetings are not inconsistent with NEPA or FLPMA and not only helps the public to better understand the process but also informs the agency about issues the public and stakeholders care about most.
- BLM should provide for a variety of ways to give input, including formal comments at meetings (in addition to the more traditional information-sharing stations), written comments that can be provided at meetings and interactive internet-based tools. It is important that BLM build in time and opportunities for stakeholders that may not have easy access to high speed internet and software.
- As displayed in Appendix F of the Land Use Planning Handbook, there are many decisions that are made prior to the official scoping notice being issued. This includes an attempt to anticipate planning issues and management concerns, setting preliminary planning criteria, evaluating data and inventory needs and preparing a public participation plan. BLM could benefit greatly by involving the public in some of these decisions from the very beginning of planning. For example, BLM could make data calls to the public and institutions to help with collection of data where or inventory information where there are gaps. BLM could also better anticipate the concerns or management issues that may come up during scoping and will be in a better position to address those issues throughout the process.

III. TRANSPARENCY: HOW CAN THE BLM FOSTER GREATER TRANSPARENCY IN THE NEPA PROCESS?

As you stated in the BLM's press release announcing this process, "we need and want input from our state and local partners as well as from the general public in this effort." As a preliminary matter, BLM should provide the public and stakeholders with ample opportunities to provide input on this process going forward, regardless of whether there are ultimately formal rulemaking processes. So far, the BLM has offered a 21-day comment period with a web format that is not user-friendly and limited to 700 characters per answer. This is inadequate for outreach to the public on such an important matter. We strongly urge you to do all that is necessary to reach out to as many members of the public as possible on these significant issues.

Regarding the overarching process for providing greater transparency in the NEPA process overall, we provide the following recommendations be incorporated in BLM's directives:

- Provide ongoing opportunities for input, such as pre-scoping and preliminary alternatives, and make information submitted available for review. These processes do not need to be formal NEPA processes, but will support BLM's decision-making and public trust in the NEPA process.
    - Involving the public during pre-scoping planning also comports with the CEQ regulations implementing NEPA which state that "[a]gencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." BLM should provide guidance about specifically and actively engaging the public prior to scoping in the planning process in order to better meet the goals of planning and create a more efficient planning process throughout.
    - Providing an opportunity for the public to review preliminary alternatives can also foster greater transparency in the NEPA process. For instance, the Arizona Strip BLM Office provided preliminary management alternatives, giving the public a chance to submit comments and giving the BLM valuable insight into their management approaches. The Las Cruces Field Office also held workshops and solicited public comments on preliminary alternatives for the Tri-County RMP. Most recently, the Moab BLM released preliminary alternatives and provided opportunities for public involvement as part of the Moab MLP process. We encourage the BLM to provide for public input into the management situation analysis and identification of planning issues, and on a preliminary range of alternatives prior to preparing draft RMPs. This allows for BLM to refine its approach prior to the next formal step in the planning process.
- Make underlying data available to stakeholders from the start of the process and throughout. It should be made clear that stakeholders should not be required to submit formal Freedom of Information Act Requests to obtain inventory data, including GIS files, or to review comments submitted, as they are sometimes required to do by the agency now. BLM can and should make this information available – as many offices already do. Provide ongoing updates on where the agency is in NEPA processes, including newsletters and posting information.
- Provide specific responses to comments on draft documents, whether environmental assessments or environmental impact statements, and make those available before final documents are issued or decisions are made.
- Provide an opportunity to receive notices of NEPA processes by notifying the BLM of areas of interest. Expecting stakeholders to hunt for updated NEPA documents in different field offices in global listings on e-planning interferes with and undermines transparency.

IV. BEING GOOD NEIGHBORS: HOW CAN THE BLM BUILD TRUST AND BETTER INTEGRATE THE NEEDS OF STATE AND LOCAL GOVERNMENTS, TRIBAL PARTNERS, AND OTHER STAKEHOLDERS?

Outreach and continuous communication should be emphasized. Stakeholders and the public want to hear from the agency on a regular basis. The following are recommendations on how to better integrate the needs of stakeholders and the public:

- Issue clarification that the agency will work throughout its planning and NEPA processes to consider state and local objectives, try to seek consistency with state and local plans and policies, and hopefully avoid the need for a formal consistency review and/or appeal in the end.
- Ensure that these efforts do not undermine BLM's role as the final decision-making authority and its obligation to manage in accordance with the multiple use mandate. While it is important for

BLM to seek to evaluate state and local government input, these decisions are ultimately to be made by the BLM and to be focused on meeting the interests and needs of the American people.
- Maintain and support the updated manual (MS-1780, 2016) and handbook (H-1780-1) on engaging tribal governments.
- Where local governments do not have expertise in planning or NEPA, provide more robust support and liaisons to assist in engagement.
- Consider how best to support state and local priorities that cross jurisdictions, such as managing wildlife migration corridors, backcountry recreation, cultural and historic resources and wildlands. Balancing other uses with energy development is vital for addressing the vitality of affected communities.

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The clearest way to reduce litigation in these processes is to ensure that all of the mandates of FLPMA, NEPA and other applicable law are fully complied with and to actively build trust, credibility, and respect with public lands stakeholders. Cutting corners on key aspects of NEPA such as relying on quality data, considering a reasonable range of alternatives, and responding to substantive comments are the biggest risks for drawing legal challenges and delays from those challenges being successful. Moreover, we emphasize that signaling, through an emphasis on "energy dominance," that fossil fuels development will be prioritized over other multiple uses, and conceiving of core planning, environmental review, and conservation safeguards as "burdens," does little to engender the expansive trust, credibility, and respect with stakeholders essential to moderate public lands conflicts and the risk of litigation.

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Conclusion

We appreciate the opportunity to comment on this important process and look forward to participating throughout. Please keep us informed of updates on this and related processes from the agency.

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Agua Fria Open Space Alliance, Inc.

Sharon Buccino
Natural Resources Defense Council

Shannon Anderson
Powder River Basin Resource Council

Luke Schafer
Conservation Colorado

Tehri Parker
Rocky Mountain Wild

Christine Canaly
San Luis Valley Ecosystem Council

Sam Evans
Southern Environmental Law Center

Alan Apt
Sierra Club, Rocky Mountain Chapter

Michael Myers, MNM
Friends of Black Rock High Rock

Justin Garoutte
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Terry Dickey
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Steph Wald
Carrizo Plain Conservancy

Ani Kame'enui
National Parks Conservation Association

Sarah Fields
Uranium Watch

Mark Salvo
Defenders of Wildlife

From: Nada Culver
To: kkelleh@blm.gov; Bernier, Heather; stryon@blm.gov
Subject: FW: comments on Streamlining BLM Planning and NEPA
Date: Monday, July 24, 2017 4:28:21 PM
Attachments: Streamlining BLM Planning NEPA comments - TWS et al. 7.24.17.pdf

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Sorry – somehow mistyped Steve's email.

Hi Karen, Heather and Steve – We wanted to share these comments with you, as well, and hope you find them useful. As noted below, we also submitted comments through the web form.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org

From: Nada Culver
Sent: Monday, July 24, 2017 2:15 PM
To: 'mnedd@blm.gov' <mnedd@blm.gov>; 'kbail@blm.gov' <kbail@blm.gov>; 'blm_wo_streamlining@blm.gov' <blm_wo_streamlining@blm.gov>
Subject: comments on Streamlining BLM Planning and NEPA

Dear Mike and Kristin – In addition to submitting comments through the website, the many groups on this letter are submitting these comments, which follow the format that the BLM set out for this process while providing more context, information and citations relating to the governing legal framework for the BLM's reference than could be provided through the online forum. We appreciate your consideration of these comments, as well.

Nada Culver

Senior Counsel and Director, BLM Action Center

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July 24, 2017

Mr. Mike Nedd
Acting Director
Bureau of Land Management
1849 C Street NW, Rm. 5665
Washington DC 20240

Ms. Kristin Bail
Assistant Director, Resources and Planning
Bureau of Land Management
1849 C Street NW, Rm. 5644
Washington, DC 20240

Sent Via Email to mnedd@blm.gov; kbail@blm.gov; blm_wo_streamlining@blm.gov

Re: Comments on the BLM Streamlining Planning and NEPA process

Dear Director Nedd and Assistant Director Bail:

We the undersigned, on behalf of our members and the public, submit this letter on the "Streamlining BLM Planning and NEPA" process currently underway. We are all inspired by the truly American legacy of our public lands and the opportunities they provide for clean air and water, wildlife habitat and connectivity, outdoor recreation, scientific discovery, spiritual renewal and other uses as appropriate. We also have significant experience and expertise in engaging in both BLM land use planning and NEPA efforts. Please accept and fully consider the following comments and recommendations on ways to improve these processes going forward, making them more transparent, more efficient, less contentious and thereby less costly.

These comments follow the format that the BLM set out for this process. While separate comments were filed through the BLM's online form, the following comments provide more context, information and citations relating to the governing legal framework for the BLM's reference than could be provided through the online forum.

We note at the outset that we are concerned that BLM's format—coupled with repeated public pronouncements from the Trump administration and Secretary Ryan Zinke regarding "energy dominance" and "unnecessary regulatory burdens" has fundamentally misdiagnosed the problem in search of solutions that would undermine science-based planning and management of our public lands, fail to account for intensifying threats to public lands such as from climate change, and subordinate the public's voice to the energy industry. Nonetheless, we constructively offer these comments in the hopes of shaping BLM's thinking and action.

I. FOCUSED ANALYSIS: HOW CAN THE BLM REDUCE DUPLICATIVE AND DISPROPORTIONATE ANALYSES?

Due to the complex nature and scale of many of the decisions the agency makes, the BLM land use planning process and NEPA processes are often complex, interdisciplinary processes and not for the faint-hearted. Some efforts will naturally take longer or require more information than others. This is as it should be: the true test of an effective plan is not how long it takes to complete, but how well it resolves on-the-ground management issues and builds trust, respect, and credibility across the range of multiple use stakeholders. However, there are several practices that may lead the agency to a more focused and

effective approach. The following recommendations provide insight on ways that the BLM can focus its planning and NEPA analyses to create a more efficient process:

A. Front-loading Planning and NEPA

BLM can make gains in efficiency by building more opportunity for change and input into planning or NEPA analyses up front. This has been tested and proven to work when done appropriately, building trust, credibility, and respect with public lands stakeholders. The following are comments with real-world examples and recommendations for successful implementation of strategies where earlier involvement in the process up front led to more efficiencies going forward.

1. The range of alternatives in the RMP should be broad enough to cover reasonable scenarios of change in the future so a certain amount of tiering can occur.

Under NEPA, agencies can draft programmatic reviews that allow for future decisions to tier to the broader NEPA analysis provided earlier.[1] This is true for both future site-specific projects as well as subsequent changes to planning decisions based on monitoring and triggering events. Tiering can function to improve decision-making certainty and increase the public's understanding of how plans, once completed, will be implemented. The Council on Environmental Quality's (CEQ) guidance on programmatic NEPA reviews provides:

> A well-crafted programmatic NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequent tiered reviews.[2]

The regulations implementing NEPA provide additional detail for considering adaptive management in NEPA evaluations:

> Bureaus should use adaptive management, as appropriate, particularly in circumstances where long-term impacts may be uncertain and future monitoring will be needed to make adjustments in subsequent implementation decisions. The NEPA analysis conducted in the context of an adaptive management approach should identify the range of management options that may be taken in response to the results of monitoring and should analyze the effects of such options. The environmental effects of any adaptive management strategy must be evaluated in this or subsequent NEPA analysis.[3]

By analyzing a range of management options up front, the agency can set up a more efficient adaptive management process during implementation of the plan by tiering future analysis to the broader, programmatic analysis in the plan. The DOI Adaptive Management Technical Guide provides the following:

> Alternatively, another approach to NEPA compliance that has proven successful for adaptive management programs is to prepare a "programmatic" EIS at the start, which broadly covers the likely range of actions that may be taken under the particular adaptive management program.

[1] 40 CFR 1508.28; 40 CFR 1502.20
[2] CEQ Guidance on Effective Use of Programmatic NEPA Reviews. Available at: https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_searchable.pdf
[3] 43 C.F.R. § 46.145.

> Later, any NEPA compliance needed for subsequent shifts in the management actions as a result of the adaptive management process can then "tier" off of the initial programmatic EIS, saving considerable time and work.[4]

BLM should provide guidance regarding analyzing a range of alternatives for future scenarios that could then inform and streamline future NEPA analyses. Acknowledging that the agency cannot foresee all future outcomes or options for management, the agency could establish a team and/or process that allows for additional input to provide advice on adjusting management in the future that were not covered under the range of alternatives.

As an example of setting a range of alternatives that contemplates future shifts in management, the *Pinedale RMP* incorporates an approach that analyzes several options for management changes without requiring an amendment to the RMP by articulating defined criteria for when those changes may apply.

The Pinedale RMP created 3 types of areas for oil and gas leasing: intensively developed fields, traditional leasing areas and unavailable areas, with the following framework for developable fields:

> In *Intensively Developed Fields*, lands are available for lease and are managed for intensive oil and gas leasing, exploration, development, and production. Exceptions to stipulations are also available to accommodate year-round drilling. In addition, accelerated reclamation will be implemented to reestablish habitats.
>
> In *Traditional Leasing Areas*, some lands and mineral estate are available for oil and gas leasing and exploration, but in concert with maintaining the viability of non-oil and gas resource values and land uses, including designing operations to mitigate impacts on wildlife and incorporating mitigation measures.

The Pinedale RMP incorporates flexibility in management by providing that Traditional Leasing Areas can be converted to Intensively Developed Fields when bottom-hole well density exceeds one well per 160 acres and a surface density of four well pads per 640-acre section and that this conversion will be analyzed based on: (1) a geology and reservoir analysis determination that additional well density is needed to efficiently and adequately produce the gas or oil resource; (2) that surface resources can be satisfactorily mitigated; and (3) that a project-specific environmental documentation is prepared to analyze impacts and to determine operating methods, mitigation, and BMPs to be used in the efficient and comprehensive development of the field.

Importantly, an amendment to the RMP is not required to makes this conversion if the areas are adjacent to the current Intensively Developed Fields.

2. BLM should set specific, measurable and enforceable indicators and thresholds for when a document needs adjustment.

BLM should set indicators and thresholds for change in land use plans or NEPA documents that describe and analyze when those documents should be adjusted. This will create more efficiency in addressing future adjustments to management plans since the agency should be allowed to tier to the analysis already completed. To be meaningful, these triggers should be specific, measurable and enforceable for when a change in management may be necessary.

[4] Williams, B. K., R. C. Szaro, and C. D. Shapiro. 2009. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.

Triggers do not need to be a single red line that must not be crossed; instead, triggers can be a continuum used to prevent the crossing of ecological and regulatory thresholds.[5] The key is pre-negotiating specific, measurable triggers that can be enforced, including without amending plans or NEPA documents.

As an example, most of the statewide plan amendments for the greater sage grouse[6] contain an adaptive management framework with both soft and hard triggers. Soft triggers require immediate monitoring and surveillance and may require curtailment of activities. Whereas, hard triggers require deferment of discretionary authorizations for new actions within the Biologically Significant Units for a period of 90 days and an Adaptive Management Working Group must convene within 14 days to develop an interim response strategy to be implemented within 90 days.

Another example of a comprehensive monitoring approach can be found in the *Jack Morrow Hills Coordinated Activity Plan*, Appendix 2 – "Implementation, Monitoring, and Evaluation Process." The management strategy discusses how the various surface use activities and their interactions with other planning area resources will be monitored, and how data collected in the planning area will be used to measure progress toward the goals adopted for the planning area, evaluate the effectiveness of specific practices or policies, and support decision changes.

The strategy includes objectives for individual resources; resource management indicators and possible measurements, including detailed indicator and measurement tables; and a flowchart management process that shows how monitoring could lead to management changes. The management process ensures that indicator data is appropriately used to inform management decisions, and helps BLM determine when a plan amendment would be necessary.

The following is a proposed framework for an adaptive management strategy to allow the agency to be more flexible and efficient in the future. The agency should consider providing guidance that includes all of the following components in order to make such a strategy meaningful and enforceable:

- Set specific management goals and objectives, such as biological goals and objectives to show the targeted management.
- Identify potential threats to management goals and objectives as well as potential stressors to the system.
- Set specific, enforceable and measurable indicators to gauge progress towards goals with timelines for implementation. Adjust management as appropriate when triggers are hit.
- Develop a monitoring plan with monitoring protocols, timelines for completing monitoring, and reports on the findings and conclusions.
- Provide a range of alternative management scenarios as well as a comprehensive process for additional consultation on adaptive management options when triggers are hit.
- Provide for public input, including providing information during data collection, setting triggers, and when change might be necessary to respond to triggers being hit or other unforeseeable factors.

[5] Nie, Martin A. & Schultz, Courtney A. *Decision-Making Triggers in Adaptive Management*, at 26. Conservation Bio. 1137 (April 2012).
[6] Available at: http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html

B. Planning and NEPA at the appropriate scale

Even the most complex processes and associated analyses can be focused by addressing management issues at the most appropriate scale. This scale may be defined geographically as more than one field office, more than one state, or a smaller portion of a field office. This scale may also be defined by the breadth of issues to be addressed. Programmatic NEPA and the flexibility for defining planning areas in FLPMA and BLM guidance support this approach.

Completing an initial analysis that is as thorough as possible and appropriate to the scale of the decisions is most consistent with NEPA's directive to complete analysis at the earliest possible point (40 C.F.R. § 1501.2) and can be conducted to support more streamlined decision-making down the road. Initial analysis should include a broad range of alternatives and explicitly analyze potential changes in management to best support related decision-making.

C. Suggested timelines for different types of amendments

BLM should recognize that not all amendments are created equal—different types of amendments require varying levels of time to complete. BLM should set suggested guidelines for completing amendments by each type of amendment. Below are our recommended timelines based on examples of actual amendments:

1) 6 to 12 months for a project-level amendment

Example: The Blanca Wetlands in southern Colorado's San Luis Valley was designated an Area of Critical Environmental Concern (ACEC) specifically for its recreation and wetland values, including playa and marsh habitats containing large populations of water birds, amphibians, macroinvertebrates, and 18 threated, endangered and sensitive species. The Blanca Wetlands ACEC was designated at 9,714 acres in the 1991 San Luis Valley RMP. BLM recently completed an environmental assessment (EA) to analyze the potential impacts of enlarging the Blanca Wetlands ACEC. The EA evaluated several alternatives, including two alternatives to vastly increase the size of the ACEC and a no action alternative. The proposed boundary would enlarge the ACEC from 9,714 acres to 122,762 acres, and this boundary was adopted in the Decision Record.

Scoping for the RMP Amendment began October 11, 2011. The Draft RMP Amendment and EA were released on November 20, 2013, for a 60-day public comment period. The FONSI was signed February 14, 2014. BLM found that the expansion would address the Resource Condition Objective Decision under Wildlife and Fish Habitat Management (1-12) of the San Luis Valley RMP, which states "Provide special management to improve the present acres of wetlands in the Mishak Lakes and Dry Lakes areas to the historical acres of wetlands," and thus would be an appropriate amendment to the RMP.

2) 2 to 4 years for a programmatic amendment that amends multiple plans

Example: The Solar Programmatic EIS (PEIS) was a huge undertaking. This PEIS amended around 90 RMPs to address solar development on public lands. After multiple comment period extensions, various public agencies involved and several public meetings throughout the process, the entire process only took around four years from scoping until the ROD was published. We recommend setting a suggested timeline for other such programmatic EISs based on this and other models.

3) 3 to 5 years for an RMP revision

Example: The RMP for the Grand Staircase-Escalante National Monument (GSENM) is a prime example of BLM being able to complete a comprehensive RMP revision within around 3 years. As BLM's first national monument RMP, the GSENM plan was new territory, highly controversial and involved an almost 2 million-acre landscape. It is also one of the best conservation management plans that BLM has ever issued.

II. USER-FRIENDLY PLANNING: HOW CAN THE BLM HELP STATE AND LOCAL GOVERNMENTS, TRIBAL PARTNERS, AND OTHER STAKEHOLDERS UNDERSTAND AND PARTICIPATE IN THE PLANNING PROCESS?

Land use planning is often a long and arduous process. Even with built-in comment periods and public meetings, stakeholders and the public often feel in the dark or intimidated by this massive undertaking. The following are guidelines that the BLM can follow to make the planning process more user-friendly and create more buy-in for the resulting land use plan:

- BLM should focus on maximizing opportunities for public input, which ensures that stakeholders trust the process and outcomes. BLM should also engage in regular public outreach whether there is an official opportunity to provide input or not to inform the public and stakeholders of the current and next steps in the planning process.
- BLM should encourage use of informal meetings that provide space for asking questions, learning and providing feedback. Discussion-style meetings are not inconsistent with NEPA or FLPMA and not only helps the public to better understand the process but also informs the agency about issues the public and stakeholders care about most.
- BLM should provide for a variety of ways to give input, including formal comments at meetings (in addition to the more traditional information-sharing stations), written comments that can be provided at meetings and interactive internet-based tools. It is important that BLM build in time and opportunities for stakeholders that may not have easy access to high speed internet and software.
- As displayed in Appendix F of the Land Use Planning Handbook, there are many decisions that are made prior to the official scoping notice being issued. This includes an attempt to anticipate planning issues and management concerns, setting preliminary planning criteria, evaluating data and inventory needs and preparing a public participation plan. BLM could benefit greatly by involving the public in some of these decisions from the very beginning of planning. For example, BLM could make data calls to the public and institutions to help with collection of data where or inventory information where there are gaps. BLM could also better anticipate the concerns or management issues that may come up during scoping and will be in a better position to address those issues throughout the process.

III. TRANSPARENCY: HOW CAN THE BLM FOSTER GREATER TRANSPARENCY IN THE NEPA PROCESS?

As you stated in the BLM's press release announcing this process, "we need and want input from our state and local partners as well as from the general public in this effort." As a preliminary matter, BLM should provide the public and stakeholders with ample opportunities to provide input on this process going forward, regardless of whether there are ultimately formal rulemaking processes. So far, the BLM has offered a 21-day comment period with a web format that is not user-friendly and limited to 700 characters per answer. This is inadequate for outreach to the public on such an important matter. We strongly urge you to do all that is necessary to reach out to as many members of the public as possible on these significant issues.

Regarding the overarching process for providing greater transparency in the NEPA process overall, we provide the following recommendations be incorporated in BLM's directives:

- Provide ongoing opportunities for input, such as pre-scoping and preliminary alternatives, and make information submitted available for review. These processes do not need to be formal NEPA processes, but will support BLM's decision-making and public trust in the NEPA process.
    - Involving the public during pre-scoping planning also comports with the CEQ regulations implementing NEPA which state that "[a]gencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." BLM should provide guidance about specifically and actively engaging the public prior to scoping in the planning process in order to better meet the goals of planning and create a more efficient planning process throughout.
    - Providing an opportunity for the public to review preliminary alternatives can also foster greater transparency in the NEPA process. For instance, the Arizona Strip BLM Office provided preliminary management alternatives, giving the public a chance to submit comments and giving the BLM valuable insight into their management approaches. The Las Cruces Field Office also held workshops and solicited public comments on preliminary alternatives for the Tri-County RMP. Most recently, the Moab BLM released preliminary alternatives and provided opportunities for public involvement as part of the Moab MLP process. We encourage the BLM to provide for public input into the management situation analysis and identification of planning issues, and on a preliminary range of alternatives prior to preparing draft RMPs. This allows for BLM to refine its approach prior to the next formal step in the planning process.
- Make underlying data available to stakeholders from the start of the process and throughout. It should be made clear that stakeholders should not be required to submit formal Freedom of Information Act Requests to obtain inventory data, including GIS files, or to review comments submitted, as they are sometimes required to do by the agency now. BLM can and should make this information available – as many offices already do. Provide ongoing updates on where the agency is in NEPA processes, including newsletters and posting information.
- Provide specific responses to comments on draft documents, whether environmental assessments or environmental impact statements, and make those available before final documents are issued or decisions are made.
- Provide an opportunity to receive notices of NEPA processes by notifying the BLM of areas of interest. Expecting stakeholders to hunt for updated NEPA documents in different field offices in global listings on e-planning interferes with and undermines transparency.

IV. BEING GOOD NEIGHBORS: HOW CAN THE BLM BUILD TRUST AND BETTER INTEGRATE THE NEEDS OF STATE AND LOCAL GOVERNMENTS, TRIBAL PARTNERS, AND OTHER STAKEHOLDERS?

Outreach and continuous communication should be emphasized. Stakeholders and the public want to hear from the agency on a regular basis. The following are recommendations on how to better integrate the needs of stakeholders and the public:

- Issue clarification that the agency will work throughout its planning and NEPA processes to consider state and local objectives, try to seek consistency with state and local plans and policies, and hopefully avoid the need for a formal consistency review and/or appeal in the end.
- Ensure that these efforts do not undermine BLM's role as the final decision-making authority and its obligation to manage in accordance with the multiple use mandate. While it is important for

BLM to seek to evaluate state and local government input, these decisions are ultimately to be made by the BLM and to be focused on meeting the interests and needs of the American people.
- Maintain and support the updated manual (MS-1780, 2016) and handbook (H-1780-1) on engaging tribal governments.
- Where local governments do not have expertise in planning or NEPA, provide more robust support and liaisons to assist in engagement.
- Consider how best to support state and local priorities that cross jurisdictions, such as managing wildlife migration corridors, backcountry recreation, cultural and historic resources and wildlands. Balancing other uses with energy development is vital for addressing the vitality of affected communities.

V. REDUCING LITIGATION: HOW CAN THE BLM CREATE LEGALLY DEFENSIBLE DOCUMENTS AND AVOID THE DELAYS ASSOCIATED WITH LEGAL CHALLENGES?

Ensuring that the public is informed and the planning and NEPA process is open and transparent will not only create a better outcome but will reduce conflict in the end. It is incumbent on the BLM, both legally (under NEPA and FLPMA) and as steward of our public lands, to ensure there are ongoing, meaningful opportunities for public input into the agency's decisions on the use and management of our public lands. Rather than seeking to change these fundamental laws through congressional intervention or undermining them in new directives, BLM can support their intent by clarifying the agency's commitment to multiple use management and its nation of stakeholders through regulations, policies and guidance.

"Public scrutiny" is considered "essential to implementing NEPA." 40 C.F.R. § 1500.1(b). Similarly, FLPMA is clear that during the land use planning process, there must be "an opportunity for public involvement," including "adequate notice and opportunity to comment upon and participate in the formulation of plans and programs relating to the management of the public lands."43 U.S.C. § 1712(f).

"Streamlining" is not an end in and of itself, especially if it cuts out the public and consideration of environmental harms. Ensuring the BLM fully considers what could happen before turning public lands over to potential harm and giving the public a chance to weigh in is not only the law, it is also the best thing for our public lands.

The clearest way to reduce litigation in these processes is to ensure that all of the mandates of FLPMA, NEPA and other applicable law are fully complied with and to actively build trust, credibility, and respect with public lands stakeholders. Cutting corners on key aspects of NEPA such as relying on quality data, considering a reasonable range of alternatives, and responding to substantive comments are the biggest risks for drawing legal challenges and delays from those challenges being successful. Moreover, we emphasize that signaling, through an emphasis on "energy dominance," that fossil fuels development will be prioritized over other multiple uses, and conceiving of core planning, environmental review, and conservation safeguards as "burdens," does little to engender the expansive trust, credibility, and respect with stakeholders essential to moderate public lands conflicts and the risk of litigation.

VI. "RIGHT-SIZED" ENVIRONMENTAL ANALYSIS: HOW CAN THE BLM MORE CLOSELY MATCH THE LEVEL OF NEPA ANALYSIS TO THE SCALE OF THE ACTION BEING ANALYZED?

The purpose of NEPA is to ensure that agency decisions are informed as to the environmental consequences of decisions and made with the benefit of public input. These should remain the guiding principles for NEPA processes.

Without setting specific limits on pages or range of analyses, BLM can define the right amount of analysis to match the scope of decision-making. This scope and scale may be defined geographically as more than one field office, more than one state, or a smaller portion of a field office. This scale may also be defined by the breadth of issues to be addressed. Programmatic NEPA and the flexibility for defining planning areas in FLPMA and BLM guidance support this approach.

Categorical exclusions are reserved for extreme circumstances where it is unequivocal that an environmental analysis is unnecessary. Focusing this process on creating more categorical exclusions is not necessary and not consistent with NEPA. The use of categorical exclusions should include thorough consideration of extraordinary circumstances that indicate NEPA analysis is required. Using categorical exclusions to permit drilling should be subject to heightened scrutiny given the potential for impacts.

Additionally, the use of Determinations of NEPA Adequacy (DNA) should be discouraged. Where a categorical exclusion is not appropriate, a focused environmental assessment that shows the BLM is evaluating potential impacts is more consistent with NEPA.

Conclusion

We appreciate the opportunity to comment on this important process and look forward to participating throughout. Please keep us informed of updates on this and related processes from the agency.

Sincerely,

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Barbara Ullian
Friends of the Kalmiopsis

Erik Schlenker-Goodrich
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Steph Wald
Carrizo Plain Conservancy

Ani Kame'enui
National Parks Conservation Association

Sarah Fields
Uranium Watch

Mark Salvo
Defenders of Wildlife

From: Jessica Wilson
Subject: New State Scenic Byway Map (Digital Version) and Scenic Byway Guide Plus Meeting Dates
Date: Wednesday, August 2, 2017 5:38:37 PM
Attachments:
UOT-17_ScenicByways_Guide_digital_BCC.pdf
UOT-17_ScenicByways_Guide_digital_BeaverCanyon.pdf
UOT-17_ScenicByways_Guide_digital_Byway12.pdf
UOT-17_ScenicByways_Guide_digital_DinoDiamond.pdf
UOT-17_ScenicByways_Guide_digital_EnergyLoop.pdf
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UOT-17_ScenicByways_Guide_digital_TrailofAncients.pdf
UOT-17_ScenicByways_Guide_digital_ZionPark.pdf

Hello,

Here are links to the new state Scenic Byway Map and the individual byway articles from the new Scenic Byway Guide. Below is my schedule for the upcoming scenic byway committee meetings I will be attending with delivery of the new Scenic Byway Guides. Please let me know if you have someone you would like me to invite to a meeting or if you would like me to meet with them when I am in the area. Of course, you are welcome to call or email me to discuss details or to learn more.

* Dinosaur Diamond Prehistoric Highway Ntl Scenic Byway Wed Aug 9th, 11:00am Grand County Offices (also the Potash-Lower Colorado River Scenic Byway the Dead Horse Mesa Scenic Byway)
* Mirror Lake Scenic Byway (meeting with the KVBA for now) Fri. Aug 11th, 8am Mirror Lake Diner, Kamas
* Provo Canyon Scenic Byway Mon. Aug 14th, 11:00am Utah Valley Convention Center 220 West Center Street, Suite 200 Provo
* All American Road: Scenic Byway 12 Tues. Aug 15th 1:00pm Boulder City Offices (grouped with the Capital Reef Country Scenic Byway)
* Utah's Patchwork Parkway Ntl Scenic Byway Wed. Aug 16th 12pm, (grouped with the Markagunt High Plateau Scenic Byway and the Cedar Breaks Scenic Byway)
* Zion Park Scenic Byway tentative Thurs. Aug 17th time tbd Hurricane City Office (also Mt Carmel Scenic Byway and the Kolob Fingers Road Scenic Byway)
* Beaver Canyon & Fish Lake Scenic Byway Fri. Aug 18th 11:00am, Beaver County Office
* Logan Canyon/ Ogden River/ Bear Lake Scenic Byway Meeting Mon. Aug 21st, 12:00pm 199 N Main St, Logan

* Flaming Gorge-Uintas Ntl Scenic Byway Tues. Aug 22nd, 1:00pm
* Trail of the Ancients Ntl' Scenic Byway Wed. Aug 23rd, 3:00pm San Juan County Office, 117 S Main Street, Monticello (also the Indian Creek Corridor Scenic Byway and the Bicentennial Highway Scenic Byway)
* Great Salt Lake Legacy Pkwy Scenic Byway Mon. Aug 28 11:00am Davis County Office, 61 South Main Street Room 304, Farmington
* Provo Canyon Scenic Byway Mon. Aug 14th, 11:00am Utah Valley Convention Center 220 West Center Street, Suite 200 Provo

* Nebo Loop Ntl Scenic Byway Tues. Aug 29 2:00pm Payson City Office, 439 W Utah Avenue, Payson
* Big & Little Cottonwood Canyon Scenic Byways (attending the Central Wasatch Commission meetings for now) Sept 7th
* Energy Loop: Huntington & Eccles Canyons Ntl Scenic Byway Thurs. Sept 21 1:00pm 599 West Price River Drive, Price review last month's awesome byway tour and next steps

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Jessica Wilson SCENIC BYWAYS & PROGRAM MANAGER
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801.538.1377 <http://801.538.1377> office
 <https://docs.google.com/uc?export=download&id=0B4IjM3aLwX-JRThjY0Y3RUlHaFk&revid=0B4IjM3aLwX-JUEovZGlJN0U1TXZURGUxWUoweTVacVIwd0VNPQ>

Utah Office of Tourism, Film & Global Branding
Governor's Office of Economic Development

Council Hall/Capitol Hill | 300 N. State Street | SLC, UT 84114
www.visitutah.com <http://www.visitutah.com/>

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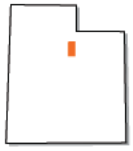
BIG COTTONWOOD CANYON SCENIC BYWAY



START: Salt Lake City (S.R. 190)

NUMBER OF DAYS: 1

DISTANCE: 15 miles



Fly-fishing Big Cottonwood Canyon Creek | Wray Sinclair



Silver Lake Sunrise

DON'T MISS

Hiking & Fishing
Be inspired as you see beautiful vistas, wildflowers or breathtaking autumn leaves on the popular hikes accessed by this byway: Lake Blanche, Lake Florence, Twin Lakes, Lake Mary, Lake Martha, Lake Catherine and Dog Lake. Dogs are not permitted in the canyon.

Brighton Resort
Enjoy the wildflowers, forest and alpine lakes on the national forest during the summer and the 500 inches of winter snowfall that falls on 66 total runs across 1,050 acres and 1,875 vertical feet. Year-round lodging and limited dining.

Solitude Mountain Resort
In the summer, enjoy mountain air, wildflowers and cool evenings alongside lift-served mountain biking and hiking. Come winter, ski or ride 500 inches of annual snowfall, 1,200 acres of terrain, 77 named runs and three bowls. Year-round lodging and dining.

Silver Lake
A boardwalk and trail encompass this picturesque alpine lake, which visitors can access from the Brighton Loop on the scenic byway.

Uinta-Wasatch-Cache National Forest is referred to as a "urban forest" due to its close proximity to Salt Lake City. The mountainous terrain provides recreation opportunities for more than a million people in less than a 30-minute drive. Big Cottonwood Canyon Scenic Byway begins at the mouth of the canyon and goes east on S.R. 190. The canyon narrows almost immediately to dramatic alpine scenery as you enter the forest. On this 15-mile scenic byway, visitors can hike through the mining country of the Old West or enjoy rock climbing, wildflower photographing, picnicking, camping or fishing. The major ski resorts of Solitude and Brighton are near the top of the canyon and in the summer months, travelers can continue through to Park City via Guardsman Pass.

THE DRIVE

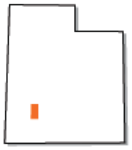
Big Cottonwood Scenic Byway (S.R. 190) is just minutes from downtown Salt Lake City and can be accessed by taking I-215 to 6200 South exit.

ADDITIONAL RESOURCES

- Uinta-Wasatch-Cache National Forest
  (801) 999-2103 | 857 West South Jordan, South Jordan, UT
- Public Lands Information Center (inside REI)
  (801) 466-6411 | 3285 East 3300 South, Salt Lake City, UT
- Make camping reservations for the Uinta-Wasatch-Cache National Forest at ***recreation.gov***

Discover more of the expansive Uinta-Wasatch-Cache National Forest at ***visitutah.com/uwcnf***

BEAVER CANYON SCENIC BYWAY



START: Beaver (S.R. 153)

NUMBER OF DAYS: 1

DISTANCE: 17 miles



Tushar Mountains | Photo courtesy of USFS

A fall favorite, the Beaver Canyon Scenic Byway will transport you in time to a view of the west in the late 1800s. You'll drive through the Tushar Mountain Range where you can enjoy OHV riding, backpacking, mountain biking, horseback riding, trout fishing and camping in beautiful pine surroundings with breathtaking vistas. Elk, deer, black bear and cougars live in the Fishlake National Forest as well as wild turkey and mountain goats. Be sure to visit the nearby cities of Beaver, Junction and Marysvale to stock up on supplies or shop locally. In your trip include a visit to the Territorial Statehouse State Park Museum and the Fremont Indian State Park and Museum.

THE DRIVE

Travel on I-15 to the exit for Beaver and head east on S.R. 153, Beaver Canyon Scenic Byway.

ADDITIONAL RESOURCES

- Beaver County Travel Council | (435)-438-5438
- Beaver Ranger District
  (435) 438-2436 | 575 South Main Street, Beaver, UT
- Make camping reservations for the Fishlake National Forest at ***recreation.gov***

Read the full story at
visitutah.com/beaver-canyon

DON'T MISS

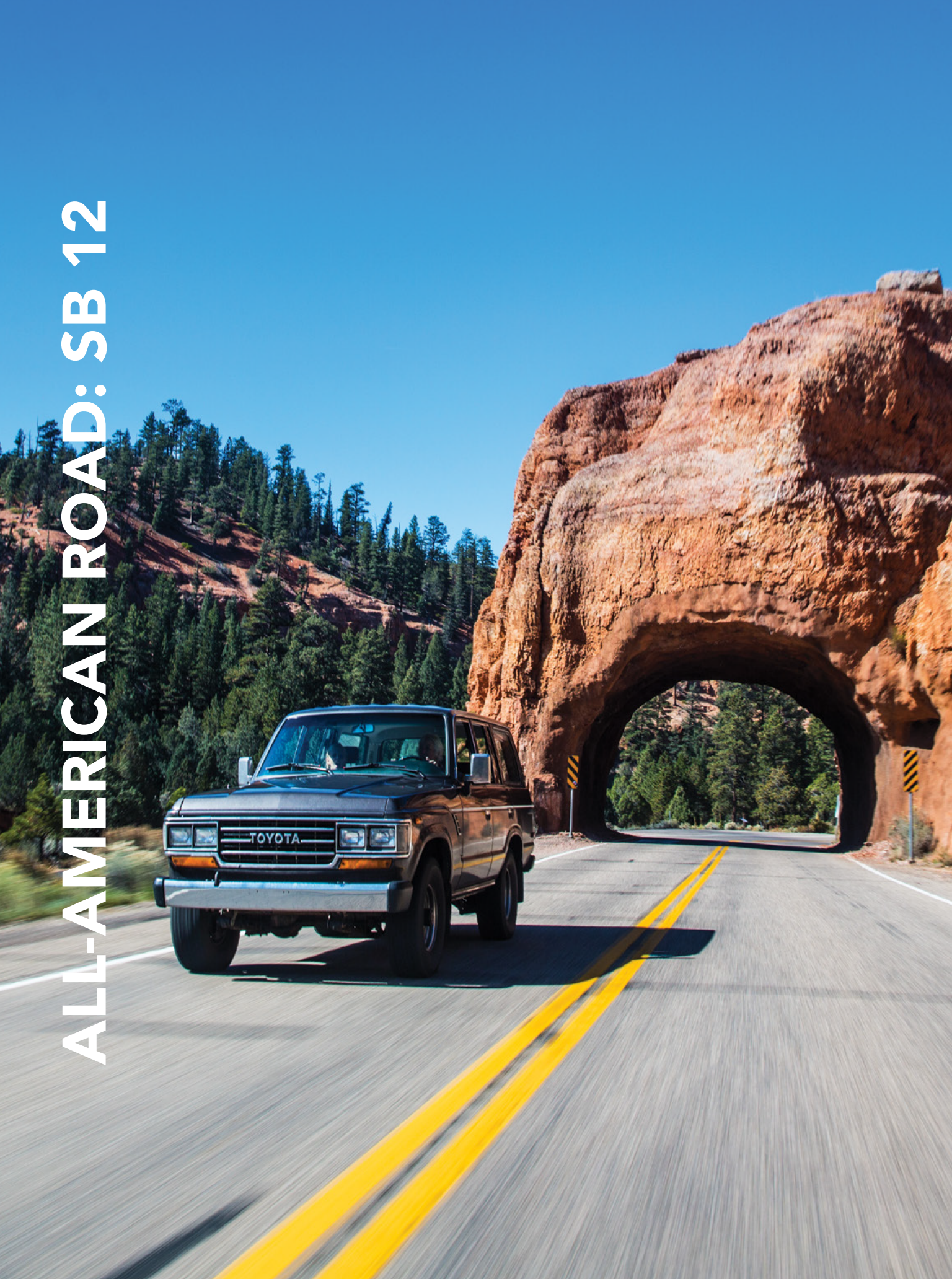
OHV
OHV riding is a very popular recreation activity on the Fishlake National Forest. There are approximately 2,700 miles of trails and roads available for motorized use, including the Paiute ATV Trail System. The Max Reid Trailhead (Paiute 01), a favorite on the Beaver Ranger District, leads to the Silver King Mine interpretive site.

Hiking
The Skyline National Recreation Trail located on the Beaver Ranger District of the Fishlake National Forest was placed on the National Recreation Trail System in 1979. The trail follows the craggy peaks of the Tushar Mountains and gives the experience of being on top of the mountains near the skyline. This trail is a pathway to beautiful mountain vistas and grassy meadows.

Fishing
Beaver Mountain is a popular fishing spot. The Beaver River runs along the scenic byway. Access to the majority of the fishing lakes is via Forest Road 137, which is a gravel road off of S.R. 153. FR 137 branches off the paved highway 10 miles east of Beaver.

Eagle Point Ski Resort
Known as Utah's most secluded resort, Eagle Point is great for getting away from it all. Year-round lodging is available and you can even rent out the entire resort.

ALL-AMERICAN ROAD: SB 12



AT A GLANCE: ALL-AMERICAN ROAD: SCENIC BYWAY 12

START: Panguitch or Torrey (S.R. 24, 12)

NUMBER OF DAYS: 2–4

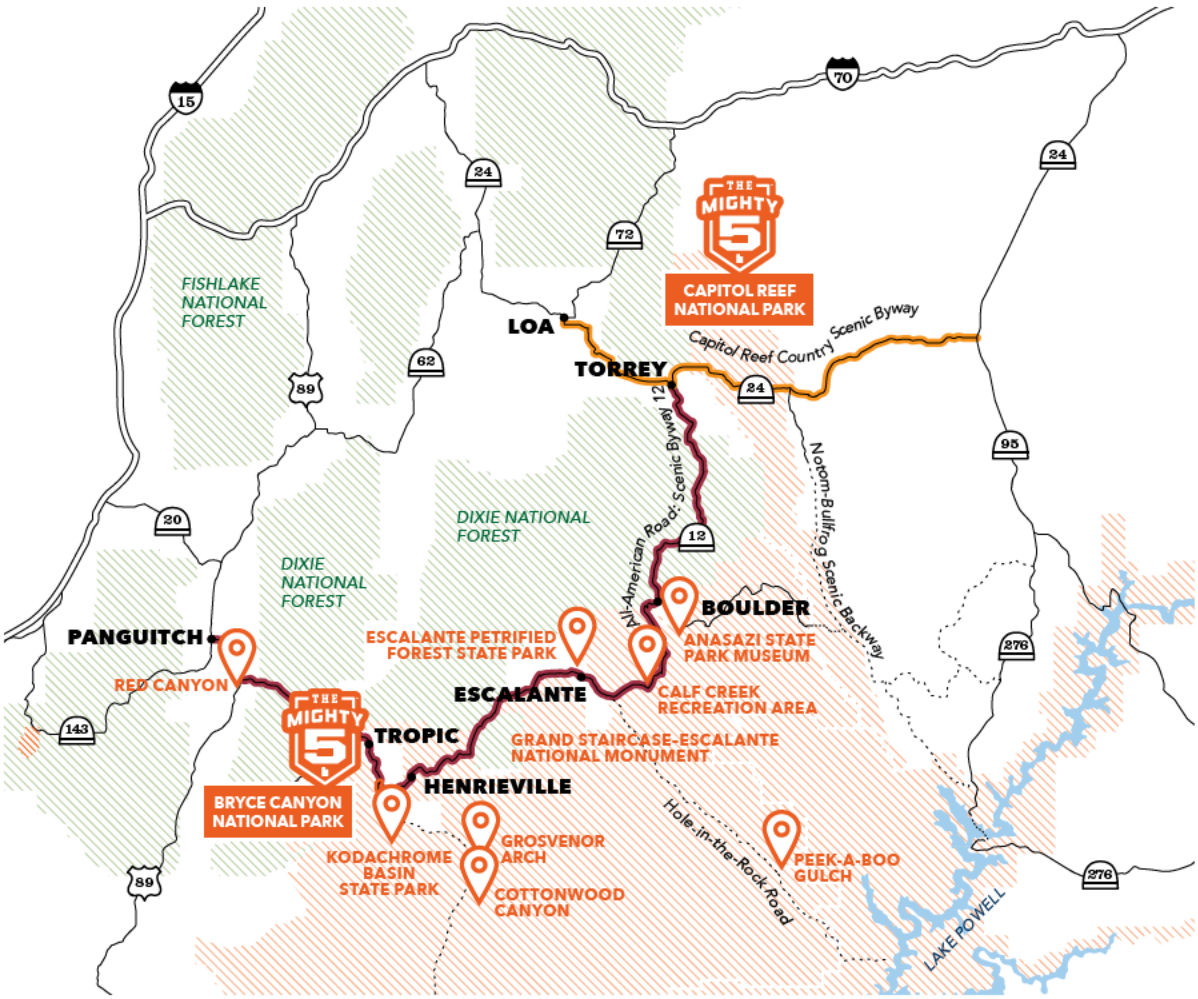
DISTANCE: 119 miles

SCENIC BYWAYS:
Capitol Reef Country (S.R. 24)
All-American Road: Scenic Byway 12



Sometimes you find yourself driving down roads that you can sense are truly special. It is not just the scenery, like the orange hoodoos of Red Canyon or contrasting landscape of alpine and distant sandstone seen from atop Boulder Mountain. It is something about the road itself. It seems to have a history. There's something in the engineering. The way the road connects with the land.

On Scenic Byway 12, discover the vast Grand Staircase–Escalante National Monument interspersed with national forest lands and state parks like you've never seen. Introduce yourself to the unique communities of adventurous and welcoming folks who call it home. Uncover a sense of prehistory that strengthens the fabric of this memorable road trip. Whether you long to camp in the backcountry or wish to seek out Zagat-rated organic cuisine, you'll want to slow down and enjoy this journey.



Left: *Red Canyon arch tunnels* | Michael Kunde

Scenic Byway 12 is one of the most fascinating stretches of road you'll ever drive. It's even better when combined with the drive through Capitol Reef National Park. From I-70, take Exit 149 for S.R. 24.

From Hanksville you'll continue west along the Fremont River through Capitol Reef and to the junction with Scenic Byway 12. From there, it's one endlessly scenic route to Panguitch with optional spurs into the Grand Staircase–Escalante National Monument — though backcountry enthusiasts with a reliable, high-clearance, four-wheel-drive vehicle could take the really scenic and remote route down the Notom-Bullfrog Scenic Backway to the Burr Trail. Hole-in-the-Rock (Spooky and Peek-a-boo gulch) and Cottonwood Canyon (Grosvenor Arch) offer additional unpaved journeys into the monument with careful planning in the right conditions.



Bryce Canyon National Park | Larry Price

Learn more about Utah's All-American Road: Scenic Byway 12 at ***visitutah.com/american***

DON'T MISS

Torrey
The idyllic and eclectic mountain town has wonderful accommodations at the doorstep to Scenic Byway 12 and Capitol Reef National Park.

Boulder
Incredible outdoor adventure, the Burr Trail, Anasazi State Park Museum and Zagat-rated cuisine at Hell's Backbone Grill lure travelers off the road.

Escalante
An adventure town cradled by the Dixie National Forest, Grand Staircase–Escalante and the Escalante Petrified Forest State Park.

Henrieville-Cannonville-Tropic
Get to know the welcoming people who live among the unparalleled natural beauty of Bryce Canyon, Kodachrome Basin and the Grand Staircase.

Calf Creek Recreation Area
Calf Creek Recreation Area is a premier stop along Scenic Byway 12 in Grand Staircase–Escalante National Monument. Lower Calf Creek Falls Trail is an almost 6-mile moderately strenuous round-trip hike to a stunning 126-foot waterfall.

Red Canyon
Cut into the sculpted Claron limestone of the Paunsaugunt Plateau, Red Canyon's most immediately striking natural feature is its variety of weirdly sculpted erosional forms variously described as turrets, hoodoos, pinnacles or spires.

Dixie National Forest
Dixie National Forest, at almost two million acres and stretching from east to west for approximately 170 miles across southern Utah, is the state's largest national forest. Scenic Byway 12 weaves in and out of Dixie National Forest.

Anasazi State Park Museum
The museum is located in Boulder, Utah, on the site of an Ancestral Puebloan habitation that archaeologists believe was occupied between A.D. 1050 and 1175.

Escalante Petrified Forest State Park
This popular state park offers one of Utah's best and most accessible displays of petrified wood — fossilized trees from millions of years ago. The visitor center offers displays of plant and marine fossils, petrified wood and fossilized dinosaur bones.

Kodachrome State Park
Named during the late 1940s by a National Geographic Society expedition in honor of the then revolutionary Kodak film, the park draws visitors fascinated by the area's unusual geological forms, including a series of upright cylindrical chimneys called sand pipes.

The Blues/Powell Point Overlook
This spectacular overlook rests below the delicate pink limestone ledges of Powell Point, rising to an elevation of 10,188 feet and above "The Blues," a badland of gray-green shales deposited some 80 million years ago when the area was covered by an inland ocean.

Boynton Overlook
Offering a bird's-eye view of the riparian area along the twisting Escalante River below, the flowing water and vegetation offer ideal habitat for small birds and animals, including river otters which were reintroduced here in 2005.

The Hogsback
Between Calf Creek Recreation Area and the town of Boulder is an internationally famous stretch of byway known as "The Hogsback." As the asphalt clings to this thin razorback ridge of slickrock, the terrain spills steeply off each side toward winding creeks and canyons below.



All-American Road: Scenic Byway 12, Grand Staircase–Escalante National Monument | Larry Price



Calf Creek Falls, Grand Staircase–Escalante National Monument | Michael Kunde

ADDITIONAL RESOURCES

- Visitor Services Capitol Reef Country
  (435) 425-3365 | (800) 858-7951
- Visitor Services Bryce Canyon Country
  (435) 676-1160 | (800) 444-6689
- Visitor Services Grand Staircase–Escalante National Monument
  (435) 644-1300
- Visitor Services Red Canyon
  (435) 826-5600 | 755 W Main Street, Escalante, UT
- Escalante Ranger District
  (435) 826-5600 | 755 W Main Street, Escalante, UT
- Make camping reservations for the Dixie National Forest at ***recreation.gov***

DON'T MISS

Homestead Overlook
From this 9,400-foot-high vantage point on Boulder Mountain visitors can see the five peaks of the Henry Mountains to the east, the magenta wedge of the Waterpocket Fold below and the striated face of the Kaiparowits Plateau to the west.

Larb Hollow Overlook
Located about 10 miles south of Grover on Scenic Byway 12, this scenic overlook commands a stunning view of southeastern Utah, especially the Waterpocket Fold in Capitol Reef National Park and the Henry Mountains.

Hole-in-the-Rock Road
The 57-mile-long scenic backway is a gravel and dirt road that closely follows the route taken by Mormon pioneers in 1879–80 in an attempt to establish a shortcut across the Colorado River between established communities in the center of the state and the Four Corners area.

Upper Valley Granaries
Tucked into the cliff face above this wayside is a small stone-and-mud-daubed structure constructed by Ancient Puebloans.

Head of the Rocks Overlook
Head of the Rocks Overlook provides expansive views out across the Escalante Canyons where colorful slickrock stretches almost as far as the eye can see.

DINOSAUR DIAMOND



AT A GLANCE: DINOSAUR DIAMOND PREHISTORIC HIGHWAY NATIONAL SCENIC BYWAY

START: Vernal or Moab

NUMBER OF DAYS: 4–6

DISTANCE: 500+ miles

SCENIC BYWAYS:

Dinosaur Diamond Prehistoric Highway National Scenic Byway (U.S. 191, U.S. 6, I-70, U.S. 40, S.R. 128)

Dead Horse Mesa State Scenic Byway (S.R. 313)

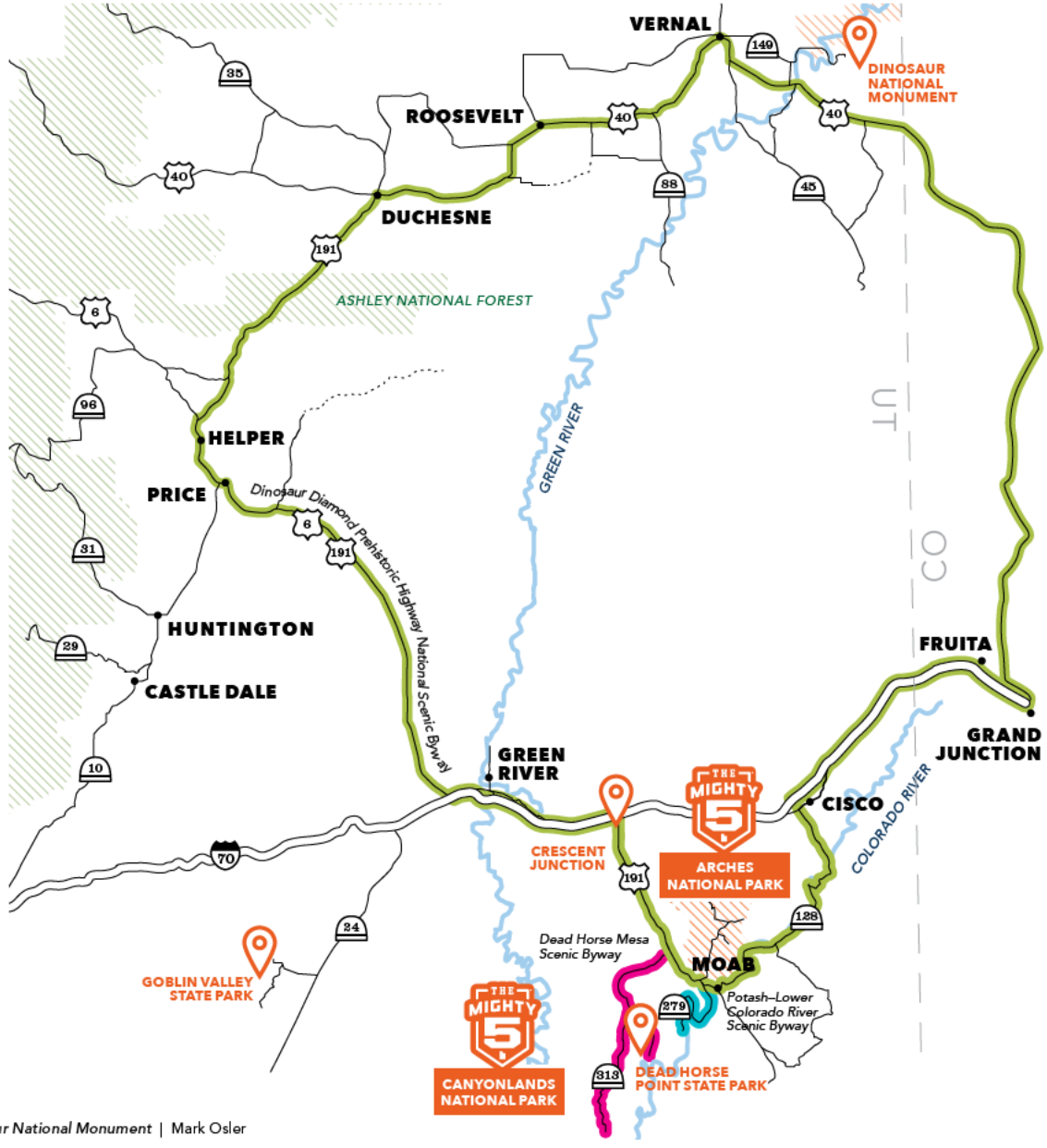
Potash–Lower Colorado River Scenic Byway (S.R. 279)



Audio Tour available for Dinosaur Diamond Prehistoric Highway National Scenic Byway at *visitutah.com/scenicbyways*

Let your imagination run wild on this road trip 200 million years in the making. The Dinosaur Diamond Prehistoric Highway National Scenic Byway bridges eastern Utah and western Colorado in a real-life "Jurassic Park" along more than 500 miles of beautiful red rock scenery, rugged Book Cliffs and cool waters of the Colorado and Green rivers.

Not only does Utah hold the fossil record of more dinosaur species than any other state, many consider these lands to represent the most complete record of prehistoric life than any other geographic area on the planet. As you drive and hike, you'll discover the prolific fossil record of bones and tracks exposed in the sedimentary record of Mesozoic age. Meanwhile, museums on the Dinosaur Diamond house the world's largest collection of mounted dinosaur skeletons and interpretive sites provide archaeological, cultural and historical information.



Left: *Dinosaur National Monument* | Mark Osler



H king near Fisher Towers in Castle Valley | Marc Piscotty

Are you a dinosaur detective? If starting in Moab, visit the Museum of Moab for prehistoric exhibits as well as more recent artifacts from native cultures, the explorations of Spanish missionaries and early settlers. Discover a prolific display of dinosaur tracksites along U.S. 191 of the Dinosaur Diamond Prehistoric Highway National Scenic Byway while surrounded by amazing red rock scenery. Stops include Mill Canyon, Copper Ridge and Poison Spider.

Also near Moab, plan time to enjoy the photogenic views and sublime dark skies of Dead Horse Point State Park on the Dead Horse Mesa State Scenic Byway, the red rock spires of Fisher Towers and Castle Valley (a popular Hollywood film location) on the byway and a trip down the Potash–Lower Colorado River Scenic Byway for ancient rock art and dinosaur tracks. The Moab area is also home to Arches and Canyonlands national parks.

Continuing northwest along the diamond, plan time for a stop in Sego Canyon for an incredible outdoor gallery of pictographs and petroglyphs spanning 8,000 years of Native American culture. Next, enjoy the green oasis of Green River State Park before taking a turn off the byway to visit the Cleveland-Lloyd Dinosaur Quarry. Then stop in Price at the College of Eastern Utah Prehistoric Museum to see discoveries unearthed at a local coal mine and three large and impressive dinosaur skeletons in the Grand Jurassic Gallery. This museum also discovered the Utahraptor, the unwitting star of the movie "Jurassic Park."

A marquee destination on the trip is Dinosaur National Monument near Vernal, Utah. Many travelers launch their journey here, inspired by the world-famous Carnegie Quarry's "Wall of Bones," a cluster of 1,500 dinosaur fossils along one magnificent rock spine. Extend the stay with camping at Echo Park, Split Mountain or the nearby Jones Hole Fish Hatchery, and then hike among the serene desert landscape and river raft the adventurous reaches of the monument. Tours and activities at the monument explore the area's fascinating geology, history, wildlife and rugged beauty.

DON'T MISS

Biking and Off-road
Enjoy some of the greatest mountain biking on the planet, no matter your skill level. The Sand Flats Recreation Area includes the renowned 40-mile Slickrock Bike Trail and is part of 8,000 acres of open exploration for motorized and non-motorized users alike. Near Moab there are more than 100 trails labeled with terrain designations of easy, intermediate and difficult.

Hiking
From cool streamside hikes to spectacular sandstone arches, Dinosaur Diamond Prehistoric Highway National Scenic Byway-area communities are full of exciting day-hikes. National parks, monuments and state parks offer exceptional hiking trails through a wide variety of terrain.

Climbing and Canyoneering
If you are looking for something even more adventuresome, try climbing or canyoneering. Climbers and canyoneers can scale up or drop into some of the most stunning spots in the southwest. It's incredible even just seeing fearless climbers on the famous Wall Street along the Potash–Lower Colorado Scenic Byway or the narrow spires and chimneys of Fisher Towers.

River Activities
The Green and Colorado rivers are known for an array of single or multi-day raft trips. Canoes, kayaks and paddle boards are perfect for the calm water segments. New to rafting? Local guides will show the way.

Aerial Activities
Get a bird's-eye view from an airplane, helicopter, hot air balloon or zipline to add a bit of excitement to your adventure. Contact the Moab Information Center for the listing of guides and outfitters.

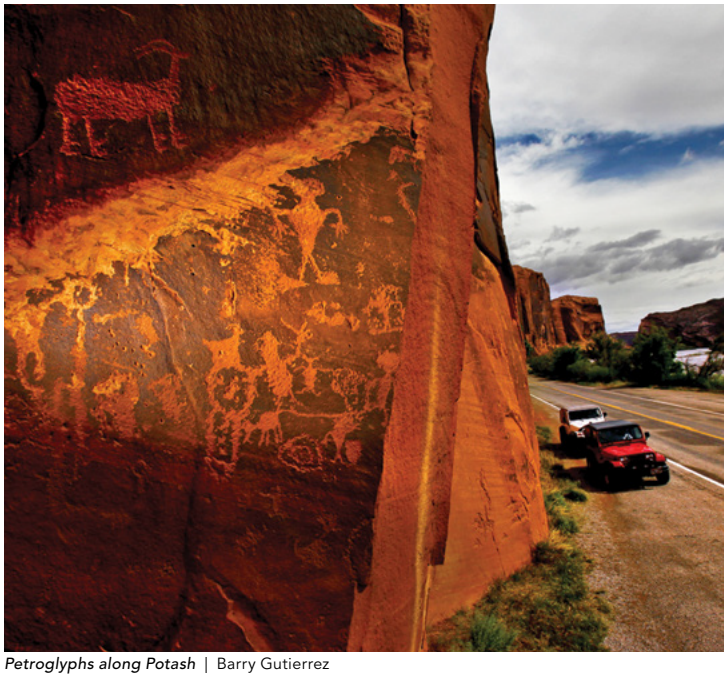
Night Skies
Away from big cities, the Colorado Plateau is one of the top spots for stargazing and perfect for astronomy lessons. Dead Horse Point State Park is a certified International Dark Sky Park, making it an ideal overnight camping destination (including reservable yurts).

Winter Recreation
These three scenic byways are open all year long and access winter recreation such as snow-dusted red rock landscapes near Moab or cross-country skiing and snowshoeing in the nearby national forests.

High Elevation
The byways connect you to the La Sal Mountains attaining heights of nearly 13,000 feet. Spring brings spectacular wildflowers, whispering pines, quaking aspens and bubbling brooks. Summer affords a cool respite from warmer temperatures. Fall is colorful on the mountains, while winter brings solitude, snow, and winter sports.



Paddle boarding the Colorado River in Moab | Photo courtesy of Discover Moab



Petroglyphs along Potash | Barry Gutierrez

ADDITIONAL RESOURCES

- Uintah County Tourism | (435) 781-6767
- Duchesne County Tourism | (435) 722-4598
- Carbon County Tourism | (435) 636-3701
- Emery County Tourism | (435) 636-3701
- Moab Information Center | (435) 259-8825

*Uncover the best in dinosaur tourism and Visit Utah's Dino Trekker itinerary at **visitutah.com/dino** or try our Southern Dinos and Goblins Road to Mighty® itinerary at **visitutah.com/dinos-goblins***

ENERGY LOOP

AT A GLANCE: ENERGY LOOP: HUNTINGTON & ECCLES CANYONS NATIONAL SCENIC BYWAY

START: Price, Huntington or Fairview

NUMBER OF DAYS: 2–4

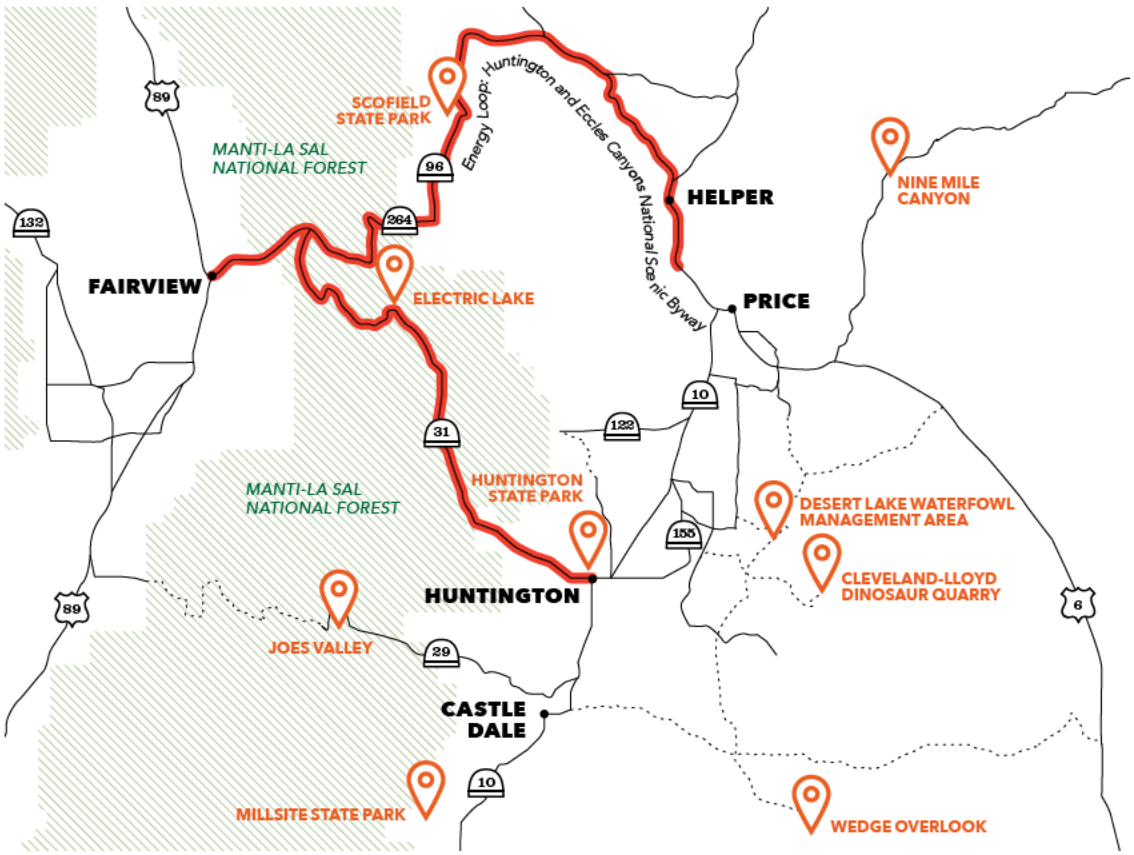
DISTANCE: 138 miles

SCENIC BYWAYS:
The Energy Loop: Huntington and Eccles Canyons National Scenic Byway (S.R. 96, 264, 31, U.S. 6)



Dip into the rich pioneer heritage of the National Mormon Heritage Area or follow in their adventurous footsteps and head straight for the hills. The Energy Loop: Huntington and Eccles Canyons National Scenic Byway (S.R. 96, 264, 31, U.S. 6) carries you over the Wasatch Plateau, capturing Utah's high-alpine experience with 360 degree views including Mount Nebo to the north and the San Rafael Swell to the east. During the fall, contrasting fields of yellow aspens and deep green conifers line the path.

On the other side of the Wasatch Plateau, cool off in sparkling reservoirs then step back in time to explore the ancient landscapes and inhabitants of Utah's Castle Country. You'll see an active dinosaur quarry and an outdoor art museum stretching for miles into one of Utah's wildest places. The Energy Loop will take you through the heart of Utah, a potpourri of outdoor adventure, landscapes and heritage that samples the best lesser-known terrain in Utah.



Left: *Huntington Reservoir* | Jim Urquhart

If coming from the Wasatch Front, head south on I-15 and at Spanish Fork take Exit 257 B-A to U.S. 6, then turn south on U.S. 89. From Fairview, you'll begin the quick ascent up the Wasatch Plateau on S.R. 31, part of the Energy Loop: Huntington and Eccles Canyons National Scenic Byway. The byway is the only paved road across the Wasatch Plateau, which marks the transition from the famous Colorado Plateau (home to The Mighty 5® national parks) to the Great Basin.

On the east side of the plateau, you'll explore spurs along S.R. 10 or scenic backways to the unexpected depth and size of the Little Grand Canyon. Then, make the extended detour up the beautifully paved Nine Mile Canyon to drive and hike among the indigenous rock art of the world's largest outdoor art gallery. Finish up with stops in Price and Helper, or complete The Energy Loop by returning to Fairview on S.R. 96.

DON'T MISS

Fairview City
The Gateway to Skyline Drive, the 75-mile Wasatch Plateau 4×4 road is also a gateway to the Mormon Pioneer National Heritage Area.

Huntington–Castle Dale
These base camps access Huntington State Park, Cleveland-Lloyd Dinosaur Museum, bouldering at Joes Valley Reservoir and scenic backways through the San Rafael Swell.

Price-Helper
Check out the USU Eastern Prehistoric Museum, the Western Mining and Railroad Museum and Nine Mile Canyon (from Wellington).

Wedge Overlook
The Wedge Overlook provides views of a deep sandstone canyon carved by the San Rafael River known as "The Little Grand Canyon."

Desert Lake Waterfowl Management Area
A great place for bird watching. Desert Lake is an important stop for migrating waterfowl.

Skyline Drive
Skyline Drive (accessed from S.R. 31) is the backbone of the Wasatch Plateau, the dividing line between the Great Basin and the Colorado Plateau, and showcases amazing mountain vistas. South Skyline Drive requires high clearance four-wheel-drive vehicles; north Skyline Drive is suitable for passenger cars.

Huntington Reservoir and Mammoth Discovery Site of 8-8-88
Mud surrounding a 10,000-year-old mammoth acted as a refrigerator, preserving the 90 percent complete skeleton until construction of the high-elevation dam unearthed it on August 8, 1988.

Arapeen Trail System
More than 350 miles of ATV trails. When combined with forest roads, there are more than 1,000 miles available to ATV enthusiasts.

Huntington State Park
A tranquil base camp with leisurely hikes, a beach, grassy campgrounds and great fishing. Partial and limited full hookups available.

Scofield State Park
Camp, boat and fish at this summer and winter recreation destination situated high in the Manti-La Sal Mountains. Large campgrounds include two reservable teepees. The nearby town of Scofield hosts the annual Pleasant Valley Days celebration on or around July 4.



San Rafael Swell | Dean Krakel



Horseback riding Candland Mountain



Snowkiting along Skyline Drive | Jeremiah Watt

DON'T MISS

Electric Lake
A large, high-elevation reservoir along Skyline Drive with good populations of Yellowstone cutthroat trout.

Tie Fork Rest Area and Interpretive Site
More than a rest stop, this stop on S.R. 6 commemorates the great railroads that moved coal and other goods through the canyons of eastern Utah. Railroad ties were made from trees cut in Tie Fork Canyon.

Stuart Guard Station Interpretive Site and Visitor Center
This former Forest Service Guard Station on S.R. 31 features stories of the Civilian Conservation Corps and the origins of the Manti-La Sal National Forest. Open weekends and holidays.

Non-motorized Trails
Explore the Left Fork of Huntington National Recreation Trail and Fish Creek National Recreation Trail on foot, bike or horseback. The Candland Mountain Trailhead off S.R. 31 is a 5.6-mile connector to Mill Canyon, Flood Canyon and Left Fork of Huntington.

ADDITIONAL RESOURCES

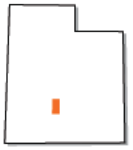
- Visitor Services Sanpete County | (435) 839-0457
- Visitor Services Emery County | (435) 381-2600
- Visitor Services Carbon County | (435) 636-3701
- Manti-La Sal National Forest Office
  (435) 637-2817 | 599 West Price River Drive, Price, UT
- Make camping reservations for the Manti-La Sal National Forest at ***recreation.gov***

Learn more about Huntington and Eccles canyons at ***visitutah.com/wasatch-plateau***



Joes Valley | Caroline Treadway

FISH LAKE SCENIC BYWAY



START: Cove Fort/Scipio (S.R. 25)

NUMBER OF DAYS: 1

DISTANCE: 13 miles



View of Fish Lake | Photo courtesy of USFS

Want some peace and quiet away from the crowds? Fish Lake Scenic Byway can take you there. Aptly named, the lake boasts excellent fishing, particularly large Mackinaw trout, splake, rainbow trout, and kokanee salmon. Scuba divers also enjoy the lake's waters as it is approximately 127 feet deep. In the winter, ice fishing, snowmobiling and cross country skiing are popular. Horseback riding is also popular. Fish Lake is Utah's largest natural mountain lake and sits at 8,848 feet. Also try fishing Johnson Valley Reservoir, and the nearby towns of Koosharem, Fremont, Loa, Richfield and Bicknell make excellent base camps to Fish Lake Scenic Byway.

THE DRIVE

Thanks to its Central Utah location east of the junction of I-15 and I-70, there are many ways to access the Fish Lake Scenic Byway. Visitors on the All-American Road: Scenic Byway 12 connecting with the Capitol Reef Country Scenic Byway (S.R. 24) can continue west for 20 minutes to access Fish Lake while travelers on I-15 will exit at I-70 if northbound from St. George or U.S. 50 east if southbound from the Wasatch Front. Check ***udottraffic.utah.gov*** for seasonal road closures.

ADDITIONAL RESOURCES

- Capitol Reef Country Visitors Bureau | (435) 425-3365
- Sevier County Travel Council | (435) 893-0458
- Fremont River Ranger District
  (435) 836-2811 | 138 South Main Street, Loa, UT
- Make camping reservations for the Fishlake National Forest at ***recreation.gov***



Autumn aspens

Read more about Fish Lake Scenic Byway at ***visitutah.com/fall-oasis***

DON'T MISS

Pando Aspen Tree Clone
Located about one mile southwest of Fish Lake, this stand of trees is believed to be the heaviest organism on Earth at nearly 13 million pounds. The clone spreads over 106 acres, consisting of over 40,000 individual trees.

Piute and Otter Creek State Parks
Nearby state parks offer tranquil base camps not only to Fish Lake but to the extensive Paiute ATV Trail System on the Fishlake National Forest.

Hiking
Explore the Lakeshore National Recreation Trail, Pelican Canyon Trail, Old Spanish Trail, Doctor Creek Canyon Trail and more.

Wildlife Viewing
See elk, deer, bobcat, cougar, bear, golden and bald eagles, osprey, beaver, porcupine, chipmunks, marmots, and several species of upland game birds, song-birds and raptors.

Camping
Try Doctor Creek, Mackinaw, Bowery Creek, Frying Pan, Tasha Equestrian Campground and Piute Campgrounds or the private resorts of Bowery Haven and Fish Lake Lodge-Lakeside Resort.

FLAMING GORGE–UINTAS

AT A GLANCE: FLAMING GORGE–UINTAS NATIONAL SCENIC BYWAY

START: Vernal (175 miles from Salt Lake City)

NUMBER OF DAYS: 3+

DISTANCE: 125 miles

SCENIC BYWAYS:
Flaming Gorge–Uintas National Scenic Byway (U.S. 191, S.R. 44)

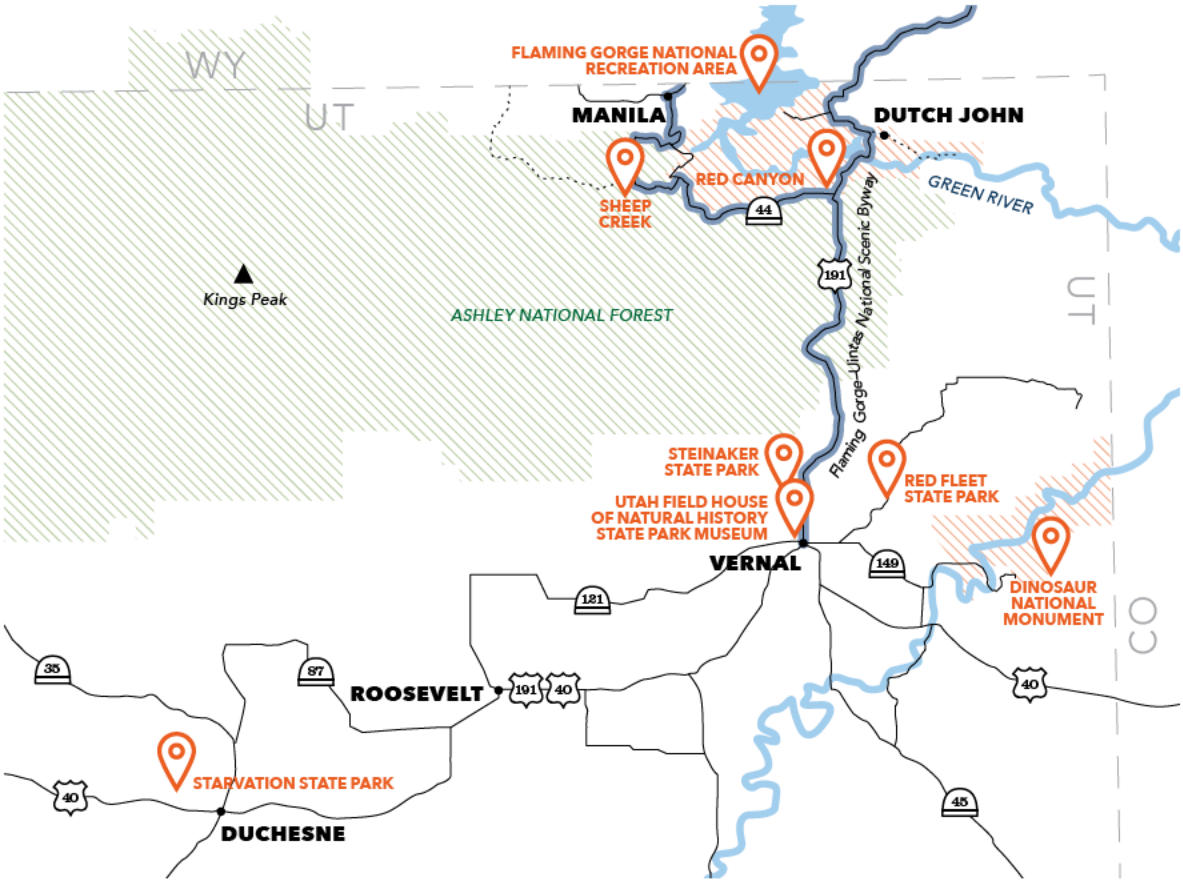


Audio Tour available for Flaming Gorge-Uintas National Scenic Byway at *visitutah.com/scenicbyways*

As you drive the Flaming Gorge–Uintas National Scenic Byway, you will pass through one of the richest areas for wildlife and their fossilized ancestors in the western United States. Pull over at any of the 15 Wildlife Through the Ages interpretive sites and nature trails to explore an unusual diversity of natural ecosystems both past and present. Here you will find stunning landscapes that have been uplifted and carved by the earth's forces, exposing almost seven miles of rock evidence of warm shallow seas along ancient coastlines and Sahara-like dune fields.. The formations exposed comprise 770 million years of geologic history, making it one of the greatest varieties of formations found anywhere.

The backdrops to this unique byway corridor are the majestic peaks of the Uinta Mountains; forests of aspen, ponderosa, and pinyon-juniper; limestone towers and slickrock cathedrals; verdant cottonwood and willow-lined streams; and the blazing red cliffs and blue waters of Flaming Gorge.

Journey through prehistoric landscapes where paleontologists have found dinosaur bones, seashells and shark's teeth. Today, pronghorn antelope ply the sands of primeval seas, colorful song birds fly above the remains of petrified forests, and fish swim among ancient rocks.



Left: *Flaming Gorge* | Dan Ransom

Begin your journey with a visit to prehistoric times at Dinosaur National Monument, where the world-famous Wall of Bones awaits. This is the only place on the planet to see more than 1,500 dinosaur bones along one magnificent rock spine. The monument also offers camping, hiking and river-running amongst the serene desert landscape. Continue unraveling the mysteries of the past at the Utah Field House of Natural History Museum in Vernal. The kids will thank you.

See those mountains on the near horizon? It's time to head up to them through the ancient rocks and present day landscapes of the Ashley National Forest. While the prehistoric life is now seen only in fossils, modern behemoths still exist in the form of Flaming Gorge's famous trophy trout. With eleven state fishing records and some 15,000 trout per river mile, it's no wonder the stunningly beautiful Flaming Gorge National Recreation Area has become America's top trophy fishing destination. Here you will find miles of uncrowded trails, fun-loving guide services, world-class boating and incredible paddling adventures, all among spectacular landscapes teeming with wildlife.

And yes, there's the way the sun catches the red canyon walls and seems to light them on fire that will provide a lasting memory. Flaming Gorge–Uintas National Scenic Byway is a land where amazing outdoor adventures, uncommon geology and visual splendor overflow.



Catching brown trout on the Green River | Sean Slobodan

ADDITIONAL RESOURCES

- Visitor Services Dinoland, Vernal | (435) 781-6765 | 800-477-5558
- Visitor Service Flaming Gorge Country | (435) 784-2318 x 135
- Ashley National Forest
  (435) 789-1181 | 355 North Vernal Avenue, Vernal, Utah
- Make camping reservations for the Ashley National Forest at ***recreation.gov***



A young bighorn sheep

DON'T MISS

Rafting
Don't miss floating down the famous Green River, the local's top pick for family adventure. Seeking a little more whitewater? Crash the rapids on guided trips through Dinosaur National Monument.

Fishing
Whether you are just getting started or a seasoned veteran, there is no end to fishing opportunities along the byway. Enjoy incredible fly-fishing on the river and mountain streams and world-class lake fishing.

Boating
With 91 miles of lake in Flaming Gorge, it is easy to find a spot to call your own. And don't miss the scenic waters of Red Fleet or Steinaker State Parks just outside of Vernal.

Wildlife Watching
Magnificent herds of bighorn sheep and excellent birding make viewing wildlife easy.

Paddling
You'll want to try a few of the paddling routes and come for the annual PaddleFest at Red Fleet State Park in June.

Winter Recreation
Outdoor recreation doesn't end when snow arrives. Groomed snowmobile, cross-country ski and snowshoeing trails await in the nearby national forest.

Dinosaur National Monument
The gateway to the park's prehistory is in the Quarry Exhibit Hall near Jensen, Utah. Here you will uncover the world-famous fossil exhibits that give the park its name.

Utah Fieldhouse of Natural History
Take a virtual tour of our planet's ancient history at this 22,000-square-foot facility in the heart of Dinosaurland. Includes full-size dinosaur replicas, and interactive exhibits.

Flaming Gorge Dam Visitor Center
A great launching point for a visit to Flaming Gorge, plan time for a free guided tour, offered daily mid-April through mid-October.

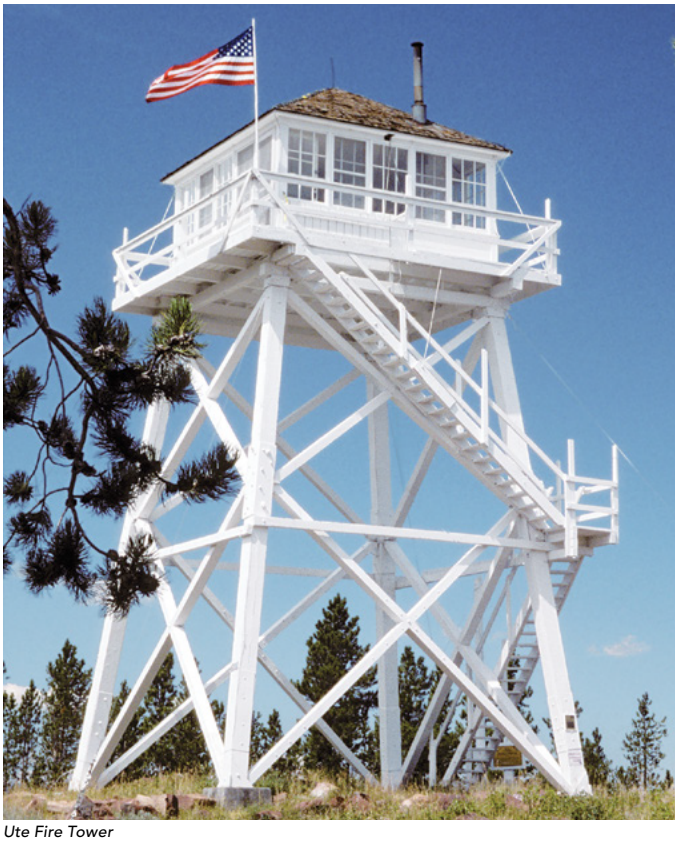
Red Canyon Visitor Center
Enjoy daily summer programs, a fully accessible interpretive trail and access to longer hiking and biking trails all with amazing overlooks of this scenic reservoir.

Moose Ponds
The easy-to-access pond is an excellent family fishing spot with a surrounding interpretive nature trail.

Sheep Creek Geologic Loop
A 10-mile section of road that takes you through the extreme forces of nature at work along the Uinta Crest Fault with opportunities to glimpse Rocky Mountain bighorn sheep.

Ute Fire Lookout Tower
The 1937 fire tower is the last of its kind in Utah. See what living in a fire lookout was like, which includes a homing pigeon program that recalls wildland firefighting communications before telephones and radio. Ashley National Forest visitors at Red Canyon Visitor Center can release messages on homing pigeons to the tower.

See more of Flaming Gorge National Recreation Area and its environs at ***visitutah.com/flaming-gorge***

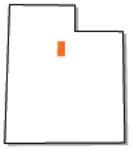


Ute Fire Tower



Boating along Hideout Canyon | Marc Piscotty

GREAT SALT LAKE LEGACY PARKWAY SCENIC BYWAY



START: Layton (S.R. 67)

NUMBER OF DAYS: 1

DISTANCE: 14 miles

Audio Tour available for Great Salt Lake Legacy Parkway Scenic Byway at *visitutah.com/scenicbyways*

This beautiful area connects the Salt Lake City International Airport with views of the world-famous Great Salt Lake. Utah's capital city takes it name for this landmark, which astronauts can see from outer space. Millions of migratory birds enjoy Great Salt Lake as a huge cafeteria as they pass through from South America and Canada each spring and fall. Visitors enjoy the white sand beaches of Antelope Island State Park and, yes, you can float in the Great Salt Lake.

The Great Salt Lake Legacy Parkway Scenic Byway (S.R. 67) passes through Davis county, which offers a lot of fun activities for families. Indoor swimming with stingrays, bumper cars, roller coasters, water parks and miniature golf are just some of the fun things to do. The scenic byway and the trail system along the Great Salt Lake has provided a new way to experience its cultural and ecological importance. It follows thousands of acres of marshland and waterways of the Farmington Bay Waterfowl Management Area and the Legacy Nature Preserve.

THE DRIVE

This byway is just a short drive from Salt Lake City. Traveling northbound on I-15, take Exit 319 and go west. Traveling southbound, take Exit 324.

ADDITIONAL RESOURCES

- Davis County Tourism and Events | (801) 451-3237



American avocet | Marc Piscotty

*Plan your trip to Antelope Island State Park at **visitutah.com/antelope***

DON'T MISS

Legacy Parkway Trail
The trail that runs along the highway is a 14-mile multi-purpose asphalt trail. It serves cities from North Salt Lake to Farmington and connects with many city parks and other trails. The Legacy Trail offers incredible views of the Legacy Nature Preserve and west to the Great Salt Lake. Many of the trailheads have interpretive panels spotlighting local history and wildlife.

Antelope Island State Park
Home to a large herd of bison, bighorn sheep, antelope and mule deer. See white sand beaches, miles of trails, pioneer history and millions of birds. There are many events held on the island including the annual bison roundup in October, the Cowboy Legends Poetry and Music Festival during Memorial Day weekend and the annual moonlight bike ride in July.

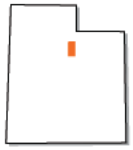
Lagoon Amusement Park
The largest amusement park in the intermountain area. Boasts ten roller coasters — five of which meet unique criteria. This is the place for family fun.

Great Salt Lake Bird Festival
This festival celebrates the spring migration of millions of birds to the Great Salt Lake and its ecosystem. Guided field trips to top birding areas, keynote speakers and workshops with live birds make this a popular event. Held the Thursday–Monday after Mother's Day.

SeaQuest Interactive Aquarium
Experience exciting exhibits and activities for families and children of all ages. You'll be able to get wet with the stingrays, feed the toucans, encounter the caimans, marvel at the sharks, take selfies with the snakes and more.

Station Park
Offers an exceptional collection of national brands and specialty shops, including nearby Cabela's, as well as over 20 outstanding restaurants.

LITTLE COTTONWOOD CANYON SCENIC BYWAY



START: Salt Lake City (S.R. 210)

NUMBER OF DAYS: 1

DISTANCE: 8 miles

Few places so near an urban area are so rich in natural diversity. The granite cliffs are a paradise for both rock climbers and the mountain goats you might see as you drive the byway. Little Cottonwood Canyon is so named because its length and width are "littler" than its big neighbor to the north; however, it is an equally glorious natural playground that features year-round recreation from winter downhill at Alta and Snowbird to summer wildflowers at Albion Basin. At the mouth of the canyon is the site where Mormon pioneers quarried massive granite blocks used to construct the Salt Lake Temple and the LDS Conference Center.

THE DRIVE

Little Cottonwood Scenic Byway (S.R. 210) begins at the mouth of the canyon and can be accessed by taking I-215 to 6200 South exit. Follow the signs to S.R. 210, which is just minutes from downtown Salt Lake City.

ADDITIONAL RESOURCES

- Uinta-Wasatch-Cache National Forest
  (801) 999-2103 | 857 West South Jordan, South Jordan, UT
- Public Lands Information Center (inside REI)
  (801) 466-6411 | 3285 East 3300 South, Salt Lake City, UT
- Make camping reservations for the Uinta-Wasatch-Cache National Forest at ***recreation.gov***



Moose in Albion Basin, Alta | Howie Garber

DON'T MISS

Rock Climbing & Bouldering
Little Cottonwood Canyon is renowned for its crack climbing on 400-foot granite walls and an array of bouldering routes alongside the highway.

Hiking & Fishing
Albion Basin is famous for it's spring and early summer wildflowers. Trails access high-altitude lakes for fishing. Dogs are not permitted in the canyon.

Snowbird Ski and Summer Resort
Want to mountain bike in style? The aerial tram at Snowbird zips visitors to the roof of the Wasatch, Hidden Peak. A mountain coaster, alpine slide, camps, lodging, dining, spa and festivals round out the summer. In winter, explore 3,420 vertical feet and 2,500 acres.

Alta Ski Area
Alta is one of only two resorts in Utah that is strictly ski only (no snowboarding allowed). Check out 116 runs and more than 2,200 acres. Some lodging and dining is available in the summer when the national forest and Albion Basin open up to camping, hiking, wildflowers and exploration.



Mountain biking Snowbird Ski & Summer Resort | Steve Lloyd/Snowbird Resort

Learn about summer activities on the mountain at ***visitutah.com/snowbird-summer***

LOGAN TO OGDEN LOOP

AT A GLANCE: LOGAN CANYON TO OGDEN RIVER SCENIC BYWAY LOOP

START: Logan or Ogden

NUMBER OF DAYS: 2–4

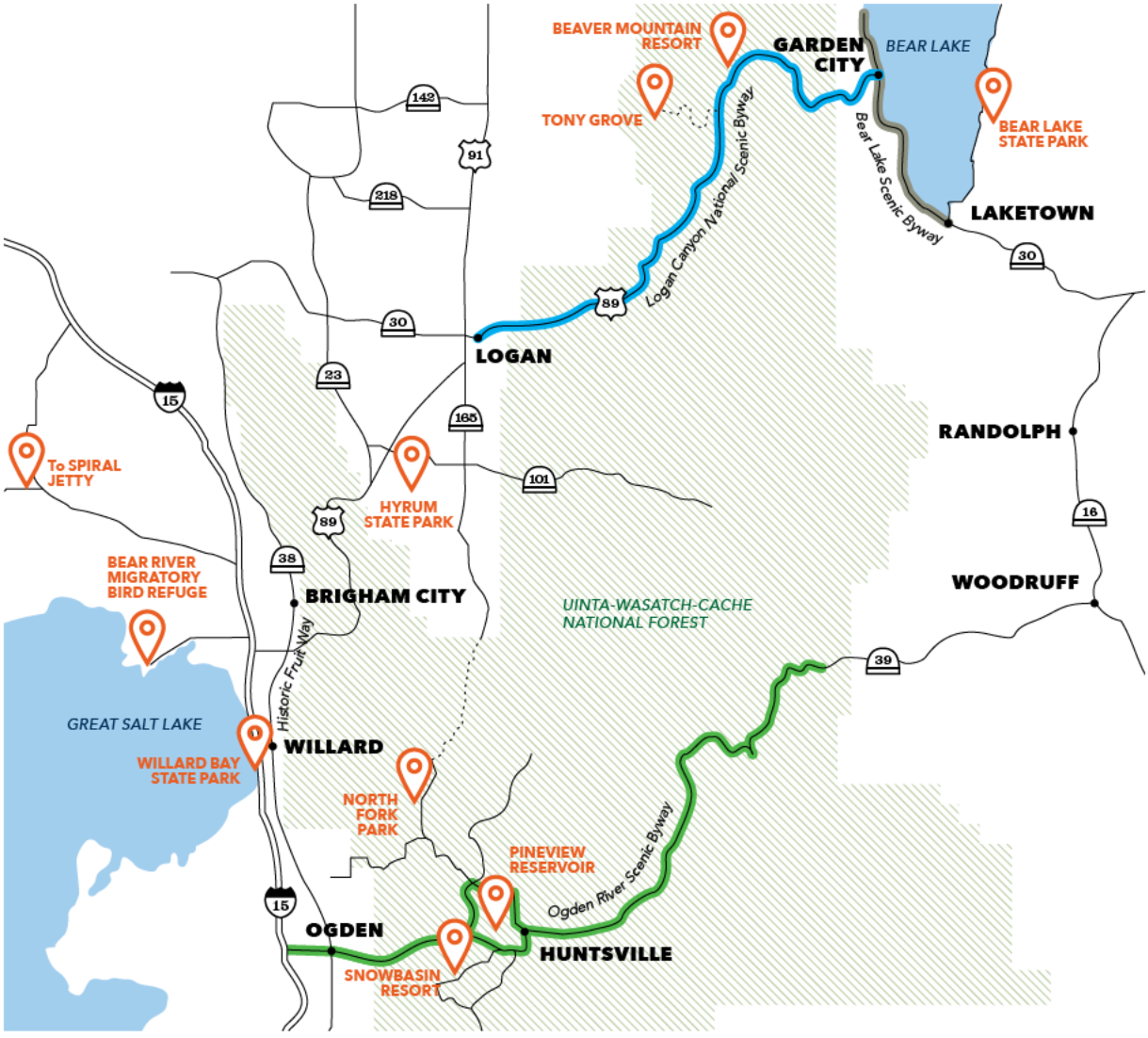
DISTANCE: 100 miles

SCENIC BYWAYS:
Logan Canyon Ntl. Scenic Byway (U.S. 89)
Ogden River Scenic Byway (S.R. 39)
Bear Lake Scenic Byway (S.R. 30)



The top of Utah is a tranquil place, rich in wildlife, natural splendor and cultural amenities. Drive the Logan Canyon National Scenic Byway and Ogden River Scenic Byway, splash in stunning turquoise water, taste the bountiful harvest and experience world-class performing arts. You'll uncover endless outdoor adventure, a certified International Dark Sky Park under a vast field of brilliant stars, fall colors and warm hospitality.

Between Bear Lake and the popular Pineview Reservoir, you can cool off on personal watercraft or luxuriate on sandy beaches and complement your adventure with nights on the town or quiet sunrises in untouched wilderness. So pack your gear. It's time to head to the top of Utah.



Left: *Autumn colors in Logan Canyon* | Steve Greenwood

Start this loop near Brigham City and consider a side trip to the Bear River Migratory Bird Refuge. In the summer and fall, exit at Willard to cruise the Historic Fruit Way before heading up the canyon to Logan. Between the beautiful agricultural lands of Cache Valley and the turquoise waters of Bear Lake lies the 41-mile Logan Canyon National Scenic Byway. This section of historic Highway 89 carves a winding path through 500 million years of breathtaking geology and Uinta-Wasatch-Cache National Forest lands before hitting a summit pass approaching 8,000 feet.

Complete the Bear Lake Scenic Byway then continue the back way (S.R. 30 to S.R. 16) to access the Ogden River Scenic Byway (S.R. 39). In the Ogden Valley, make a refreshing stop at Pineview Reservoir or take on a day of lift-served mountain biking at Snowbasin Resort. Check ***udottraffic.utah.gov*** for season road closures.



Paddle boarding the "Carribean of the Rockies" | Marc Piscotty

*Discover the very best of the top of Utah at **visitutah.com/top-of-utah** or combine your Northern Utah road trip with the Yellowstone Loop at **visitutah.com/yellowstone***



Kids playing in the sand at Bear Lake | Marc Piscotty



American West Heritage Center | Nicole Morgenthau

DON'T MISS

Logan
Stroll through historic downtown Logan for a taste of small-town Americana, visit the Cache Valley Gardeners' Market Saturdays, May–October, or rent horses or ATVs. Additionally, you can take a foodie trek, see a live performance at one of the three historic theaters or take a step back in time at the American West Heritage Center.

Garden City
This gateway to Bear Lake serves up hand-spun raspberry shakes along with small-town charm and access to endless fishing and water sports. Celebrate the famous Raspberry Days harvest in August with pageants, fairs and fireworks.

Huntsville
Experience Pineview Reservoir and Utah's oldest continuously operating saloon.

Ogden
Explore this outdoor recreation mecca with a lively and historic downtown including indoor skydiving and Blue Ribbon fishing on the Ogden River.

Tony Grove Lake
This crown jewel of the Bear River Range features an easy hiking trail at an alpine lake with camping, picnicking and fishing.

Beaver Mountain Resort
Avoid long lift lines and high prices at the longest-running family-owned resort in the nation.

Ogden Valley's North Fork Park
Discover the Milky Way at this certified International Dark Sky Park.

Conestoga Ranch
Glamping! Step back in time and stay in a covered wagon or tent.

Bear Lake State Park
Dubbed the "Caribbean of the Rockies" for its stunning blue water and sandy beaches. Bear Lake offers boating, paddle boarding and swimming. Cabin lodging available.

Beaver Creek Lodge
Enjoy beautiful horseback rides or an off-road adventure in side-by-side RZR vehicles during summer and fall. Rent snowmobiles and enjoy hundreds of miles of riding all winter.

Hyrum State Park
This beautiful 450-acre man-made lake offers boating, year-round fishing, waterskiing, camping and swimming.

Fruit Way
Along U.S. 89 discover fruit stands with the very best in local homegrown fruits, veggies and other products in Northern Utah.

Snowbasin Resort
This world-class, family-friendly ski resort has been the proud host of the 2002 Olympic Games' downhill, combined and super-G races.

Bear River Migratory Bird Refuge
The 75,000-acre refuge welcomes millions of migrating birds and has miles of driving tours and hiking paths.

Golden Spike National Historic Site
Relive the momentous meeting of the Central Pacific and the Union Pacific railroads and explore the Big Fill Trail.

Willard Bay State Park
Plan time at this freshwater reservoir for fishing, boating, paddleboarding, camping, birding, geocaching and swimming.

Spiral Jetty
The official land art of the state of Utah is 1,500-foot-long coil of 6,650 tons of rock on the northeastern shore of the Great Salt Lake.



Kayaking the Weber River near Ogden

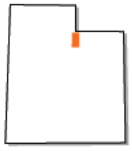


Summer concert series at Snowbasin Resort

ADDITIONAL RESOURCES

- Visitor Services Box Elder County | (435) 734-3315
- Visitor Services Cache Valley/Logan | (435) 755-1890
- Visitor Services Ogden/Weber | (800) 255-8824
- Logan Ranger District
  (435) 755-3620 | 1500 E. Highway 89, Logan, UT
- Ogden Ranger District
  (801) 625-5112 | 507 25th Street, Ogden, UT
- Make camping reservations for the Uinta-Wasatch-Cache National Forest at ***recreation.gov***

MIRROR LAKE SCENIC BYWAY



START: Kamas (S.R. 150)

NUMBER OF DAYS: 1

DISTANCE: 54 miles



Hayden Peak seen from Moosehorn Lake | Steve Greenwood



Wildflower season in the Uintas | Andrew Burr

The quaint mountain town of Kamas is undeniably the Gateway to the Uintas, though Samak Smokehouse may have sneakily staked a share of the claim — you'll note Samak is Kamas spelled backward. There are great places to stop in Kamas to grab a bite to eat before or after your trip, stock up on last-minute supplies for your journey, buy some local artwork or connect with a local guide to learn about the secret "sweet spots" along the Mirror Lake Scenic Byway and surrounding areas. From there, it's all scenic driving all the time on the 56-mile Mirror Lake Scenic Byway, until you're lured from your car. Between beautifully developed campgrounds and endless designated wilderness, you'll find the perfect stop to park your RV or pitch your tent for blissfully cool nights away from it all.

Fish from your choice of hundreds of lakes and streams, take short strolls along the river, jump on a horse or ATV and, with wayfinding skills and the right supplies, climb Utah's loftiest peaks. You won't be alone up here either: In the mighty Uinta Mountains you may see elk, moose or perhaps a bighorn sheep. Your byway journey will end as you step into the "Old West" in the town of Evanston, Wyoming.

THE DRIVE

Kamas is only 45 minutes from Salt Lake City, 55 minutes from Provo and 75 minutes from Ogden. From there, you'll forget about time as you enjoy the drive, watch out for wildlife or scout your trailhead. From Highway 189, take S.R. 32 east to Kamas. The Mirror Lake Scenic Byway (S.R. 150) traces the Upper Provo River as it climbs to 10,700 feet.
Check ***udottraffic.utah.gov*** for seasonal road closures.

ADDITIONAL RESOURCES

- Kamas/Park City Visitors Bureau | (435) 649-6100
- Heber-Kamas Ranger District (Kamas Office) | (435) 783-4338 | 50 E. Center Street, Kamas, UT
- Heber-Kamas Ranger District (Heber Office) | (435) 654-0470 | 2460 S. U.S. 40, Heber City, UT
- Make camping reservations for the Uinta-Wasatch-Cache National Forest at ***recreation.gov***

Explore some of the popular hikes of the High Uintas at ***visitutah.com/kamas-hikes***

DON'T MISS

Dejoria Center
This events center in the High Star Ranch neighborhood of Kamas offers great concerts and more at the foot of the Uinta Mountains.

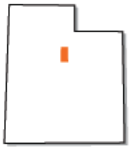
Mirror Lake
The drive's namesake lake is one of the best, with kayaking, fishing, camping and trails — all above 10,000 feet.

Bald Mountain
The 11,943-foot summit is a two-mile, family-friendly hike with panoramic views of the High Uintas.

Christmas Meadows
Enjoy a lush meadow at 8,800 feet with a campground and recreation area surrounded by lodgepole pines and aspen. A great location for wildflower photography.

Rockport State Park
Fish, boat and water ski in summer. During winter, ice fish and access nearby snowmobile trails. Yurt camping available.

NEBO LOOP NATIONAL SCENIC BYWAY



START: Payson/Nephi (FR 15)

NUMBER OF DAYS: 1

DISTANCE: 38 miles

The beautiful Nebo Loop National Scenic Byway provides stunning views of Utah and Nephi valleys while looking up at the tallest peak in the Wasatch Range, the 11,928-foot Mt. Nebo. The 38-mile loop offers multiple picturesque campsites, picnic sites and several waterfalls only a short hike off the road.

Hikes range from the family-friendly stroll to Devils Kitchen Geologic Site to the very strenuous journey to the summit of Mt. Nebo. Beyond hiking, the byway offers stunning scenery the whole route, ideal for photography, fishing, auto touring and horseback riding. The byway has numerous overlooks and wildlife viewing opportunities. Nearby cities of Nephi, Payson, Santaquin and Spanish Fork offer opportunities to stock up on supplies or shop locally.

THE DRIVE

To access from the south, from I-15 at Nephi, take Exit 225 to travel east on state Route 132. Five miles from the Interstate, look for a left turn (north) onto Forest Road 15. Travel north on the byway, following the signs at junctions. The byway ends just outside Payson, from which you can access I-15 again.

To access the byway from the north, from I-15 take Exit 248 in Payson, heading east on 800 South. Turn right onto 600 East, which becomes the Nebo Loop Road (FR 15) into the mountains. Check ***udottraffic.utah.gov*** for seasonal road closures.

ADDITIONAL RESOURCES

- Utah Valley Visitors Bureau | (801) 851-2100
- Spanish Fork Ranger District Office
  (801) 798-3571 | 44 West 400 North, Spanish Fork, UT
- Make camping reservations for the Mt. Nebo Wilderness at ***recreation.gov***



Cycling Nebo Loop | Photo courtesy of Payson City

See more images of the Nebo Loop National Scenic Byway at ***visitutah.com/nebo***

DON'T MISS

Grotto Falls Trail
The flat, wide trail makes it a perfect choice for families or novice hikers. This is a beautiful waterfall that cascades into a shallow pool of water surrounded by steep rock walls.

Payson Lakes
Three lakes provide fishing, swimming and boating. Fish for brook trout and rainbow trout. Reservable group areas for weddings, parties and other large gatherings hold up to 100 people.

Historic Payson Lakes Guard Station
This historic building is available to the public as a cabin rental.

Monument Trailhead
Mt. Nebo overlook provides a stunning view of the 11,928-foot Mt. Nebo, the highest peak in the Wasatch Range. The north, south and middle peaks are all visible from different vantage points along the loop. The mountain is a popular, challenging hike that ascends 5,500 feet and takes the better part of a day.

Devils Kitchen Geologic Site
Devils Kitchen resembles Bryce Canyon, bringing the beauty of a national park to Northern Utah. The trail runs through a beautiful forest to the edge of the red rock area, and is more of a stroll than a hike.

Nebo Loop Snowmobile Complex
Access to the Mt. Nebo complex is provided through the Payson and Salt Creek Canyon trailheads. Nebo Loop Snowmobile Complex provides outstanding snowmobiling opportunities December through March. Elevations reach a breathtaking 9,200 feet.

Payson Golden Onion Days
Enjoy the craft fair, Dutch oven cook-off, carnival, live entertainment and parade on Labor Day Weekend.

Nephi
Annual summer events include the Ute Stampede Rodeo and Juab County Fair.

PATCHWORK PARKWAY

AT A GLANCE: UTAH'S PATCHWORK PARKWAY NATIONAL SCENIC BYWAY

START: Cedar City or Parowan

NUMBER OF DAYS: 2

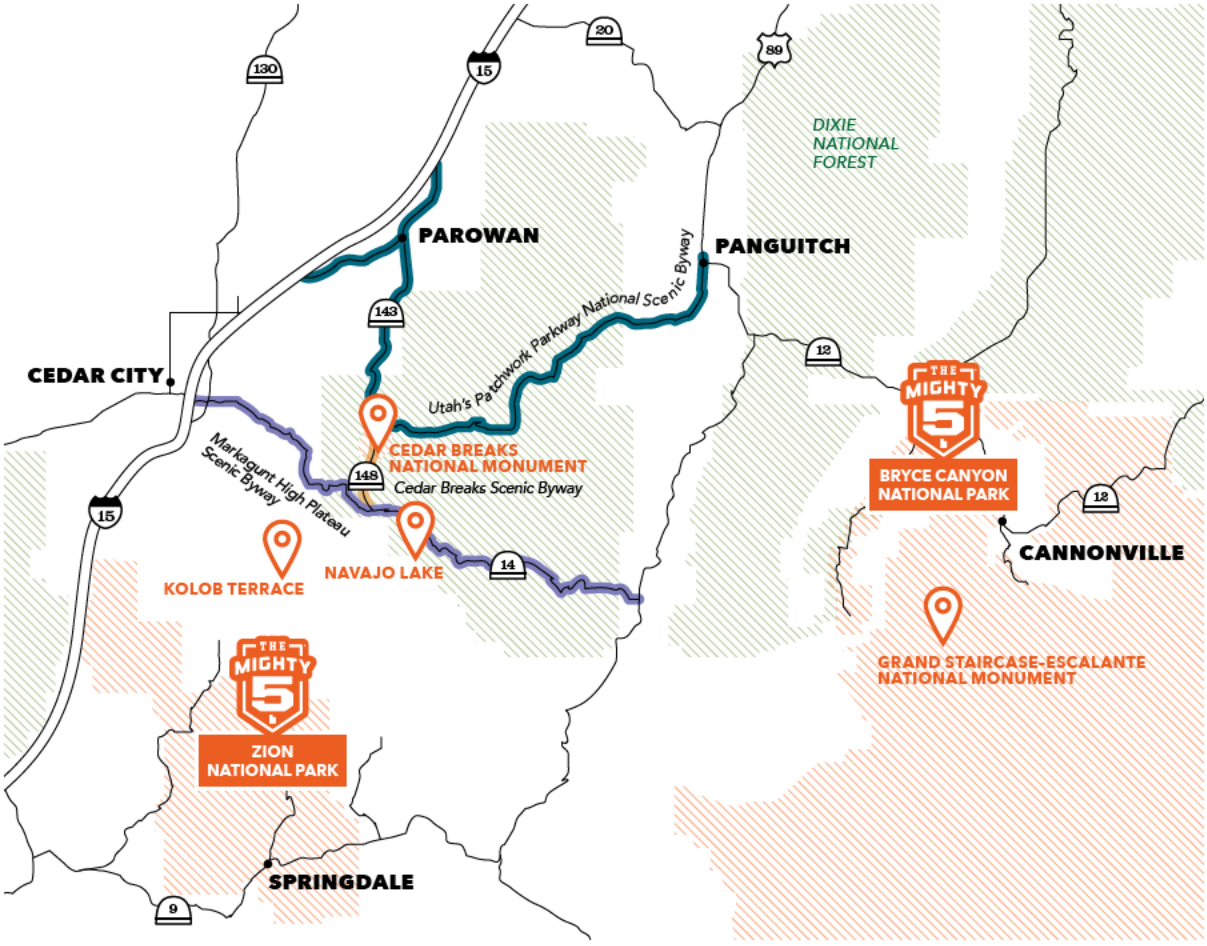
DISTANCE: 97 miles

SCENIC BYWAYS:
Utah's Patchwork Parkway National Scenic Byway (S.R. 143)
Cedar Breaks Scenic Byway (S.R. 148)
Markagunt High Plateau Scenic Byway (S.R. 14)



Experience diverse colors, cultures and climates as you climb and descend Utah's Patchwork Parkway National Scenic Byway through the Dixie National Forest. Every bend in the road brings into vision a new patch of scenery from colorful rocky cliffs and spires, alpine forests, lush meadows with rambling streams, crystal blue lakes and an unexpected splash of lava fields amidst the towering aspen trees. In 2016, the Active Times on *msn.com*'s Travel Section touted Utah's Patchwork Parkway as one of 16 most beautiful spring scenic drives in the U.S. Its fall foliage is equally radiant with its one-of-a-kind aspen groves whose leaves turn into a glowing orange and vibrant red. A variety of outdoor recreation opportunities to explore wildlife, wildflowers, rock formations, fishing, history and more are abundant throughout the national scenic byway and its communities.

As you continue, the Cedar Breaks Scenic Byway takes you to the visitor center of Cedar Breaks National Monument. Several easy and moderate hikes allow you to view the huge natural amphitheater, which is more than 2,000 feet deep and three miles from rim to rim. Traveling onto the Markaguant High Plateau Scenic Byway will connect you with Navajo Lake. This 3.5-mile-long lake is drained by sinkholes where water from inlets dramatically disappears into the ground. From Markaguant High Plateau Scenic Byway you can also enjoy the Mammoth Cave (a lava tube), Strawberry Point, Zion Overlook and a panoramic view of Kolob Terrace.



Left: *Cedar Breaks National Monument* | Scott Harding

Following ancient routes used by wildlife and Native Americans, Utah's Patchwork Parkway National Scenic Byway crosses a series of plateaus connecting I-15 travelers to Heritage Highway 89. This drive links All-American Road: Scenic Byway 12 and Zion Park Scenic Byway providing travelers with a scenic driving loop connecting three scenic byways, three national parks and one monument. Check ***udottraffic.utah.gov*** for seasonal road closures of the Cedar Breaks Scenic Byway.



Duck Creek



Panguitch Lake | Leah Hogsten

DON'T MISS

Cedar Breaks National Monument
Scenic overlooks and upper rim trails allow visitors to experience the diverse colorful rock spires, alpine forest and lush meadows. Guided ranger tours combined with picnic and camping areas make for a perfect day trip.

Cedar Breaks National Monument Star Parties
Nationally recognized for the park's clear dark night skies, Cedar Breaks allows visitors to see a vast array of stars and galaxies. The National Park Service hosts several guided star parties throughout the summer months.

Cedar Breaks National Monument's Wildflower Festival
This annual festival includes workshops and events in the high-altitude and colorful meadows.

Twisted Forest
Located between Brian Head and Cedar Breaks National Monument, the forest provides two hiking trails where hikers can walk along the rim of Cedar Breaks as well as hike up and down through the Twisted Forest where some of the world's oldest bristlecone pines live.

Brian Head Resort
Enjoy high-altitude year-round recreational opportunities from winter skiing to summer multi-use trails. Brian Head hosts a number of family-fun festival events throughout the summer and fall, such as the mid-September Rocktoberfest, where you can experience autumn colors, live music, beer and German food.

Brian Head Peak
From the peak (elevation 11,300 feet) one can view out over the vast mountain plateaus and canyons into eastern Utah, Arizona and Nevada, as well as experience the downhill Brian Head Peak trail by mountain bike. Brian Head Peak is accessible by a dirt road and only during the summer months.

Parowan Gap
Petroglyphs offer visitors a look back in time of how ancient cultures traveled and used the natural setting of the gap as a calendar system to tell the various seasons of the year. Interpretive events are held throughout the year.

Hidden Haven
Hidden up Parowan Canyon, hike into the canyon forest, which opens up into a haven with a towering canyon waterfall and weeping rock faces from underground springs.

Parowan City
The first Southern Utah settlement has a number of historical parks and museums, as well as a historic downtown and self-guided walking tours.

Quilt Walk Park & Festival
Quilt Walk Park depicts the poignant story of how seven men left Panguitch in March during a blizzard and ended up using quilts to traverse the mountain to Parowan to get supplies for their starving community. An annual festival is held the second week of June.

Panguitch City
Centrally located to over a dozen multi-use trails, this adventure base camp allows hikers, bicyclists, horse and ATV riders easy access to the diverse backcountry of southwest Utah and the Dixie National Forest.

Panguitch Lake
True to its Native American name meaning "Big Fish," the lake provides a fine catch of fish year-round.

Panguitch Valley Balloon Festival
The last weekend in June, the annual Panguitch Balloon Festival showcases over 50 balloons and includes a Balloon Glow event on Main Street.



Dark Skies at Cedar Breaks National Monument

*Get to know Cedar Breaks National Monument at **visitutah.com/cedar-breaks** or push yourself on our strenuous Cycling the Road to Mighty® itinerary inspired by the Larry H. Miller Tour of Utah at **visitutah.com/tou-itinerary***



Duck Creek Pond in Fall | Craig Primas/Visit Southern Utah

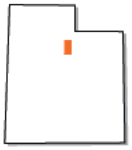


Parowan Gap Petroglyphs | Louis Arevalo

ADDITIONAL RESOURCES

- Visitor Services Bryce Canyon Country | (800) 444-6689
- Visitor Services Cedar City/Brian Head | (435) 784-2318 x135
- Dixie National Forest & Cedar City Ranger District
  (435) 865-3200 | 1789 North Wedgewood Lane, Cedar City, UT
- Make camping reservations for the Dixie National Forest at ***recreation.gov***

PROVO RIVER SCENIC BYWAY



START: Provo (U.S. 189)

NUMBER OF DAYS: 1

DISTANCE: 24 miles

DON'T MISS

Timpanogos Cave National Monument
Hike the moderately strenuous trail to three linked and dazzling caverns on the north slope of Mt. Timpanogos.

Deer Creek State Park
Windsurf, boat, fish or zip-line with views of the stunning nearby Mt. Timpanogos. Camping and cabin lodging available.

Jordanelle State Park
Choose between big adventure launched from a full-service marina or a serene retreat to the Rock Cliff Recreation Area. Cabin lodging available.

Wasatch Mountain State Park
Camp, reserve a tee time at one of four 18-hole golf courses or explore miles of mountain trails on foot or ATV. Cabin lodging available.

Homestead Crater
This geothermal spring, hidden within a 55-foot tall limestone rock, is the only warm scuba diving destination in the continental U.S.

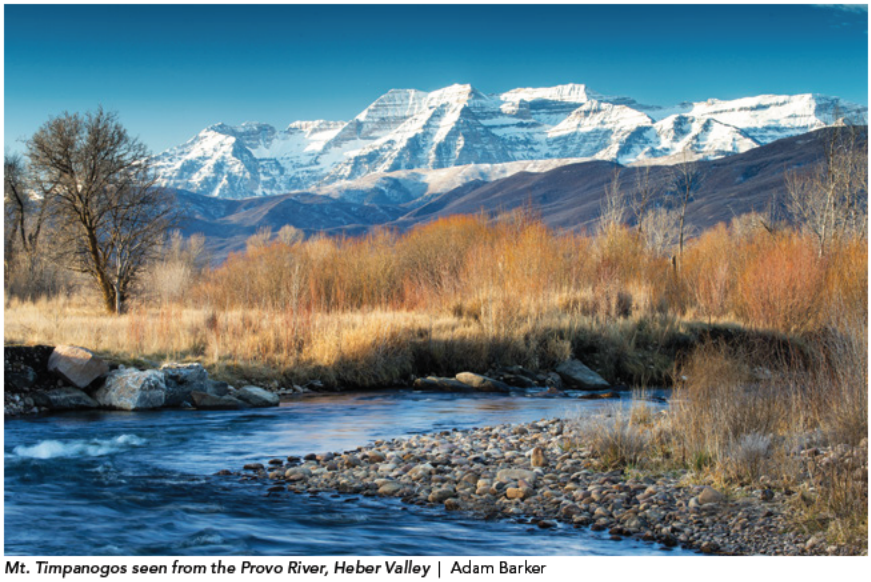
Heber Valley Railroad
Utah's only operating historic railroad takes riders through scenic Provo Canyon and the beautiful Heber Valley. Onboard entertainment creates an authentic Western experience.

Sundance Mountain Resort
Nestled in the north fork of Provo Canyon, Robert Redford's Sundance Mountain Resort is home to a year-round mountain community. Visitors and guests can ski, dine, hike, mountain bike, ride horseback or shop.

Stewart Falls
Stewart Fall is a beautiful waterfall on the 12,000-foot Mount Timpanogos. A one-and-a-half-mile hike provides stunning views.

Bridal Veil Falls
A beautiful waterfall that is easily accessible by a trail that connects to the parking lot. The trail to Bridal Veil Falls is open year-round. The Bridal Veil Falls park has picnic tables with barbeque grills.

Provo River Parkway
This popular bikeway runs along the Provo River as it meanders through Provo Canyon and Provo City before ending at Utah Lake State Park.



Mt. Timpanogos seen from the Provo River, Heber Valley | Adam Barker

The Provo River Scenic Byway (U.S. 189) connects the beautiful Heber and Utah valleys through Provo Canyon. There are many opportunities for adventure in the canyon, such as Bridal Veil Falls, Stewart Falls, Sundance Mountain Resort, zip-lines, horseback riding, river tubing and an extensive trail system.

Today, old-world charm blends with off-road adventure or tranquil mornings fishing on the winding middle Provo River between the reservoirs of Jordanelle and Deer Creek state parks. During Labor Day Weekend enjoy the Midway Swiss Days Festival and Soldier Hollow Classic Sheepdog Championship.

THE DRIVE

Only 45 minutes from downtown Salt Lake City or Provo, access the Heber Valley from eastbound I-80 to U.S. 189 or drive Provo Scenic Byway through Provo Canyon. Choose the really scenic route (particularly in the fall) by adding the Alpine Loop (S.R. 92) past Sundance Mountain Resort and Timpanogos Cave.

ADDITIONAL RESOURCES

- Uinta-Wasatch-Cache National Forest
  (801) 999-2103 | 857 West South Jordan, South Jordan, UT
- Heber Valley Visitors Bureau | (435) 654-3666
- Utah Valley Visitor Center | (801) 851-2100
- Public Lands Information Center (inside REI)
  (801) 466-6411 | 3285 East 3300 South, Salt Lake City, UT
- Make camping reservations for the Uinta-Wasatch-Cache National Forest at ***recreation.gov***

*Explore more things to do in Provo and the Heber Valley at **visitutah.com/provo** and **visitutah.com/heber***

TRAIL OF THE ANCIENTS

AT A GLANCE: TRAIL OF THE ANCIENTS NATIONAL SCENIC BYWAY

START: Monticello

NUMBER OF DAYS: 3–7

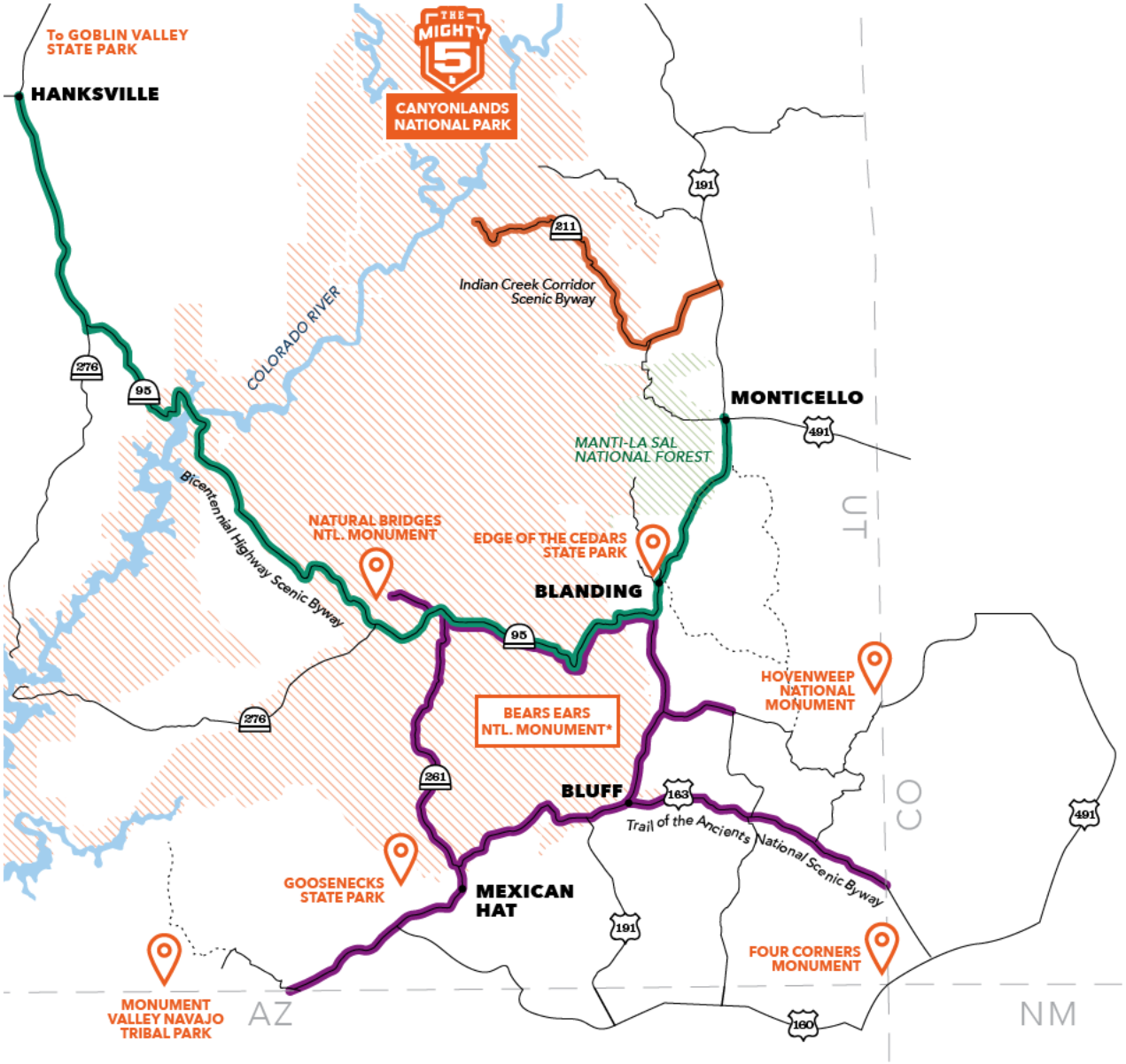
DISTANCE: 400+ miles

SCENIC BYWAYS:
Trail of the Ancients National Scenic Byway (U.S. 191, 163 and S.R. 261, 262)
Indian Creek Corridor Scenic Byway (S.R. 211)
Bicentennial Highway Scenic Byway (S.R. 95)



Just south of Moab and Arches National Park you can travel through time along portions of the dramatic Trail of the Ancients National Scenic Byway, which intersects with Ancestral Puebloan history of the Four Corners area. This is a place where monumental landforms connect with the sky, and vast fields of stars fill the nights.

On your road trip, you'll see evidence of early cultures that built a life in the ruggedly beautiful Canyonlands region, including incredible cliff dwellings. You'll realize this was a very different way of life. In these sparsely populated lands, it is easy to imagine this place before humans. After seeing the Valley of the Gods and massive natural bridges with mythological significance, you'll learn about a more primitive time and place, and maybe learn a little about modern life in the process.



Left: *Hovenweep National Monument* | Barry Gutierrez

*under review

There are many ways to experience this important scenic byway but this tour begins one hour south of Moab in Monticello or the Needles district of Canyonlands National Park. Learn the Ancestral Puebloan history at Edge of the Cedars State Park Museum in Blanding. Explore the ruins of the fascinating Hovenweep National Monument.

Take the scenic drive through Monument Valley Navajo Tribal Park then tour the Valley of the Gods. Plan a stop at the remote and spectacular Natural Bridges National Monument. Time permitting, plan hikes to Cedar Mesa, Butler Wash and Comb Ridge. Or return home along the Bicentennial Highway Scenic Byway U.S. 95 to Hanksville through red rock landscapes and beautifully tranquil desert places.



Monument Valley | Michael Kunde

ADDITIONAL RESOURCES

- Utah's Canyon Country Visitor Services
  (435) 587-3235 ext 4139 | (800) 574-4386
- Manti-La Sal National Forest Office
  (435) 637-2817 | 599 W. Price River Drive, Price, UT
- Make camping reservations for the Manti-La Sal National Forest at ***recreation.gov***

DON'T MISS

Newspaper Rock
Native American Indians have been engraving and drawing on Newspaper Rock for more than 2,000 years. Their markings tell stories, hunting patterns, crop cycles, and the mythologies of their lives. It's a great stop on its own or as part of the Indian Creek Corridor Scenic Byway to the Needles District of Canyonlands.

Valley of the Gods
This 17-mile backway at the base of Cedar Mesa is like a mini Monument Valley.

Canyonlands National Park
This national park is a dream come true for day hikers and backpackers. Near Monticello, be sure to visit the famous Needles district on the Indian Creek Corridor Scenic Byway. Adventurous and self-sufficient travelers can explore the rugged and remote Maze district.

Blanding
At Edge of the Cedars, explore a 1,000-year-old Puebloan village and the largest collection of Ancestral Puebloan pottery in the Four Corners region.

Bluff
Take the Bluff History Tour, enjoy local and Native American art, discover the landscape's ancient balance and beauty or launch on the San Juan River.

Mexican Hat
A quaint town lined with red rock ridges and gateway to Monument Valley Navajo Tribal Park and Valley of the Gods.

Hanksville
Make a supply stop near the scenic headwaters of the Dirty Devil River, Butch Cassidy's Robbers Roost and the Hanksville-Burpee Dinosaur Quarry.

San Juan River and Goosenecks State Park
From the rim, look down 1,500 feet to see this entrenched river meander.

Natural Bridges National Monument
Trails lead to each bridge and a comprehensive trail traverses the canyon bottom. Small archaeological sites are scattered throughout the canyon. Designated the first certified International Dark Sky Park, as well as the first NPS park to be solar powered.

Goblin Valley State Park
Goblin Valley is unlike any other place in the world, and it's a place that captures and stretches the imagination, challenging you with its geologic whimsy. Bring the family and experience this amazing place by hiking, camping and yurts, mountain biking, and exploring the surrounding canyons.

Edge of the Cedars State Park
Explore one of the largest and most comprehensive collections of artifacts from the Ancestral Pueblo, Navajo and Ute people, and Euro-American settlers.

Moki Dugway
One of the most extreme drives in the United States. A mining company constructed the Moki Dugway in the 1950s as a shortcut for transporting uranium. The gravel road is steep and includes a number of switchbacks, but the view is stunning. Not recommended for RVs or trailers.



Monument Valley Navajo Tribal Park | Barry Gutierrez



Night sky at Owachomo Bridge, National Bridges National Monument | NPS

Discover more along Utah's Trail of the Ancients at ***visitutah.com/panoramas*** *or set out on our Native Spirit four-day itinerary at* ***visitutah.com/native-spirit***

ZION PARK SCENIC BYWAY

AT A GLANCE: ZION PARK SCENIC BYWAY

START: Cedar City or Springdale

NUMBER OF DAYS: 1–4

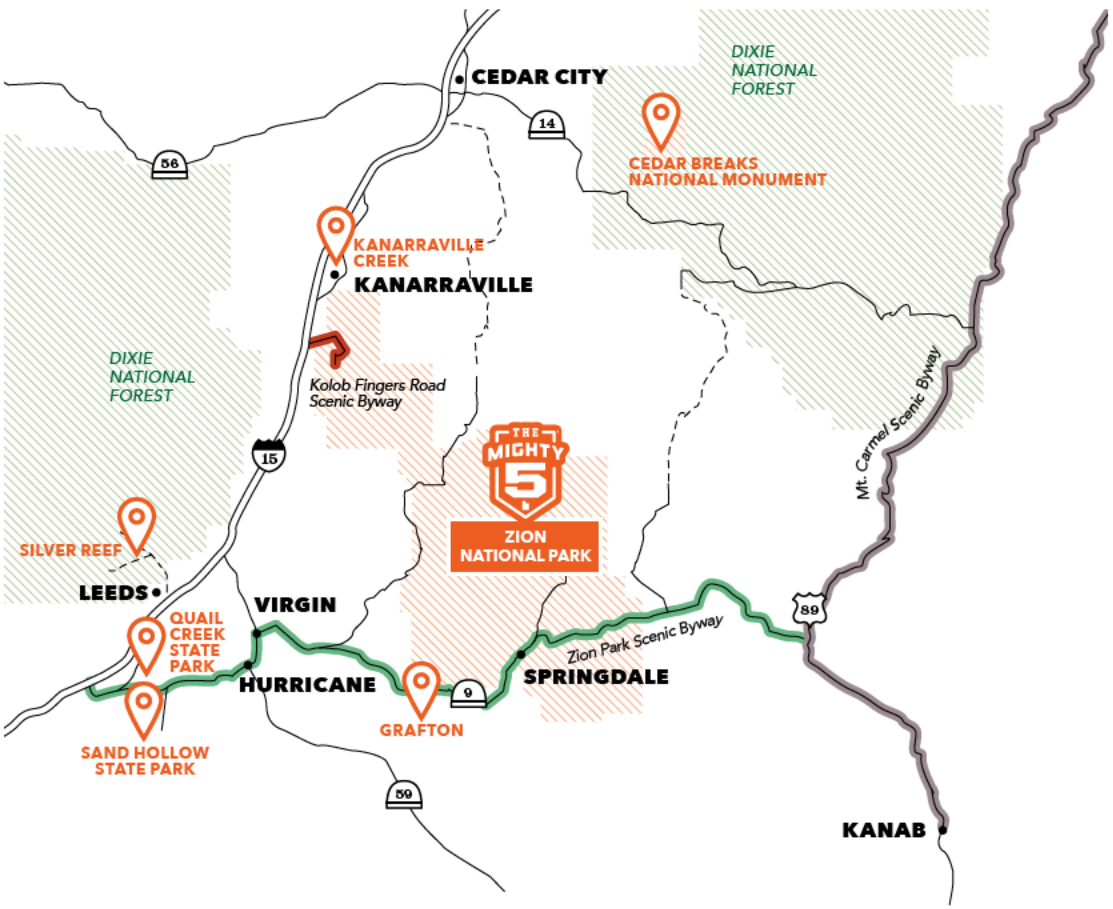
DISTANCE: 175 miles

SCENIC BYWAYS:
Zion Park Scenic Byway (S.R. 9)
Mt. Carmel Scenic Byway (U.S. 89)
Kolob Fingers Road Scenic Byway



Millions annually make a pilgrimage to Zion. It is not a place built by human hands, but human intelligence recognized its intrinsic value and bestowed upon it one of our highest designations: national park. The journey here starts with scenic byways: Zion Park Scenic Byway, Mt. Carmel Scenic Byway and Kolob Fingers Road Scenic Byway.

Zion National Park is a phenomenon of natural history. The Virgin River and its tributaries flow like lifeblood through the wilderness and main canyon. Though the river giveth, it also taketh away, dropping steeply off the plateau and carrying away layers of time as it carves ever deeper into the Earth's crust, slowly, patiently. This wild and and scenic river and the canyons it carves sit at the heart of southwestern Utah's trio of scenic byways. These byways are roads that rise with the sheer canyon walls and carve out their very existence from the sacred stone; they trace ancient riverways past headwaters through pioneer towns alongside alpine forests and down a staircase of sweeping cliffs; and they deliver travelers through lands of singular natural beauty.



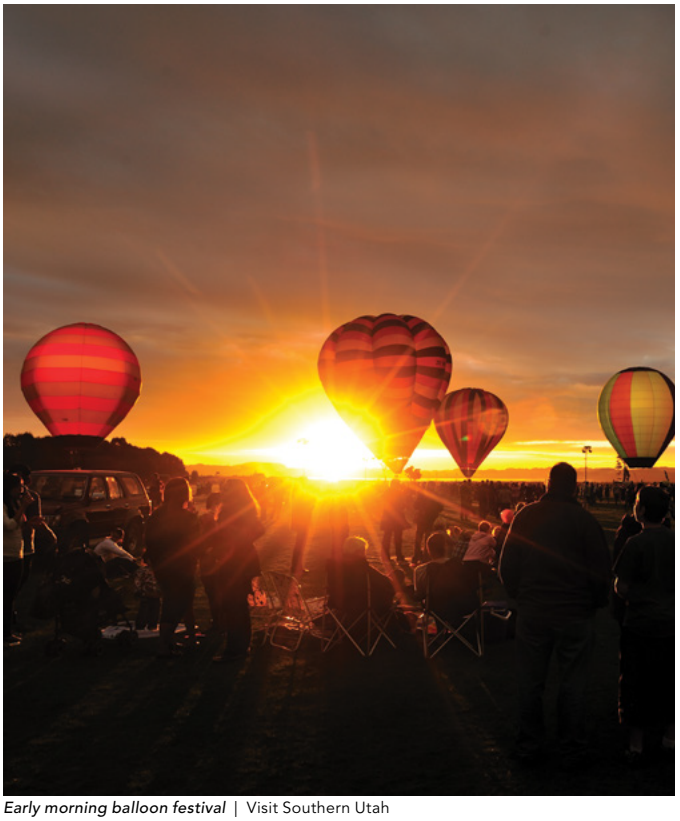
Left: *The Watchman Trail, Zion National Park* | Hage Photo

Though only 5 miles long, Kolob Fingers Road packs in a lot of scenery. Take Exit 40 from Interstate 15 on the northwest side of Zion National Park and proceed up the distinctive red asphalt switchbacks among the park's towering cliffs. While the view at the end is spectacular, there are also options to get out and hike.

On the south and east side of the park, Zion Park and Mount Carmel scenic byways form a wavy "T" shape, so driving these roads can involve a little backtracking depending on your final destination. Zion Park holds the honor of being a scenic byway that happens to pass directly through Zion National Park — the entrance fee is required even if you're just in it for the road trip (but you'll want to stop and stay awhile). The route (S.R. 9) begins on the west from Washington. It travels 54 miles through small towns and adventurous landscapes before the distinctive formations of Zion National Park appear near Springdale. Zion begs several days of exploration, but the road continues up through the legendary Zion–Mount Carmel Tunnel en route to the junction with U.S. 89. Mount Carmel Scenic Byway's north-south trajectory, which means a dramatic variance in geology and landscape as the 60-mile-long road traverses the Markagunt Plateau through the Sevier River valley descending cliffs of Pink, Gray, White and Vermillion that make up the Grand Staircase.



Zion Canyon from above | Visit St. George



Early morning balloon festival | Visit Southern Utah

See the Kolob Canyon Visitor Guide at ***visitutah.com/kolob***



Best Friends Animal Society, Kanab | Visit Southern Utah

DON'T MISS

Kolob Fingers Road Byway and Hikes
Exit 40 off I-15, 18 miles south of Cedar City, Zion NPS fee applies. The short byway accesses spectacular overlooks and a handful of trails.

State Parks
Boasting some of the warmest waters in the state and a mild winter climate, Quail Creek and Sand Hollow state parks lure boaters, campers and anglers year-round. Sand Hollow is also a top destination for OHV enthusiasts.

Towns of S.R. 9 West of Zion
Gateways to Red Cliffs Desert Reserve, Gooseberry Mesa, Sand Hollow State Park and park trailheads such as Chinle and Eagle Crags.

Grafton Ghost Town and Trail
Forces of nature and tensions with Native Americans forced Mormon pioneer settlers to abandon Grafton after less than a decade. A scenic trail skirts the nearby mesa.

Springdale
Thanks to an international clientèle, Springdale serves up world-class traveler-friendly accommodations, art, spas, dining, coffee, local brewing and outfitting.

Zion Canyon
Ride the multi-passenger shuttle up Zion Canyon Scenic Drive, a beautiful road that follows the North Fork of the Virgin River past historic Zion Lodge and the park's most outstanding scenery.

Zion-Mt. Carmel Tunnel
The road east from Zion to Mount Carmel Junction, completed in 1930, was considered one of the great engineering accomplishments of its time. Large RVs restricted.

Canyon Overlook
This short but scenic trail runs to a high overlook with commanding vistas of the lower reaches of Zion Canyon. Only 1 mile (1.6 km) round trip, but steep dropoffs demand caution.

East Rim Trailhead
This long trail starts at east entrance and climbs up 1,000 feet onto the rim and through a high ponderosa forest before descending 2,300 feet down to the floor of Zion Canyon.

East Side Lodging
Authentic western destinations east of Zion include a roaming herd of buffalo, farm-to-table dining and a 4,000-acre ranch resort bordering the east boundary of the park.

Dixie National Forest
U.S. 89 skirts the edge of a patch of national forest past the junction with S.R. 14, which accesses high-elevation lakes, streams, trails, and Cedar Breaks National Monument

Pioneer Towns of U.S. 89
Welcoming rural towns in Utah's Kane County offer local rodeos, fairs and access points to the western edge of the Grand Staircase–Escalante.

Geology of U.S. 89
Rocky formations and alpine areas rise and fall along the Markagunt Plateau, Paunsaugunt Plateau, Long Valley and cliffs of many colors.

Kanab
The town is like a Hollywood portrayal of the classic American West with itstowering Navajo sandstone cliffs and vistas of sagebrush. A prime base camp to the southwest.

Best Friends Animal Sanctuary
Best Friends operates the nation's largest sanctuary for homeless animals and provides adoption, spaying/neutering and educational programs. Tours available in Angel Canyon.



North Fo k Taylor Creek, Kolob Canyon | NPS

ADDITIONAL RESOURCES

- Kolob Canyons Visitor Center | (435) 772-3256
  3752 E Kolob Canyon Rd, New Harmony, UT
- Zion National Park Visitor Center | (435) 772-3256
  1 Zion National Park, S.R. 9, Springdale, UT
- Kanab/Grand Staircase–Escalante
  (435) 644-1300 | 745 E. Highway 89, Kanab, UT
- Dixie National Forest | (435) 688-3246
  345 E. Riverside Drive, St. George, UT
- Make camping reservations for the Dixie National Forest and some sites within Zion National Park at ***recreation.gov***

From:	Laura King
To:	BLM_CO_FOIA@blm.gov
Cc:	"Shannon Laun"; "Jeremy Nichols"
Subject:	BLM-2017-00624/CO-17-040
Date:	Wednesday, August 2, 2017 6:24:41 PM
Attachments:	FOIA Request_Trump EO and Zinke SO CRVFO and CO SO.PDF FOIA Response (First)_Trump EO and Zinke SO CRVFO and CO SO.PDF

Dear Diana,

We received installment 1 to our FOIA request concerning Colorado BLM's compliance with EO 13783 and SO 3349. (For your ease of reference, I have attached our FOIA request, and your letter transmitting installment 1.)

I have had a chance to review the records released in installment 1. I noticed several documents which are referred to or indicated as "attached" to emails, and that I believe should have been but were not included in the release. These are:

· The "list of all identified BLM Colorado specific policy for Oil and Gas (FY2010-FY2017), BLM Colorado Notice-to-Lessees, and CO-922's identified burdensome nationwide policy with suggestions for improvement" attached by Peter Cowan in the email chain "Re: Identified CO Specific Policy & Burdensome WO Policy_DRAFT - Invitation to edit."

· The above list, as revised to include "any nationwide Coal policy that is burdensome per Secretarial Order 3349 and the March 28, 2017, Executive Order" as suggested by Peter Cowan in the email chain "Re: Identified CO Specific Policy & Burdensome WO Policy_DRAFT - Invitation to edit" and as referred to by Rebecca Backlund in the email chain "Re: 10:30 Meeting."

· The document produced by Kymm Gresset referred to in the email chain "Fwd: QUICK TURN AROUND Fwd: BLM Priorities - Internal Working Document."

· The "templates and an example from Nevada on the Energy Program" referred to as attached in the 4/20/2017 5:03pm email from Ruth Welch and the "draft work product provided by NV" referred to as attached in the 4/20/2017 4:34pm email from Michael Nedd in the email thread "Fwd: QUICK TURN AROUND Fwd: BLM Priorities - Internal Working Document."

· The "draft BLM Priority Themes and Goals sent out in early April" referred to by Michael Nedd in the email thread "Fwd: QUICK TURN AROUND Fwd: BLM Priorities - Internal Working Document."

Also, I will be going out on maternity leave in about a month. To ensure that we receive all responsive documents, would you be willing to send responses both to me and to the attorney who will be tracking this request in my absence:

Shannon Laun

8818 8th Ave NW

Seattle, WA 98117

We look forward to hearing whether BLM will release the above-referenced documents.

Thank you.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder’s Alley

Helena, MT 59601

(406) 204-4852 (tel.)

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Defending the West www.westernlaw.org

May 22, 2017

Sent via Email and USPS Certified Mail Return Receipt Requested

Diana Fisher
FOIA Officer
2850 Youngfield Street
Lakewood, CO 80215
Phone: (303) 239-3688
FAX: (303) 239-3933
CO_FOIA@blm.gov

FREEDOM OF INFORMATION ACT REQUEST

Dear Ms. Fisher:

This is a request under the Freedom of Information Act (FOIA), 5 U.S.C. § 552, as amended. I make this request on behalf of WildEarth Guardians ("Guardians") for the following records from the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office:

- All agency records produced by the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office in the course of complying with Executive Order No. 13783, "Promoting Energy Independence and Economic Growth," which was published on March 28, 2017.
- All agency records produced by the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office in the course of complying with Secretarial Order No. 3349, "American Energy Independence," which was published on March 29, 2017, under Secretary of the Interior Ryan Zinke.

For purposes of this request, "agency records" is consistent with the meaning of the term under FOIA. This includes, but is not limited to, documents of any kind including electronic as well as paper documents, emails, writings (handwritten, typed, electronic or otherwise produced, reproduced, or stored), correspondence, letters, memoranda, reports, consultations, notes, recordings, telephone conversation recordings, voice mails, telephone logs, messages, instant messages, G-chats, text messages, chats, telefaxes, photographs, videos, meeting notes or minutes, and electronic and magnetic recordings of meetings. All of the foregoing is included in

this request if it is in BLM's possession and control. If such recordings are no longer under the control of BLM but were at any time, please refer this request to the relevant federal agency or agencies.

This request is not meant to exclude any other records that, although not specially requested, are reasonably related to the subject matter of this request. Please provide responsive records in digital format whenever possible.

*** * ***

Please identify and inform us of all responsive or potentially responsive records within 20 working days as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i), and the basis of any claimed exemptions or privilege, including the specific responsive or potentially responsive records(s) to which such exemption or privilege may apply. *See Citizens for Responsibility and Ethics in Washington v. Federal Election Com'n*, 711 F.3d 180, 182-183 (D.C. Cir. 2013) (holding that the agency must identify the exemptions it will claim with respect to any withheld documents within the time frame prescribed by FOIA). The Supreme Court has stated that FOIA establishes a "strong presumption in favor of disclosure" of requested information, and that the burden is on the government to substantiate why information may not be released under FOIA's limited exemptions. *Department of State v. Ray*, 502 U.S. 164, 173 (1991). Congress affirmed these tenets of FOIA in legislation as recently as December 2007, stating that government remains accessible to the American people and "is always based not upon the 'need to know' but upon the fundamental 'right to know.'" Public Law 110-175, 121 Stat. 2524, 2525 (Dec. 31, 2007).

If your office takes the position that any portion of the requested records is exempt from disclosure, we request that you provide us with an index of those records as required under *Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973), with sufficient specificity "to permit a reasoned judgment as to whether the material is actually exempt under FOIA." *Founding Church of Scientology v. Bell*, 603 F.2d 945, 959 (D.C. Cir. 1979). A *Vaughn* index must (1) identify each document or portion of document withheld; (2) state the statutory exemption claimed; and (3) explain how disclosure of the document or portion of document would damage the interests protected by the claimed exemption. *See Citizens Comm'n on Human Rights v. FDA*, 45 F.3d 1325, 1326 n.1 (9th Cir. 1995). "The description and explanation the agency offers should reveal as much detail as possible as to the nature of the document," in order to provide "the requestor with a realistic opportunity to challenge the agency's decision." *Oglesby v. U.S. Dept. of Army*, 79 F.3d 1172, 1176 (D.C. Cir. 1996). Such explanation will be helpful in deciding whether to appeal a decision to withhold documents and may help to avoid unnecessary litigation.

In the event that some portions of the requested records are properly exempt from disclosure, please disclose any reasonably segregable, non-exempt portions of the requested records. *See* 5 U.S.C. §552(b). If it is your position that a document contains non-exempt segments and that those non-exempt segments are so dispersed throughout the documents as to make segregation impossible, please state what portion of the document is non-exempt and how the material is dispersed through the document. *See Mead Data Central v. U.S. Department of the Air Force*, 455 F.2d 242, 261 (D.C. Cir. 1977). Claims of non-segregability must be made

with the same detail as required for claims of exemption in a *Vaughn* index. If a request is denied in whole, please state specifically that it is not reasonable to segregate portions of the record for release.

FOIA requires federal agencies to make their records "promptly available" to any person who makes a proper request for them. 5 U.S.C. § 552(a)(3)(A) (as amended by OPEN Government Act of 2007, Pub. L. No. 110-175, 121 Stat. 2524).

Presumption of Openness and "Foreseeable Harm" Standard

On his first full day in office President Obama demonstrated his commitment to the ideals of transparency and openness by issuing a Memorandum to the heads of all Executive Branch Departments and agencies by calling on them to "renew their commitment to the principles embodied in FOIA." *See* Presidential Memorandum for Heads of Executive Departments and Agencies Concerning the FOIA, 74 Fed. Reg. 4683 (Jan. 21, 2009). The President directed all agencies to administer the FOIA with a clear presumption in favor of disclosure, to resolve doubts in favor of openness, and to not withhold information based on "speculative or abstract fears." *Id.* In addition, the President called on agencies to ensure that requests are responded to in "a spirit of cooperation," that disclosures are timely made, and that modern technology is used to make information available to the public even before a request is made. *Id.*

In accordance with the President's directives, on March 19, 2009, Attorney General Holder issued new FOIA guidelines, calling on all agencies to reaffirm the government's "commitment to accountability and transparency." Memorandum from Att'y Gen. Eric Holder for Heads of Executive Departments and Agencies (Mar. 19, 2009), *available at* http://www.justice.gov/ag/foia-memo-march2009.pdf. The Guidelines stress that the FOIA is to be administered with the presumption of openness called for by the President. *Id*. at p. 1.

The Attorney General "strongly encourage[d] agencies to make discretionary disclosures of information." *Id*. He specifically directed agencies not to withhold information simply because they may do so legally and to consider making partial disclosures when full disclosures are not possible. *Id*. He also comprehensively addressed the need for each agency to establish effective systems for improving transparency. *Id*. at p. 2. In doing so he emphasized that "[e]ach agency must be fully accountable for its administration of the FOIA." *Id*.

In issuing these new guidelines, Attorney General Holder established a new "foreseeable harm" standard for defending agency decisions to withhold information. Under this new standard, the U.S. Department of Justice will defend an agency's denial of a FOIA request "only if (1) the agency reasonably foresees that disclosure would harm an interest protected by one of the statutory exemptions, or (2) disclosure is prohibited by law." *Id*. As a result, "agencies must now include the 'foreseeable harm' standard as part of the FOIA analysis at the initial request stage and the administrative appeal stage." Department of Justice Guide to the FOIA (2009), p. 25, available at http://www.justice.gov/oip/foia_guide09.htm.

Request for Fee Waiver

FOIA was designed to grant a broad right of access to government information, with a

focus on the public's "right to be informed about what their government is up to," thereby "open[ing] agency action to the light of public scrutiny." *U.S. Dep't of Justice v. Reporters Comm. for Freedom of Press*, 489 U.S. 749, 773-74 (1989) (internal quotation and citations omitted). A key component of providing public access to those records is FOIA's fee waiver provision, 5 U.S.C. § 552(a)(4)(A)(iii), which provides that "[d]ocuments shall be furnished without any charge or at a [reduced] charge . . . if disclosure of the information is in the public interest because it is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester."

FOIA's fee waiver requirement is to be "liberally construed." *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003); *Forest Guardians v. U.S. Dept. of Interior*, 416 F.3d 1173, 1178 (10th Cir. 2005). The fee waiver amendments of 1986 were designed specifically to provide organizations such as Guardians access to government documents without the payment of fees. As one Senator stated, "[a]gencies should not be allowed to use fees as an offensive weapon against requesters seeking access to Government information . . ." 132 Cong. Rec. S. 14298 (statement of Senator Leahy). Indeed, FOIA's waiver provision was intended "to prevent government agencies from using high fees to discourage certain types of requesters and requests, in clear reference to requests from journalists, scholars, and . . . non-profit public interest groups." *Better Gov't Ass'n v. Dep't of State*, 780 F.2d 86, 93-94 (D.C. Cir. 1986) (quoting *Ettlinger v. FBI*, 596 F. Supp. 867, 876 (D. Mass. 1984)).

Guardians, a non-commercial and public-interest requester, hereby requests a waiver of all fees associated with this request because disclosure "is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester." 5 U.S.C. § 552(a)(4)(A)(iii); *see also* 43 C.F.R § 2.45. This request satisfies both statutory and regulatory requirements for granting a fee waiver, including fees for search, review, and duplication.[1] Below, stated first in bold, are the criteria the BLM considers in assessing requests for fee waivers, followed by an explanation of Guardians' satisfaction of those requirements. *See* 43 C.F.R § 2.48.[2] Fee waiver requests must be evaluated based on the face of the request. *See Citizens for Responsibility & Ethics in Washington v. U.S. Dep't of Justice*, 602 F. Supp. 2d 121, 125 (D.D.C. 2009).

(1) The subject of Guardians' request concerns identifiable operations or activities of the Federal Government:

The subject matter of the requested records directly and specifically concerns identifiable operations or activities of the federal government, with a connection that is direct and clear, not remote. Guardians requests documents related to Executive Order No. 13783 and Secretarial

[1] Pursuant to FOIA, 5 U.S.C. § 552(a)(4)(A)(iv), no fee may be charged for the first two hours of search time or for the first one hundred pages of duplication.

[2] *See also* Department of Justice Fee Waiver Guidance to Agency Heads From Stephan Markman, Assistant Att'y Gen. (Apr. 2, 1987) (advising agencies of factors to consider when construing fee waivers), *available at* http://www.justice.gov/oip/foia_updates/Vol_VIII_1/viii1page2.htm.

Order No. 3349, which was designed to implement the directive in the Executive Order No. 13783, to, *inter alia*, "review all existing regulations, orders, guidance documents, policies, and any other similar agency actions . . . that potentially burden the development or use of domestically produced energy resources."

The Department of Justice Freedom of Information Act Guide expressly concedes that "in most cases records possessed by a federal agency will meet this threshold" of identifiable operations or activities of the government. *See* Department of Justice Guide to the FOIA (2009), p. 25. This requirement is clearly met in this case.

(2) How disclosure is likely to contribute to public understanding of those operations or activities:

Disclosure of these records is likely to contribute to public understanding of the operations and activities of the federal government. BLM "must not make value judgments about whether the information at issue is 'important' enough to be made public; it is not the bureau's role to attempt to determine the level of public interest in requested information." 43 C.F.R. § 2.45(f).

(i) How the contents of the records are meaningfully informative:

The requested records are meaningfully informative about government operations or activities and are likely to contribute to an increased public understanding of those operations or activities. The records requested will provide Guardians with the ability to communicate to the public about the activities of the BLM, and, more broadly, of the federal government. The documents will give Guardians, and therefore the public, crucial insight into the way the federal government intends to manage energy development on public lands. Regarding this issue, the actions and assessments of the BLM, and the actions and assessments of other branches of the federal government which would be revealed by records in the possession of BLM, are of concern to the public. Disclosure of the requested records will enhance the public's knowledge of this issue and support public oversight of federal agency operations.

These documents are not currently in the public domain. Their release is "likely to contribute" to better public understanding of federal government's management of public lands. The public is always well served when it knows how government activities, particularly matters touching on legal and ethical questions, have been conducted. *See Judicial Watch*, 326 F.3d at 1314 ("[T]he American people have as much interest in knowing that key [agency] decisions are free from the taint of conflict of interest as they have in discovering that they are not.").

(ii) The logical connection between the content of the records and the operations or activities:

The requested records directly concern the operations or activities of the federal government.

(iii) How disclosure will contribute to the understanding of a reasonably

broad audience of persons interested in the subject, as opposed to your individual understanding:

The public currently does not have the ability to fully evaluate the actions or inactions of the federal government regarding the management of public lands. Disclosure of these records will contribute to the understanding of a reasonably broad audience of persons interested in the subject because we will disseminate the information we receive to a large audience of interested persons. Once the information is made available, it will be analyzed and presented to the public in a manner that will meaningfully enhance the public's understanding of this issue.

(iv) Your identity, vocation, qualifications, and expertise regarding the requested information and information that explains how you plan to disclose the information in a manner that will be informative to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

WildEarth Guardians is a nonprofit organization dedicated to environmental protection. WildEarth Guardians protects and restores wild places, wildlife, and wild rivers in the American West. Through its Climate and Energy Program, Guardians works to sustain a transition from fossil fuels to clean energy in order to safeguard the American West.

WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding BLM actions and policy. For example, WildEarth Guardians has utilized FOIA to obtain records related to BLM's federal coal leasing activities in Wyoming and has disseminated this information through the media, its own website, and through other forms of public commentary. Guardians most recently utilized FOIA to obtain and disseminate information regarding BLM management of oil and gas resources in New Mexico. This information was related to the agency's decision to abruptly change the location of a planned oil and gas lease sale. The responsive FOIA documents have been shared with the media and have been reported on in various news stories.

Further, WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding other federal agency actions and is consistently granted fee waivers from these agencies. Just in the last five years, Guardians has been granted fee waivers in conjunction with FOIA requests to the U.S. Environmental Protection Agency, U.S. Office of Surface Mining Reclamation and Enforcement, U.S. Forest Service, U.S. Fish and Wildlife Service, and U.S. Bureau of Reclamation. In granting WildEarth Guardians' requests for fee waivers, these agencies have acknowledged Guardians' ability to obtain, analyze, and disseminate information to a reasonably broad audience.

(v) Your ability and intent to disseminate the information to a reasonably broad audience of persons interested in the subject (for example, how and to whom do you intend to disseminate the information):

Guardians has the ability and intention to disseminate the information requested to the public and its many members and supporters. Therefore, the disclosure of the requested

documents will contribute to the understanding of a reasonably broad audience of persons interested in the subject.

Guardians plans to disseminate the information it obtains pursuant to this FOIA request in various effective ways, including through its website, newsletter, press releases, Facebook page, public education events, comments on proposed agency actions, and other public interest advocacy. Guardians' staff will first analyze and digest the documents. The information will then be disseminated to Guardians' members and supporters, members of other conservation organizations, as well as other interested members of the public.

(3) How disclosure is likely to significantly contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

(i) Whether the information being requested is new:

The information being requested is new. Although the full contents of the requested records are currently unknown to us, Guardians does not request any records previously provided to us by the Government.

(ii) Whether the information would confirm or clarify data that has been released previously:

The information Guardians requests has not, to our knowledge, been released previously.

(iii) How disclosure will increase the level of public understanding of the operations or activities of the Department or a bureau that existed prior to disclosure:

Because this information is not currently in the public domain, disclosure of these records will increase the level of public understanding of the operations or activities of DOI and BLM that existed prior to disclosure. Guardians will disseminate the information obtained from this FOIA request to a large public audience, as explained above, and will help the public understand the information in a simple and informative way.

(iv) Whether the information is already publicly available:

The information Guardians requests is not, to our knowledge, publicly available. The Government may omit sending us requested records that are available in publicly accessible forums such as on the internet or that are routinely available at public or university libraries. However, please provide us with adequate references and/or website links so that we may obtain these materials on our own.

(4) How the public's understanding of the subject in question will be enhanced to a significant extent by the disclosure:

The public's understanding of the federal government's management of public lands will be enhanced to a significant extent by the disclosure of these records. The directives in Executive Order No. 13783 and Secretarial Order No. 3349 have the potential to create a dramatic shift in the way the Department of the Interior manages energy development on public lands. For example, depending on which policies or actions are deemed to "burden" energy development, public access, wildlife, and a range of public land recreation activities could be at risk. The public currently does not have the ability to evaluate the actions or inactions of DOI or BLM regarding management decisions on public lands as directed by Executive Order No. 13783 and Secretarial Order No. 3349.

Guardians' dissemination of the information obtained pursuant to this FOIA request will enhance the public's understanding of this issue because this information is not currently available to the public. *See Federal CURE*, 602 F. Supp. 2d at 205 (the existing public availability of the information is weighed when determining the degree of significance that will be derived from the disclosure of the information) (citing *Forest Guardians*, 416 F.3d at 1181). As described above, Guardians will disseminate the information it obtains pursuant to this FOIA in various effective ways, including through its website, newsletter, press releases, Facebook page, and public education events. Furthermore, the information obtained through this FOIA request will be used to contribute to one or more of the following: public interest litigation, petitions, newsletters, public presentations, e-mail and postal mail publications, press releases, and local and national news stories.

Given Guardians' positions and abilities, disclosure will lead to a significant enhancement of the public's understanding of the Government operations and activities at issue.

(5) Any commercial interest that would be furthered by the requested disclosure:

Guardians has no commercial, trade, or profit interest that would be furthered by the requested disclosure. Guardians is a tax-exempt organizations under section 501(c)(3) of the Internal Revenue Code. As such, Guardians has no commercial interests. The requested records will be used in the furtherance of Guardians' mission as an education and advocacy group to protect and restore the natural environment.

Guardians, a non-profit organization, has no commercial interests and will realize no commercial benefit from the release of the requested information. Therefore, no assessment of the magnitude of the interest is required. *See* 43 C.F.R. § 2.48(b)(2)-(3).

Conclusion

Given Guardians' demonstrably successful efforts at educating the public on environmental issues, and the fact that their education programs have significantly contributed to an understanding of Government operations and activities, it is clear that Guardians is entitled to a fee waiver. *See* 43 C.F.R § 2.48. In the event that your agency denies Guardians a fee waiver, please send a written explanation for the denial along with a cost estimate. Please contact us for authorization before incurring any costs in excess of $50.

I look forward to your determination on this FOIA request within twenty days, as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i). The twenty-day statutory deadline is also applicable to Guardians' fee waiver request. *See, e.g.*, *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003) (finding where an agency "fails to answer the [fee waiver] request within twenty days," judicial review is appropriate).

Please direct all correspondence and responsive records to counsel for WildEarth Guardians:

Laura King, Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
king@westernlaw.org

Thank you for your attention to this request. If you have any questions about the requested documents or the requested fee waiver, please do not hesitate to contact me at the phone number or email address below.

Sincerely,



Laura King, Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
Email: king@westernlaw.org
Phone: (406) 204-4852

Attorney for WildEarth Guardians

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Colorado State Office
2850 Youngfield Street
Lakewood, Colorado 80215-7210
www.co.blm.gov

In Reply Refer To:
FOIA CO-17-040
1278 (CO-951)

July 19, 2017

CERTIFIED MAIL
Return Receipt Requested

Ms. Laura King
Western Environmental Law Center
103 Reeder's Alley
Helena Montana 59601

Dear Ms. King:

This letter is installment 1 to your Freedom of Information Act (FOIA) request, BLM-2017-00624/CO-17-040, dated May 22, 2017, and received by the Bureau of Land Management (BLM) Colorado State Office on the same date. In your FOIA, you sought the following records:

> "This is a request under the Freedom of Information Act (FOIA), 5 U.S.C. § 552, as amended. I make this request on behalf of WildEarth Guardians ("Guardians") for the following records from the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office:
>
> - All agency records produced by the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office in the course of complying with Executive Order No. 13783, "Promoting Energy Independence and Economic Growth," which was published on March 28, 2017.
>
> - All agency records produced by the Bureau of Land Management's Colorado River Valley Field Office and the Bureau of Land Management's Colorado State Office in the course of complying with Secretarial Order No. 3349, "American Energy Independence," which was published on March 29, 2017, under Secretary of the Interior Ryan Zinke."

The Colorado State Office and Colorado River Valley Field Office conducted a search of their files and located responsive records to your request. Please find enclosed one compact disc containing approximately 404 pages responsive to your request, which are being released in their entirety.

We are still reviewing additional records that are responsive to your request and will follow with further installments. Please note that some records may contain material that will need to be reviewed by the Rocky Mountain Region Solicitor's Office.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010)). This response is limited to those records that are subject to the requirements of the FOIA. This is standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you have any questions related to your FOIA, please contact me at (303) 239-3688 or Laura Garcia Hinojosa, FOIA Specialist at (303) 239-3686; via mail at the letterhead address; or via email at BLM_CO_FOIA@blm.gov.

Sincerely,

Diana Fisher
BLM Colorado FOIA Officer

Enclosures (as stated)

From: dmfisher@blm.gov
To: king@westernlaw.org
Cc: Shannon Laun; Jeremy Nichols
Subject: Re: BLM-2017-00624/CO-17-040
Date: Friday, August 4, 2017 3:32:04 PM

Hello Laura,

Thank you for your email. Yes, we will be happy to send all future responses to you and the attorney who will be tracking this request in your absence. In addition, we wanted to keep you apprised that we're looking into your questions regarding the noted documents and will get back to you as soon as possible. Please don't hesitate to contact me (#303.239.3688) or Laura (#303.239.3686) if you have any other questions in the interim. Thanks!

Best regards,

Diana Fisher
FOIA/Privacy Act Officer
BLM Colorado
Phone: 303.239.3688

On Wed, Aug 2, 2017 at 4:23 PM, Laura King <king@westernlaw.org> wrote:

Dear Diana,

We received installment 1 to our FOIA request concerning Colorado BLM's compliance with EO 13783 and SO 3349. (For your ease of reference, I have attached our FOIA request, and your letter transmitting installment 1.)

I have had a chance to review the records released in installment 1. I noticed several documents which are referred to or indicated as "attached" to emails, and that I believe should have been but were not included in the release. These are:

· The "list of all identified BLM Colorado specific policy for Oil and Gas (FY2010-FY2017), BLM Colorado Notice-to-Lessees, and CO-922's identified burdensome nationwide policy with suggestions for improvement" attached by Peter Cowan in the email chain "Re: Identified CO Specific Policy & Burdensome WO Policy_DRAFT - Invitation to edit."

· The above list, as revised to include "any nationwide Coal policy that is burdensome per Secretarial Order 3349 and the March 28, 2017, Executive Order" as suggested by Peter Cowan in the email chain "Re: Identified CO Specific Policy & Burdensome WO Policy_DRAFT - Invitation to edit" and as referred to by Rebecca Backlund in the email chain "Re: 10:30 Meeting."

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Also, I will be going out on maternity leave in about a month. To ensure that we receive all responsive documents, would you be willing to send responses both to me and to the attorney who will be tracking this request in my absence:

Shannon Laun

8818 8th Ave NW

Seattle, WA 98117

We look forward to hearing whether BLM will release the above-referenced documents.

Thank you.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder’s Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org

www.westernlaw.org

From: Laura King
To: "FOIA, BLM_CO"
Cc: "Shannon Laun"; "Jeremy Nichols"
Subject: RE: BLM-2017-00624/CO-17-040
Date: Saturday, August 5, 2017 1:53:35 PM

Great. Thank you very much, Diana.

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder's Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org <mailto:king@westernlaw.org>

www.westernlaw.org

From: dmfisher@blm.gov [mailto:dmfisher@blm.gov] On Behalf Of FOIA, BLM_CO
Sent: Friday, August 04, 2017 1:32 PM
To: king@westernlaw.org
Cc: Shannon Laun; Jeremy Nichols
Subject: Re: BLM-2017-00624/CO-17-040

Hello Laura,

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Best regards,

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BLM Colorado
Phone: 303.239.3688

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Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder’s Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org

www.westernlaw.org

From:	dmfisher@blm.gov
To:	king@westernlaw.org
Cc:	Shannon Laun; Jeremy Nichols
Subject:	Re: BLM-2017-00624/CO-17-040
Date:	Tuesday, August 8, 2017 6:56:29 PM
Attachments:	BLM PRIORITY WORK--NV Response.pdf Template -- BLM Priority Themes and Goals with State Milestones.pdf

---

Hello Laura,

Thank you for your patience while we looked into your questions. Our comments to your questions are in yellow highlights as noted below. Please note that two of the referenced documents are also attached. Please let us know if you have any questions. Thank you!

Best regards,

Diana Fisher
FOIA/Privacy Act Officer
BLM Colorado
Phone: 303.239.3688

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· The document produced by Kymm Gresset referred to in the email chain "Fwd: QUICK TURN AROUND Fwd: BLM Priorities - Internal Working Document."

· The “templates and an example from Nevada on the Energy Program” referred to as attached in the 4/20/2017 5:03pm email from Ruth Welch and the “draft work product provided by NV” referred to as attached in the 4/20/2017 4:34pm email from Michael Nedd in the email thread “Fwd: QUICK TURN AROUND Fwd: BLM Priorities - Internal Working Document.” -The document referenced as an example from Nevada and the document referenced as the "draft work product provided by NV" are the same document. The template and example from Nevada are attached and will also be included with our final installment.

· The “draft BLM Priority Themes and Goals sent out in early April” referred to by Michael Nedd in the email thread “Fwd: QUICK TURN AROUND Fwd: BLM Priorities - Internal Working Document.” - We are reviewing this document and will provide more information as soon as we're able. In the interim, your patience is greatly appreciated.

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8818 8th Ave NW

Seattle, WA 98117

We look forward to hearing whether BLM will release the above-referenced documents.

Thank you.

Best,

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BLM PRIORITY WORK -- NEVADA RESPONSES

Making America Safe through Energy Independence

Make additional lands available for "all of the above" energy development

- BLM Nevada is leading the way in implementing the new solar and wind rule energy rule, which was published on December 19, 2016 and became final on January 19, 2017, incorporating changes to the regulations that improved the way BLM process applications and defines how to create additional lands for energy projects.

- Nevada is working with the solar Industry to identify competitive interest in solar development around Las Vegas in order to develop Designated Leasing Areas in support of the new solar and wind energy rule.

- The Nevada BLM is working to pursue the designation of more renewable energy zones on public lands including the offering of incentives for wind and solar development to in areas with fewer resource conflicts and which focus on designated energy zones that provide access to existing or planned transmission lines.

- Nevada BLM is pursuing the development of community-based partnerships that would work with local communities to help site renewable energy projects on adjacent public lands and potentially designate local and landscape scale multimodal energy corridors for the distribution of energy through electric transmission lines and pipelines.

Address backlog of Applications for Permit to Drill (APDs) and Expressions of Interest (EOIs)

- The Nevada State Office is mapping all pending Expression of Interest (EOI) filings in GIS to visually depict the EOI nominations spatially and working with the State of Nevada and District Offices to better identify potential for fluid minerals development based on the EOIs and industry demand.

- The Nevada State Office is working with the District Offices on staffing needs to have EOIs processed and pending APDs approved timely.

- The Nevada State Office is working with the Solicitors and with District Offices to establish a process to add lease stipulations to a parcel at the leasing stage through the lease sale NEPA process, such that, in conformance with the land use plan, the stipulation applies for the term of the lease only and does not require new planning.

- The Nevada State Office is implementing NEPA efficiencies with District Offices to streamline the analysis document and is working on developing a standardized template for lease sale EAs to reflect these efficiencies.

- Offer Lease Sales online for both Oil and Gas and Geothermal.

Streamline Federal coal leasing and permitting, and address backlog

- This item is not applicable because Nevada has no coal resources.

Streamline oil and gas leasing and permitting

- Update the current rotation schedule for lease sales to allow for more land to be offered timely.
- Encouraging District Offices to communicate across administrative jurisdictions to streamline the NEPA process for lease sales.
- Offer parcels where the NEPA analyses have been completed recently rather than postponing or deferring until the next year to offer the parcel.
- Nevada is actively working with WO on completing AMFSS 2 and GRASS2 through staff support and hosting monthly GRASS2 work and test sessions in Reno.
- Ensuring the PE and PET receive appropriate training throughout the year regarding new policy changes.

Streamline rights-of-way processing for pipelines, transmission lines, and solar/wind projects.

- The BLM-SHPO Statewide Protocol Agreement allows types of projects (at or below the Environmental Assessment level) and which categorically avoid adverse effects to historic properties to be exempt from formal SHPO consultation when complying with Section 106 of the National Historic Preservation Act thereby reducing overall time to permit.
- Through the creation of Designated Leasing Areas the BLM now has a process available for the competitive leasing of parcels for solar or wind development, thereby reducing the time for applicants to acquire site control in order to reduce risk to their financial obligations.
- Energy corridors create low use conflict areas for pipelines and transmission that provide a multistate industry-designated path for transferring energy from source to load center and reducing the permitting time.
- BLM Nevada implements shared Cost Recovery Agreements with Fish and Wildlife Service for processing Biological Opinions, Bird and Bat Conservation Strategies, and Eagle Conservation Plans that has lowered timelines on BLM processing of energy applications that require these documents.

- Nevada BLM is working with Washington BLM in the development/publication of the Westwide Section 368 Energy Corridor Guidebook for the purpose of streamlining the permitting process within Sec. 368 Corridors in Nevada and ten other western states.

- NV BLM works tirelessly to develop policies (BMPs, Programmatic Agreements, etc.) for activities on BLM administered public lands, which eliminate redundant processes and help reduce delay.

Streamline leasing and permitting for hardrock mining

- The Nevada State Office improved state-wide consistency, effectiveness, efficiency, and defensibility associated with processing and permitting Plans of Operations (PoOs) by issuing NV IM-2012-046 – Rock Characterization and Water Resources Analysis.

- The Nevada State Office entered into a Memorandum of Understanding (MOU) with the Nevada Division of Environmental Protection (NDEP) and the United States Forest Service to improve coordination and expedite administration and enforcement of respective authorities (MOU-NV920-2014-01).

- The Nevada State Office provided guidance to improve the efficiency and effectiveness of processing PoOs by issuing IM NV-2014-019 that encourages the implementation of a "Pre-Plan of Operations" phase as part of the PoO review process; requiring meetings between the BLM, the operator and other local, state or federal agencies including the Environmental Protection Agency that may be involved in the approval process to identify the content of the PoO and what baseline data may be needed in their submission to support the NEPA analysis.

- The State of Nevada Department of Environmental Protection (NDEP), in collaboration with Nevada State Office, and the Nevada Mining Association, has developed a Standardized Reclamation Cost Estimator (SRCE) that mining proponents can use to determine their reclamation cost estimate (RCE); the use of this model speeds up the process because the model is trusted by the State NDEP and by Nevada State Office, so it takes less time to verify the accuracy and completeness of RCEs from proponents.

- The Nevada State Office has created a bond adjudication team through cross-training, which allows the adjudication of bonds and the issuance of decisions approving bonds to be accomplished in less than two weeks; Nevada State Office holds over 600 bonds totaling over $2.4 billion.

- The Nevada State Office has recently hired a mining engineer to be the state program lead for solid leasable minerals, to provide guidance to the field office on prospecting permit applications, and to streamline the application review process.

- The DSD Minerals tracks all Hardrock Mine Federal Register Notices in DTS and works closely with WO100 to provide the necessary information to satisfy briefing requirements for the ASLM and Exec Sec Office in order to expedite publishing in the Federal Register.

Making America Great Through Shared Conservation Stewardship

Achieve appropriate management levels (AMLs) for the Wild Horse and Burro Program

- The Nevada Bureau of Land Management manages 83 Herd Management Areas (HMAs) with a projected population of 38,000-39,000 animals (projection current as of 3/1/17). The statewide Appropriate Management Level (AML) is 12,811 (this includes horses and burros). There are currently 72 HMAs over AML.

- In 2016, 900 excess wild horses and burros were removed, and 100 mares were treated with fertility control.

- In 2017, the Nevada Bureau of Land Management plans to remove 2,000 excess wild horses and burros and treat 250 mares with fertility control.

Work with partners to develop and implement priority habitat improvement projects

- BLM Nevada Continues to engage with the Natural Resources Conservation Service, the US Forest Service, and local partners to identify two pilot project proposals in Nevada that can use capacity funding dedicated in the Intermountain West Joint Venture Agreement to help promote local sagebrush ecosystem enhancements in the State of Nevada.

- Nevada BLM is a member of the State of Nevada's Conservation Collaborative Network (NCCN), which consists of the State of Nevada's Sagebrush Ecosystem Council, state and federal field specialists, and local stakeholders (conservation districts and local area working groups) to enhance the connectedness of communities to land management agencies to mitigate conflict at the local level before turning to other options such as litigation in regards to sagebrush conservation efforts throughout the State of Nevada.

- Along with BLM California, Oregon/Washington, Idaho, and Utah, BLM Nevada is cooperating with state, federal, and local stakeholders in the development of a Great Basin Region-wide Programmatic Environmental Impact Statements (PEISs) to analyze management actions and tools, including cumulative effects, across the entire Great Basin in support of a BLM ten year commitment to complete over 13 million acres of fuels breaks, fuels reduction, habitat restoration treatments, and activities supporting sage grouse habitat improvement in order to significantly minimize the subsequent National Environmental Policy Act (NEPA) work and time required to approve projects.

Enhance opportunities for volunteer service on public lands.

- BLM Nevada State Office maintains an Assistance Agreement with the Nevada SHPO to leverage volunteers for a statewide site stewardship program that helps protect some of the state's most important cultural resources.

- Each year BLM Nevada offers numerous volunteer opportunities, across most of our programs, totaling approximately 59,000 volunteer hours per year.

- BLM Nevada has a very robust Agreements program and is an active partner in hundreds of Assistance Agreements, which help get important project work accomplished across all programs.

- Youth partner hires total to approximately 400 youth per year, (not including BLM seasonal youth hires).

- Every BLM Nevada District Office hosts at least one National Public Lands Day (NPLD) project per year to encourage volunteers to come out and enjoy their public lands while working on a worthwhile project.

Emphasize BLM's multiple-use mandate through strategic communication efforts and educational outreach

- Since 2015, over 2,000 copies of the BLM Nevada pamphlet, "What is Nevada BLM?" have been distributed at visitor centers, public rooms, and student recruitment events across the state. The pamphlet emphasizes BLM's multiple-use mission and outlines the agency's various programs.

- In January 2017, BLM Nevada Communications adopted a formal communication strategy with the following key message and talking points:

  Key Message: The Bureau of Land Management's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations.

  Talking Points:

  - BLM manages more than 1/10 of the nation's surface area (approximately 245 million acres) and 30 percent of the nation's minerals and soils (approximately 700 million acres).
  - As part of our work, we determine the best combination of uses for public lands based on good science and input from the public.
  - We manage for a wide variety of activities from renewable energy production and mineral extraction to wildlife habitat, recreation and wilderness.

  - The BLM had a budget of $1.5 billion in 2015 and facilitated a total economic output of $114 billion and 467 million jobs.

- BLM staff made the following outreach presentations at these schools:
  - March 3rd, 2017, six staff representing fire, archeology, and hydrology from the Winnemucca District Office went to Lowry High School and presented career information on various BLM programs and the relevance of each in accomplishing the BLM's multiple-use mission.
  - February 10, 2017, a BLM Southern Nevada District Office staff member attended a career fair at Arbor View High School in Las Vegas where they spoke with about thirty students. They discussed wildland firefighting, wildlife management, and interpretation and education with junior ranger books, geological specimens and plant material. Other topics included engineering and GIS map skills for multiple uses.
  - December 8, 2016, Battle Mountain District's new surface water hydrologist gave presentations to three sixth grade classes at Battle Mountain Junior High School, teaching nearly 100 students about erosion and how the BLM uses science in nearly everything we do.
  - November 10, 2016, two BLM Nevada State Office staff members visited the Honors Academy of Literature charter school in Reno. They enrolled 23 students in the "Every Kid in a Park" free public lands pass program and talked about BLM's multi-use mandate and recreation opportunities on public lands. The BLM staff also visited the kindergarten - 2nd grade classes and enrolled about 50 Junior Explorers.
  - November 3rd, 2106, Winnemucca District staff representing Fire and Support Services participated in the Lowry High School College and Career Fair. They staffed an informational booth that presented information on BLM careers and general information on the BLM and its programs.

Making America Safe-Restoring Our Sovereignty

Coordinate with law enforcement and local communities to enhance public safety

- In February 2017, BLM law enforcement staff assisted with a declared state of emergency for flooding in Elko County near Montello. Rangers supported the Elko County Sheriff's office with evacuations while providing for public safety.

- BLM law enforcement staff participate in various community public safety events in Reno, Las Vegas, Elko, Ely, Battle Mountain and Winnemucca. These events include National Night Out, Junior Ranger Programs, and Shop with a Cop.

- BLM Nevada law enforcement maintains a collaborative partnership with the Nevada Department of Investigations, County Sheriff Departments, and the Drug Enforcement Administration on the detection, eradication, and cleanup of illegal marijuana gardens located on public land.

Fully deploy communications systems to enhance employee safety, emergency notification, and accountability.

- Mobile dispatch center was purchased and utilized for the 2016 Burning Man event. The Radio over IP mobile dispatch gives the BLM the capability to set up a dispatch center or backup a current dispatch center in the case of an emergency or interagency event.

- Multiband radios have been purchased to give BLM Law Enforcement the capability to communicate with other federal, state, and local agencies on their radio systems.

- Satellite radios have been installed in all Law Enforcement vehicles. These radios allow BLM officers the ability to dispatch from Lake Mead Interagency Communication Center which gives them 24/7 emergency dispatch capabilities that they didn't have access to before.

- Nevada BLM has deployed the ShoutNano two-way satellite communication device and emergency beacon to field going employees, Fire teams and Law Enforcement assets statewide. Emergency requests from these devices are monitored and responded to on a 24/7/365 basis.

- Nevada BLM has deployed the Send Word Now emergency notification system to all District and Field offices throughout Nevada. This system provides the ability to delivery emergency notifications to employees throughout the state on virtually any device in just minutes.

- By end of FY18, Nevada BLM intends to purchase and implement informacast - Singlewire's alert software which offers the only emergency notification system that reaches people on-premises and when they are mobile. (Desk phone, PC, Conference Room Phone, Emergency Strobe etc.)

- BLM Nevada has conducted Active Shooter Training in all District Offices and requires annual training to be conducted.

Enhance partnership projects such as Operation Reclaim Our Arizona Monuments (ROAM)

- Planning occurs year round with the Pershing County Sheriff's Office (PCSO) to ensure adequate employee and public safety measures are in place for the annual Burning Man event. The Burning Man event brings approximately 80,000 participants to a remote part of Nevada, hours away from most basic emergency services. Together, the BLM and PCSO operate in a Unified Command sharing resources to insure a safe event.

- BLM participates in the Southern Nevada Agency Partnership (SNAP) which leverages law enforcement resources to mitigate illegal activity or problem areas on public land. As an example, the SNAP group has worked on illegal household dumping and target shooting media campaigns with local communities and have sponsored clean up days.

Coordinate with the Department of Defense to ensure that public lands and resources are available to support the mission of our military.

- Appendix G of the BLM-SHPO Statewide Protocol Agreement suspends the review clause for Navy projects on Navy withdrawn lands (Fallon Naval Air Station) and instead allows BLM to consult with SHPO on those lands; in addition, the Protocol calls out specific lands (e.g., the B-20 Range) that do not require cultural inventory prior to the Navy disturbing those lands for training exercises.

- "Reservations," in the sense of military withdrawals, are handled at the WO level and although the local district offices are involved in analyzing the effects of proposed withdrawals (such as for Nellis AFB and Fallon NAS), the NVSO does not directly influence this process.

- The NVSO provides support (both directly through limited staff involvement and indirectly through policy and regulatory guidance) to the field in processing withdrawal requests on behalf of the Department of Defense,

- Nevada BLM works with local military installations to facilitate various combat training exercises on public lands and frequently does so through either casual use authorizations or other agreements whereby the military can conduct low impact exercises and drills with a minimum of BLM interference.

- Through Memorandums of Understanding, the BLM works in cooperation with the Department of Defense on all matters relating to energy projects and any impact to the militaries mission.

- Monthly meetings with military mission groups including Joint Military Advisory Committee meetings twice a year, help the military in Nevada understand all aspects of land and resources available to support the mission of the military.

- On March 28, 2017, BLM-NV joined an extensive inter-agency partnership known as The Great Basin Sagebrush Sentinel Landscape Partnership, which is aimed at delivering mutually beneficial programs and strategies to preserve, enhance or protect habitat and working lands within Naval Air Station Fallon's Military Influence Area in order to reduce, prevent or eliminate impacts to the Nation's defense mission.

Prioritize clearance and approval process to support Southern Border actions

- This item is not applicable because Nevada has no Southern Border lands.

Getting America Back to Work

Improve and streamline land use planning to support energy and minerals development and other priority initiatives

- An Enabling Agreement Barrick Gold Corporation was approved in 2015 for the Barrick "Deep South" project in order to facilitate the economic development of mineral resources while simultaneously providing for the preservation, restoration, and/or enhancement of sagebrush ecosystems.

- The land use planning process, which includes socio-economic impact analysis and detailed analyses that quantify the number and types of jobs affected per project, and which results in management decisions --such as permits, available recreational activities, and land disposals-- that affect numerous jobs throughout the State and provides reasonable certainty for planning business decisions and local government activity.

- The Nevada BLM and the US Forest Service entered into a Memorandum of Understanding (MOU) with the Nevada Department of Conservation and Natural Resources (DCNR) in 2016 to facilitate cooperation between the parties on the use of the Nevada Conservation Credit System (CCS), which aims to streamline project authorizations through the authorization of credit development projects that provide mitigation options for project proponents.

Streamline NEPA processes to achieve efficiencies and decrease time to completion

- The NEPA process is expedited and streamlined whenever possible through the applicability of Determinations of NEPA Adequacy derived from prior work, and Categorical Exclusions for the kinds of projects with no standard impacts.

- BLM Nevada is highly committed to utilization of programmatic level NEPA documents, which allow for subsequent streamlined authorizations deriving from this earlier programmatic analysis.

- Step-down guidance, such as NV IM 2011 – 004 entitled "Guidance for Permitting 3809 Plans of Operation" is designed to ensure a streamlined permitting and NEPA process for mining projects, by structuring the application processing as well as standardizing the approach to baseline data collection required under NEPA, so new information is far less likely to emerge later on to delay the review process

Modernize critical information systems

- Nevada BLM is pursuing replacement of 25-30% of desktop computers statewide with laptops annually to provide telework capability for enhanced continuity of operations capabilities.
- Nevada BLM is pursuing the purchase and deployment of Radio Over Internet Protocol (ROIP) infrastructure to allow for enhanced radio coverage, enhanced continuity of operations capabilities and the ability to consolidate or diversify dispatch duties on demand.
- Nevada BLM is working with the National Operations Center to replace all existing Network Attached Storage (NAS) servers with new hardware featuring enhanced storage capacities. This new hardware will also usher in a new backup architecture that better supports continuity of operations and offsite data backups.
- Mobile dispatch center was purchased and utilized for the 2016 Burning Man event. The Radio over IP mobile dispatch gives the BLM the capability to set up a dispatch center or backup a current dispatch center in the case of an emergency or interagency event.
- Multiband radios have been purchased to give BLM Law Enforcement the capability to communicate with other federal, state, and local agencies on their radio systems.
- Satellite radios have been installed in all Law Enforcement vehicles. These radios allow BLM officers the ability to dispatch from Lake Mead Interagency Communication Center which gives them 24/7 emergency dispatch capabilities that they didn't have access to before.
- Nevada BLM is currently working to purchase an Incident Command Element. This will give us the ability to allow our radio system to work with anyone else's radio system through interoperability patching. This gives us the capability to have interagency operations where all members can communicate through radios and cell phones.

Pursue maintenance and capital improvement projects that address infrastructure needs

- 2014 to present; developed and implemented $1.9 M in safety, security and compliance repairs and upgrades to 17 mountaintop Radio Communication Sites statewide.
- 2013 to present; collaborating with Federal Highways through the Federal Lands Transportation Program, co-developed and currently implementing $15 million in pavement improvements to date at the Red Rock Scenic Loop Road, including ancillary visitor parking areas and SR159, to enhance visitor experience and public safety.
- $450,000 in upgrades and repairs to the Red Rock Visitor's Center potable water system awarded in 2016, with construction beginning in 2017, updating aging infrastructure and providing safe drinking water to the BLM staff and the public.

- Annually program approximately $1.4M in BLM NV Deferred Maintenance project needs for the Department Of Interior.

- Awarded $500,000 replacement of Fire Barracks at the Wells Fire Station in 2016.

Provide employment opportunities for veterans and youth to work on public lands

- BLM staff attended 14 job fairs in FY2016 and have currently attended 12 job fairs in FY2017 at colleges, high schools and middle schools to engage youth in public land opportunities.

- BLM staff have worked to recruit veterans by sending job announcements to Vet Success Coordinators in Las Vegas and as a practice, send vacancy announcement to military bases for posting and dissemination to military personnel.

- Nevada has continued to maintain a "Veterans Hand Crew" for fire operations in Las Vegas. This crew is made solely of Veterans who are later converted to permanent full time employees.

- BLM staff actively attend and participate in breakfast/luncheons at Veteran organized meeting to provide information to Veterans on how to successful apply or be considered for BLM positions.

- BLM hiring officials actively use the Pathways hiring authority as a means to recruit students/youth in a variety of job series.

Increase efficiency of compliance activities (ESA, NHPA, CWA)

- BLM Nevada is actively increasing the use of the Memorandum of Agreement among the US Fish and Wildlife Service, Bureau of Land Management, National Marine Fisheries Service, and US Forest Service signed in 2000, which allows for the use of a collaborative process under the Counterpart Regulations, thereby decreasing the time needed to complete Section 7 Consultations.

- BLM Nevada uses Programmatic Section 7 Consultations for Resource Management Plans and Programmatic Environmental Impact Statements (PEISs), such as the Wind Energy Development PEIS (2006) and the Solar Energy Development PEIS (2012), which allows for a more streamlined (and therefore quicker), consultation process for subsequent projects.

- BLM Nevada has done a great job Identifying and prioritizing funding opportunities that benefit sensitive species, with the specific focus on projects that will result in preventing these species from potential listing under the ESA.
- Nevada BLM is utilizing Programmatic Biological Opinions (PBOs), such as the PBO completed in the Southern Nevada District that provides a programmatic take statement for all projects less than 20 acres in size and eliminates the need to do Section 7 Consultation on these small projects.
- BLM Nevada regularly coordinates with the Nevada Division of Environmental Protection (NDEP) to identify sites on public lands not meeting water quality standards.
- BLM Nevada is committed to working with project proponents throughout the project planning and NEPA processes in order to identify all potential impacts to water quality from project activities and develop appropriate monitoring and mitigation requirements.
- BLM Nevada continuously develops and implements restoration projects designed to improve the health of uplands and riparian habitat and improve water quality.
- BLM Nevada ensures adequate training and support to field staff as well as applicants and local tribes in protecting cultural resources under ARPA.
- Nevada has a strong collaborative partnership with the Nevada SHPO to provide accurate and timely geospatial data to field practitioners to facilitate compliance with the NHPA.
- Nevada regularly develops and implements monitoring and restoration programs and projects to improve the health of uplands and riparian habitat and improve water quality.

Serving the American Family

Maintain a capable, ethical, and diverse professional workforce and an inclusive and motivating work culture that drives high productivity

Maintain a capable, ethical, and diverse professional workforce and an inclusive work culture that drives high productivity.

- The BLM Nevada State Office incorporates the guidance and standards for establishing and maintaining an effective Equal Employment Opportunity Program and Affirmative Employment Program as outlined in the Equal Employment Opportunity Commission's MD-715, " The Six Elements for a Model EEO Program" in their Diversity Strategic Plan.

Demonstrated Commitment from Agency Leadership

- The BLM State Directors' Priorities state: "We have a strong commitment to diversity and inclusion in the workplace and our diverse workforce will continue to be developed, mentored, and retained" This state-wide policy is stepped down through supervisors to all employees.
- A Full-time EEO Manager is onboard and is a Senior Leadership Team member.

Integration of EEO into the Agency's Strategic Mission

- Senior Leadership participated in the Franklin Covey's "Speed of Trust" and "A Championing Diversity" course. Management officials also participated in a two-day "Speed of Trust" course. A one day "Leading at the Speed of Trust" training component is currently under consideration for non-supervisory staff.
- Currently, BLM Nevada has eleven (11) onboard Diversity Change Agents.

Management and Program Accountability

- The solidification of diversity and inclusion practices will be cascaded by senior leaders in to all supervisory performance plans which require adherence to the following:
    - Merit System Principles
    - Anti-harassment, anti-discrimination & EEO obligations
    - Strengthening diversity & inclusion
    - Effective management of ethics, conduct & discipline issues
    - Strategic planning of workforce requirements and effective use of recruitment, retention and hiring tools
    - Reasonable accommodation obligations
    - Safety and occupational health obligations
    - Strengthening employee engagement and customer service
    - Effective performance management
    - IT security, data protection and records management obligations
    - Internal management policies and controls

Proactive Prevention of Unlawful Discrimination

- The BLM EEO Nevada Strategic Plan requires active participation of leadership in barrier analysis, to insure broad participation in the identification of potential barriers, and a universal commitment from leadership, particularly selecting officials, to be aware of possible barriers, and address those barriers in all management practices.

Efficiency

- BLM NV currently has two trained EEO Counselors onboard and a recruitment campaign is underway to solicit additional counselors with the six District Offices.

Responsiveness and Legal Compliance

- Continuous policy development will ensure that the current BLM Nevada EEO Policies align with Senior Leadership's expectations to promote a workplace free from employment discrimination and harassment of any kind.

Enhance our relationships with States and local communities

- The Southern Nevada District will continue meeting, on a regular basis, with staff and elected officials with local, county and state elected officials to discuss crossover issues; examples include county commission meetings, town advisory boards and one-on-one meetings related to topics such as solar projects and community needed realty projects.

- The Ely District, Caliente Field Office is processing a proposal to offer through competitive sale approximately 427 acres of public lands in Lincoln County, Nevada, in accordance with the Lincoln County Conservation, Recreation, and Development Act of 2004.

- The Ely District, Bristlecone Field Office is processing a Round 2 land sale in White Pine County, in accordance with the White Pine County Conservation, Recreation and Development Act of 2006.

- The Ely District has conveyed public lands in Lincoln County to the Nevada Division of Lands to expand Cathedral Gorge and Kershaw-Ryan state parks and is processing a conveyance for Beaver Dam State Park. The district has also conveyed BLM-administered lands to expand the Ward Charcoal Kilns State Park in White Pine County and is processing conveyances for the Steptoe Wildlife Management Area and White Pine Industrial Park.

Protect life, critical infrastructure, and natural/cultural resources through BLM's Fire and Aviation Program

- BLM Nevada prioritizes firefighter and public safety (communities and infrastructure) as the highest priority for all suppression actions. Sage grouse habitat identified in district Resource Management Plans is the second priority and other natural resource priorities are the third priority.

- BLM Nevada partners with University of Nevada Living with Fire program to provide education to homeowners on defensible space from communities and infrastructure.

- BLM Nevada provides training to volunteer fire department, communities and cooperators statewide.

- BLM Nevada has robust remote, publicly-accessible, online mountaintop camera detection to aid in the detection and situational awareness of wildland fires.

- BLM Nevada conducts hazardous fuels reduction on over 45,000 acres in Nevada to reduce fire threat.

- BLM Nevada will evaluate, develop and implement Emergency Stabilization and Rehabilitation on wildland fire on public land.

Expand recreational, hunting, and wildlife conservation opportunities:

- Recreational hunting, fishing, and wildlife observation opportunities have expanded throughout the state and are regularly highlighted through our planning process which now features the option for designating Backcountry Conservation Areas in our Resource Management Plans.

- BLM Nevada currently manages 4,595,875 acres of designated wilderness and wilderness study areas which provides continual protection of unfettered national natural resources, both flora and fauna in a natural condition for future generations.

- BLM Nevada manages three National Conservation Areas and 2 National Monuments, totaling approx. 2 million acres, which provide tremendous recreation and conservation opportunities for the American family.

- BLM Nevada manages the CA Trail Interpretive Center and segments of three National Historical Trails, which provide generations of Americans with recreational opportunities to explore and maintain ties with the nation's historical past.

- BLM Nevada has a robust Junior Ranger program with numerous sites offering books and badges for youth. To encourage more families to visit public lands BLM Nevada is currently hosting a geocaching contest affiliated with sites in the BLM Nevada Adventure Book for Junior Explorers.

- BLM Nevada collaborates with the Nevada Division of Wildlife to complete numerous projects per year, which improve wildlife habitat and enhance hunting opportunities.

Fulfill our trust responsibilities to tribal communities.

- BLM Nevada State Office intends to issue an IM that defines a statewide policy on compensating tribes for specific tribal services to ensure that tribal concerns and resources are adequately taken into consideration during land use planning decisions.

- NVSO facilitates statewide data sharing agreements to more fully engage local tribes in permitting process and ensure quality input into discharging our duties under the NHPA.

- BLM Nevada is very diligent and proactive in pursuing designations of Traditional Cultural Properties (TCPs) under the NHPA thereby ensuring continuity of tribal traditions and support for indigenous lifeways.

Enhance State and local law enforcement partnerships to increase safety and improve the visitor experience on public lands

- All district BLM Nevada law enforcement operations maintain strong partnerships with statewide search and rescue (SAR) teams. Frequent communication and resource sharing to improve SAR activities on public land. Collaboration is ongoing to improve incident response, conduct cross training, and land use improvements for the reduction of incidents.

- The Nevada State Chief Ranger was elected as a member of the Nevada Sheriff's and Chief's Association in 2015. Membership with this group of leaders allows the BLM to network, communicate, and develop mutually beneficial solutions toward public land concerns.

- Nevada BLM administers law enforcement service contracts or memorandums of understanding with the Humboldt, Lincoln, Lyon, Carson City, Clark, Pershing, Elko, and Churchill County Sheriff departments. These agreements allow the BLM to partner with county sheriffs to address illegal activity on public land in support of public safety and resource management goals.

Streamline the grazing permit renewal process and provide more flexibility to the American rancher.

- The State Office has, and will continue to, develop statewide templates for the necessary documents required to be completed for the grazing permit renewal process in accordance with

4180 – Standards and Guidelines, Sage Grouse Land Use Plan Amendments, and the National Environmental Protection Act (NEPA) thereby ensuring efficiency and consistency.

- The State Office will actively work with collaborative rancher groups, typically comprised of permittees, agencies (federal, state and local), and conservation districts, in the pursuit of innovative approaches to create flexibility in grazing permits.
- The Nevada State Office is involved in a national effort to establish an 'Objective Based Grazing Authorization' pilot project (expected to be ready to receive applications September/October 2017) in order to provide more flexibility to ranchers in managing their cattle on public lands.
- The Nevada State Office is in the process of initiating a programmatic NEPA analysis that would provide for expedited/streamlined approaches to statewide applications of range flexibility such as targeted grazing of annual fuels or potential Range Improvement Projects.
- The Nevada State Office through their dedicated Grazing Permit Renewal Team is working to develop guidance to better define the grazing permit renewal process and provide useful tools to all field units that will make the grazing permit renewal process more effective and efficient.

BLM Priority Themes and Goals
with Milestones, Objectives, or Actions Provided by State Directors

Making America Safe through Energy Independence

Make additional lands available for "all of the above" energy development

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Streamline oil and gas leasing and permitting while addressing backlog of Applications for Permit to Drill (APDs) and Expressions of Interest (EOIs)

-

Streamline rights-of-way processing for pipelines, transmission lines, and solar/wind projects

-

Streamline leasing and permitting for Federal coal and hardrock mining while addressing backlog of mining applications

-

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Making America Great Through Shared Conservation Stewardship

Pursue all options to achieve appropriate management levels (AMLs) for the Wild Horse and Burro Program

-

Work with partners to develop and implement priority habitat monitoring and improvement projects

-

Enhance opportunities for volunteer service and youth engagement on public lands

-

Emphasize BLM's multiple-use mandate through strategic communication efforts and educational outreach

-

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Making America Safe – Restoring Our Sovereignty

Direct agency law enforcement assets and efforts on BLM administered lands on or near the Southern border in a way that increases the safety of our visitors and employees, and the protection of public lands

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Fully deploy security and communications systems to enhance employee safety, emergency notification, and accountability

-

Coordinate with the Department of Defense to ensure that public lands and resources are available to support the mission of our military

-

Support agencies of the Department of Homeland Security and the Department of the Interior in all border security actions.

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DRAFT

Getting America Back to Work

Improve and streamline land use planning to support energy and minerals development and other priority initiatives

-

Streamline NEPA processes to achieve efficiencies and decrease time to completion

-

Modernize critical information systems

-

Pursue maintenance and capital improvement projects that address infrastructure needs

-

Provide employment opportunities for veterans, youth, and others to work on public lands

-

Increase efficiency of compliance with other agencies authorities (e.g., ESA, NHPA, CWA)

-

DRAFT

Serving the American Family

Maintain a capable, ethical, and diverse professional workforce and an inclusive and motivating work culture that drives high productivity

-

Enhance our relationships with States and local communities

-

Fulfill our trust responsibilities to tribal communities

-

Protect life, critical infrastructure, and natural/cultural resources through BLM's Fire and Aviation Program

-

Expand recreational, hunting, and wildlife conservation opportunities

-

Enhance State and local law enforcement partnerships to increase safety and improve the visitor experience on public lands

-

Streamline the grazing permit process and provide more flexibility to the American rancher (WO200)

-

DRAFT

From: dmfisher@blm.gov
To: king@westernlaw.org
Cc: Shannon Laun; Jeremy Nichols
Subject: Re: BLM-2017-00624/CO-17-040
Date: Wednesday, August 9, 2017 3:59:35 PM

Hello Laura,

This is a follow-up to the email that we sent to you yesterday to apprise you that the "draft BLM Priority Themes and Goals sent out in early April" document needs to be reviewed by the Rocky Mountain Region Solictor's Office and will be included in our final response. Please feel free to contact me (#303.239.3688) or Laura (#303.239.3686) via phone if you have any questions. Thank you!

Best regards,

Diana Fisher
FOIA/Privacy Act Officer
BLM Colorado
Phone: 303.239.3688

On Tue, Aug 8, 2017 at 4:56 PM, FOIA, BLM_CO <blm_co_foia@blm.gov> wrote:

> Hello Laura,
>
> Thank you for your patience while we looked into your questions. Our comments to your questions are in yellow highlights as noted below. Please note that two of the referenced documents are also attached. Please let us know if you have any questions. Thank you!
>
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> Diana Fisher
> FOIA/Privacy Act Officer
> BLM Colorado
> Phone: 303.239.3688
>
> On Wed, Aug 2, 2017 at 4:23 PM, Laura King <king@westernlaw.org> wrote:
>
> > Dear Diana,
> >
> > We received installment 1 to our FOIA request concerning Colorado BLM’s compliance with EO 13783 and SO 3349. (For your ease of reference, I have attached our FOIA request, and your letter transmitting installment 1.)
> >
> > I have had a chance to review the records released in installment 1. I noticed several documents which are referred to or indicated as “attached” to emails, and that I believe should have been but were not included in the release. These are:

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- The above list, as revised to include "any nationwide Coal policy that is burdensome per Secretarial Order 3349 and the March 28, 2017, Executive Order" as suggested by Peter Cowan in the email chain "Re: Identified CO Specific Policy & Burdensome WO Policy_DRAFT - Invitation to edit" and as referred to by Rebecca Backlund in the email chain "Re: 10:30 Meeting." - Our Branch Chief of Fluid Minerals advised us that the employee added four entries into the MS Excel sheet instead of adding separate documents. This information is part of the above document that is under review at the Solicitor's Office and will be provided with the final response.

- The document produced by Kymm Gresset referred to in the email chain "Fwd: QUICK TURN AROUND Fwd: BLM Priorities - Internal Working Document."

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Also, I will be going out on maternity leave in about a month. To ensure that we receive all responsive documents, would you be willing to send responses both to me and to the attorney who will be tracking this request in my absence:

Shannon Laun

8818 8th Ave NW

Seattle, WA 98117

We look forward to hearing whether BLM will release the above-referenced documents.

Thank you.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder's Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org

www.westernlaw.org

From:	Laura King
To:	"FOIA, BLM_CO"
Cc:	"Shannon Laun"; "Jeremy Nichols"
Subject:	RE: BLM-2017-00624/CO-17-040
Date:	Wednesday, August 9, 2017 4:17:36 PM

Great. Thanks for the follow-up, Diana.

Laura King
Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, MT 59601
(406) 204-4852 (tel.)
king@westernlaw.org
www.westernlaw.org

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Sent: Wednesday, August 09, 2017 1:59 PM
To: king@westernlaw.org
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Subject: Re: BLM-2017-00624/CO-17-040

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Laura King
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From:	Nada Culver
To:	BLM_MT_Miles_CityFO_Lease_EA@blm.gov
Subject:	Comments on December 2017 lease sale DOI-BLM-MT-C020-2017-0051-EA
Date:	Thursday, August 10, 2017 1:02:14 PM
Attachments:	TWS comments on MT December 2017 lease sale.pdf

Dear Ms. Nansel – Attached are comments from The Wilderness Society on the EA for the December 2017 lease being held by the Montana BLM.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org

Via e-mail: BLM_MT_Miles_CityFO_Lease_EA@blm.gov

Miles City Field Office
Attention: Irma Nansel
111 Garryowen Road
Miles City, MT 59301-7000

Re: Comments on December 2017 lease sale DOI-BLM-MT-C020-2017-0051-EA

Dear Ms. Nansel –

We appreciate this opportunity to comment on the environmental assessment (EA) for parcels in the Miles City Field Office proposed for inclusion in the December 2017 lease sale.

The Wilderness Society is writing to express our concerns with various aspects of this lease sale, including failure to evaluate a reasonable range of alternatives, compliance with BLM's multiple use mandate, capturing wasted gas and leasing of multiple parcels located in priority (PHMA) or general (GHMA) sage-grouse habitat despite a key requirement in the record of decision (ROD) for the Rocky Mountain GRSG Sub-Regions (2015) ("Rocky Mountain Region ROD") and the Miles City Approved Resource Management Plan (MCFO ARMP) that the BLM prioritize new leasing outside of sage-grouse habitat.

Founded in 1935, The Wilderness Society's (TWS) mission is to protect wilderness and inspire Americans to care for our wild places.

I. BLM has failed to consider a reasonable range of alternatives.

The National Envionmental Policy Act (NEPA) requires that BLM analyze in detail "all reasonable alternatives." 40 C.F.R. § 1502.14(a). The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice from the spectrum of reasonable options. The Environmental Assessment (EA) for the December lease sale fails to meet this requirement. It only analyzes two alternatives:

- The No Action alternative, which would exclude all lease parcels from the sale; and
- Leasing all nominated parcels, comprising 204 lease parcels covering approximately 98,889 acres Federal mineral acres (the Lease Everything Alternative).

EA at 10. An EA offering a choice between leasing every parcel nominated, and leasing nothing at all, does not present a reasonable range of alternatives. BLM must consider reasonable alternatives that fall between the two extremes. In particular, the agency should analyze one or more alternatives for prioritizing leasing outside of sage-grouse habitat. As we discuss in detail later in these comments, BLM

should have considered an alternative that would not lease the cluster of 132 parcels within greater sage-grouse habitat that are isolated from existing leases and fall on lands with low potential for successful oil and gas development. Failing to analyze such a middle-ground option would violate NEPA. *See TWS v. Wisely*, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-ground compromise between the absolutism of the outright leasing and no action alternatives"); *Muckleshoot Indian Tribe v. US Forest Serv.*, 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives").

Eliminating the cluster of parcels within greater sage-grouse habitat that are isolated from existing leases and have low potential for development is plainly a reasonable alternative. By identifying these lease parcels as being located in "low potential" areas, BLM's analysis indicates that these areas may never be developed. EA at 258.[1] If so, and BLM expects these leases will never produce, there is no reason to offer them – especially given that the agency will be offering 30,000 acres in higher potential areas in this lease sale. *Ibid.* If the parcels are not developed, leasing them offers little benefit because they will generate no royalties, and no significant additional employment or investment in the area. Moreover, the bonus payments and rentals from such leases will likely be minimal. There is simply no legal requirement or other reason to offer these leases if BLM does not expect them to be developed.

On the other hand, the EA provides no meaningful analysis of what the impacts on these parcels will be if the leases do get developed. For a variety of different resources, the EA states that it cannot predict the impacts from development until a drilling permit application is received. See, e.g., EA at 43, 45, 46. BLM's position illustrates why these parcels should be deferred. BLM has not done the analysis to determine what impacts are likely under the stipulations proposed for these leases, and whether those stipulations will be adequate to prevent significant adverse impacts to water supplies, public health and other resources. Nor can BLM conclude that the potential economic benefits of leasing them outweigh the environmental and economic harms to the local community and other resources. But by leasing these lands now, BLM will make an irreversible commitment of resources limiting the government's options if and when companies seek to drill for oil and gas in these areas. If leases are issued now, it becomes difficult or impossible for BLM to change course later.

BLM should wait until development begins on nearby lands before deciding to offer these parcels. If significant development starts occurring on nearby lands, BLM is likely to receive much higher bonus bids for these parcels than it will now. Moreover, if development begins on nearby lands, it will generate additional information about the impacts and development patterns that can be expected on public lands. That information will allow the agency to make a much better-informed decision on whether the economic and environmental costs of oil and gas leasing are outweighed by the purported benefits.

II. Prioritizing oil and gas leasing above other multiple uses violates FLPMA.

BLM proposes to offer all nominated oil and gas lease parcels for sale in the December 2017 lease sale, regardless of other values present on these public lands that could be harmed by oil and gas development such as greater sage-grouse habitat. This proposed action indicates a preference for oil and gas leasing and development over other multiple uses, in contravention of the Federal Land

[1] As described in more detail and shown in Figure 1 in Section III.a of these comments, these parcels are not near existing leases or development, confirming the low likelihood of development.

Management and Policy Act (FLPMA), which establishes a multiple use and sustained yield mandate for the agency.

BLM is subject to a multiple-use mandate, which prohibits the Department of the Interior from managing public lands primarily for energy development or in a manner that unduly or unnecessarily degrades other uses. *See* 43 U.S.C. § 1732(a). Instead, the multiple-use mandate directs DOI to achieve "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations." 43 U.S.C. § 1702(c). Further, as co-equal, principal uses of public lands, outdoor recreation, fish and wildlife, grazing, and rights-of-way must receive the same consideration as energy development. 43 U.S.C. § 1702(l).

None of the overarching legal mandates under which BLM operates – be it multiple-use or non-impairment – authorizes DOI to establish energy development as the dominant use of public lands. On our public lands, energy development is an allowable use that must be carefully balanced with other uses. Thus, any action that attempts to enshrine energy development as the dominant use of public lands is invalid on its face and inconsistent with the foundational statutes that govern the management of public lands.

Federal courts have consistently rejected efforts to affirmatively elevate energy development over other uses of public lands. In the seminal case, *New Mexico ex rel. Richardson v. BLM*, the Tenth Circuit put to rest the notion that BLM can manage chiefly for energy development, declaring that "[i]t is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses." 565 F.3d 683, 710 (10th Cir. 2009); *see also S. Utah Wilderness Alliance v. Norton*, 542 U.S. 52, 58 (2004) (defining "multiple use management" as "striking a balance among the many competing uses to which land can be put"). Other federal courts have agreed. *See, e.g., Colo. Envtl. Coalition v. Salazar*, 875 F. Supp. 2d 1233, 1249 (D. Colo. 2012) (rejecting oil and gas leasing plan that failed to adequately consider other uses of public lands). Thus, any action by BLM that seeks to prioritize oil and gas leasing and development as the dominant use of public lands would violate FLPMA.

III. BLM has not complied with its obligations to protect greater sage-grouse habitat.

a. BLM failed to prioritize leasing outside of greater sage-grouse habitat.

BLM has not prioritized leasing outside of sage-grouse habitat, as required by the Greater Sage Grouse EIS ROD, Miles City Approved Resource Management Plan and Instruction Memorandum (IM) 2016-143. Under the Greater Sage Grouse EIS ROD, BLM must:

> prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs…to further limit future surface disturbance and to encourage new development in areas that would not conflict with GRSG. This objective is intended to guide development to lower conflict areas and, as such, protect important habitat and reduce the time and cost associated with oil and gas leasing development. It would do this by avoiding sensitive areas, reducing the complexity of environmental review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation.

ROD, p. 1-25. The MCFO ARMP echoes this directive, including the following objective:

> Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of PHMA and GHMA. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in PHMA and GHMA, and subject to applicable stipulations for the conservation of GRSG, priority will be given to development in non-habitat areas first and then in the least suitable habitat for GRSG.

MCFO ARMP, p. 2-8. Further, in IM 2016-143, BLM has issued guidance elaborating on the way agency staff are to comply with the requirement to prioritize leasing and development outside of sage-grouse habitat:

> Lands within GHMAs: BLM state offices will consider EOIs for lands within GHMAs, after considering lands outside of both GHMAs and PHMAs. When considering the GHMA lands for leasing, the BLM State Office will ensure that a decision to lease those lands would conform to the conservation objectives and provision in the GRSG Plans (e.g., Stipulations).

Importantly, the IM also sets out "factors to consider" (i.e., parcel-specific factors) after applying this prioritization sequence:

- Parcels immediately adjacent or proximate to existing oil and gas leases and development operations or other land use development should be more appropriate for consideration before parcels that are not near existing operations. This is the most important factor to consider, as the objective is to minimize disturbance footprints and preserve the integrity of habitat for conservation.

- Parcels that are within existing Federal oil and gas units should be more appropriate for consideration than parcels not within existing Federal oil and gas units.

- Parcels in areas with higher potential for development (for example, considering the oil and gas potential maps developed by the BLM for the GRSG Plans) are more appropriate for consideration than parcels with lower potential for development. The Authorized Officer may conclude that an area has "higher potential" based on all pertinent information, and is not limited to the Reasonable Foreseeable Development (RFD) potential maps from Plans analysis.

- Parcels in areas of lower-value sage-grouse habitat or further away from important life-history habitat features (for example, distance from any active sage-grouse leks) are more appropriate for consideration than parcels in higher-value habitat or closer to important life-history habitat features (i.e. lek, nesting, winter range areas). At the time the leasing priority is determined, when leasing within GHMA or PHMA is considered, BLM should consider, first, areas determined to be non-sage-grouse habitat and then consider areas of lower value habitat.

- Parcels within areas having completed field-development Environmental Impact Statements or Master Leasing Plans that allow for adequate site-specific mitigation and are in conformance with the objectives and provisions in the GRSG Plans may be more appropriate for consideration than parcels that have not been evaluated by the BLM in this manner.

- Parcels within areas where law or regulation indicates that offering the lands for leasing is in the government's interest (such as in instances where there is drainage of Federal minerals, 43 CFR § 3162.2-2, or trespass drilling on unleased lands) will generally be considered more appropriate

for leasing, but lease terms will include all appropriate conservation objectives and provisions from the GRSG Plans.

- As appropriate, use the BLM's Surface Disturbance Analysis and Reclamation Tracking Tool (SDARTT) to check EOI parcels in PHMA, to ensure that existing surface disturbance does not exceed the disturbance and density caps and that development of valid existing rights (Solid Minerals, ROW) for approved-but-not-yet-constructed surface disturbing activities would not exceed the caps.

In Appendix D to the EA for this lease sale, BLM claims that it applied the prioritization sequence and parcel-specific factors to the nominated leases:

> The Miles City Field Office (MCF) prioritized the leasing of oil and gas parcels in accordance with the WO IM 2016-143, in order to minimize further fragmentation and impacts to GRSG habitat or populations, and to seek greater certainty that project development can move forward. The MCFO took into account the EOIs, the GRSG plan decisions and goals, the prioritization sequence policy, other resource values, and workload capacity for this lease sale review.

EA, p. 260.

Contrary to this statement, however, the proposed action would carry forward all 204 nominated parcels (i.e., EOIs) for leasing, including all 187 parcels within greater sage-grouse habitat. This includes 180 parcels in GHMA and an additional 7 parcels in Restoration Habitat Management Areas (RHMA). EA, pp. 27-28. In other words, even though BLM claims to have applied the prioritization sequence, in part "to minimize further fragmentation and impacts to GRSG habitat or populations," the proposed action is to lease all nominated land within sage-grouse habitat. This is contrary to the guidance in the Greater Sage Grouse EIS ROD, MCFO ARMP, and IM 2016-143.

The EA also fails to explore the parcel-specific factors that are supposed to guide the prioritization sequence. In other lease sale EAs with EOIs in sage-grouse habitat, BLM has carefully applied the parcel-specific factors to each lease under consideration, as required by IM 2016-143 ("This guidance is also intended to ensure *careful consideration* of the factors identified below when making any leasing and development decisions.") (emphasis added). Further, when applied to the EOIs for this sale, the parcel-specific factors clearly weigh against a decision to lease most of the proposed parcels.

IM 2016-143 states that the "most important" parcel-specific factor is whether a proposed lease is near existing leases and development. By focusing new leasing around existing development, "the objective is to minimize disturbance footprints and preserve the integrity of habitat for conservation." While some of the parcels in this sale fall near and adjacent to existing development, a cluster of 132 parcels are all more than 20 miles away from any existing leases (and fall outside of any unitized or field development areas, other factors under IM 2016-143). *See* **Figure 1**, below. Yet, nowhere does the EA consider the vicinity of the proposed parcels to existing leases or development.

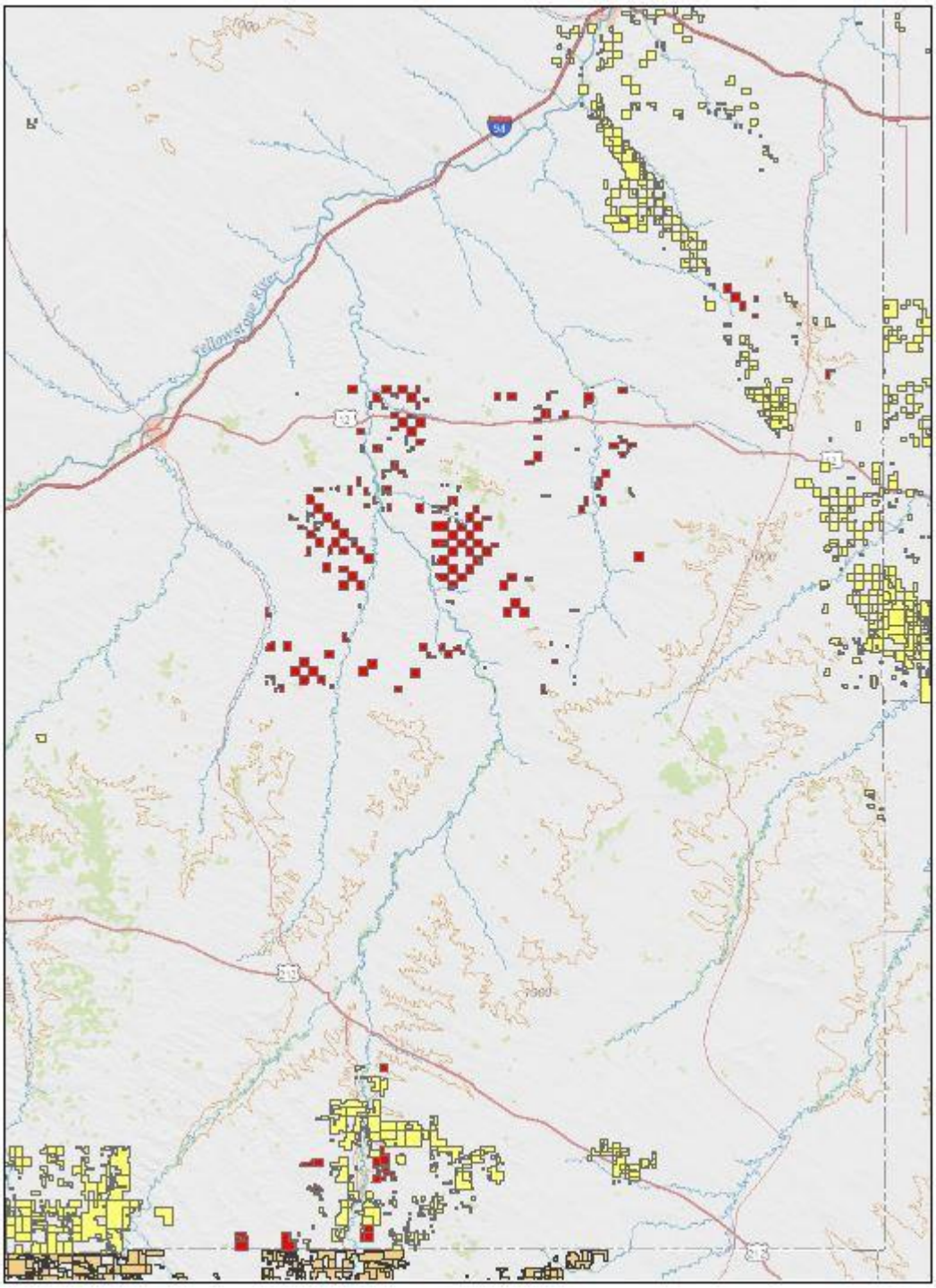

Figure 1. A cluster of more than 130 proposed lease parcels (red) within greater sage-grouse habitat are isolated from existing leases (yellow) and fall on lands with low potential for successful oil and gas development. The parcel-specific factors in IM 2016-143 clearly weigh in favor of deferring these parcels.

IM 2016-143 and the parcel-specific factors also provide that "[p]arcels in areas with higher potential for development (for example, considering the oil and gas potential maps developed by the BLM for the

GRSG Plans) are more appropriate for consideration than parcels with lower potential for development." This too, weighs against leasing many of the proposed parcels, including the cluster of isolated parcels described above, which all fall within an area of low potential for successful oil and gas development. The EA points out that 68% of the proposed lease acreage, 67,991 of 98,898 acres, fall in areas with low potential for successful development. EA, p. 258.

The IM further provides that "[p]arcels in areas of lower-value sage-grouse habitat or further away from important life-history habitat features (for example, distance from any active sage-grouse leks) are more appropriate for consideration than parcels in higher-value habitat or closer to important life-history habitat features (i.e. lek, nesting, winter range areas)." In the EA, BLM states that 45 parcels are within 2 miles of a greater sage-grouse lek, with 11 parcels within 0.6 miles of a lek. EA, pp. 27-28. The closeness of these parcels to important habitat features weighs in favor of deferring the parcels, especially where the parcels are also isolated from existing leases and within low potential areas. Yet, the EA fails to analyze or weigh how the factors apply to specific lease parcels.

In other recent lease sale EAs, BLM has applied the parcel specific factors and described how the factors informed its proposed action. For example, in the Draft EA for Wyoming BLM's August 2017 Lease Sale, BLM applied the parcel-specific factors to justify a deferral decision:

> After careful review of the parcels, the BLM has determined that it was appropriate to defer certain parcels nominated for inclusion in the August 2017 oil and gas lease sale…These deferrals were made consistent with the BLM's sage-grouse conservation plans and strategy, which direct the BLM to prioritize oil and gas leasing and development in a manner that minimizes resource conflicts in order to protect important habitat and reduce development time and costs. Parcels deferred are generally located in sage-grouse important life-history habitat features such as active or occupied leks, and/or are not proximate to existing development, and are in areas of low oil and gas development potential.

Draft EA, pp. 1-2, 1-3. In that same sale, BLM also applied the parcel-specific factors to justify a decision to carry forward parcels for leasing:

> Parcels WY-1708-153 and WY-1708-154 are proximate or adjacent to federal oil and gas leases with active development and production (within 2 miles of leases currently held by production), and have no known sage-grouse leks within the boundaries. The area is also proximate to bentonite mining claims, disturbance, and activity.

Draft EA, p. 3-8. Thus, in the Wyoming sale, BLM proposed deferring parcels on lands with high-quality sage-grouse habitat, low potential for oil and gas development, and minimal nearby development, and it proposed carrying forward parcels on lands with lower-quality habitat near existing development. BLM clearly applied and weighed the factors to reach a reasoned leasing decision.

As another, more recent example, in the Draft EA for Utah's December 2017 Oil and Gas Lease Sale in the Vernal Field Office, BLM applied each of the parcel specific factors to each of the proposed parcels in or near sage-grouse habitat. For each individual parcel, BLM determined whether it was adjacent to an existing lease, within an existing unit, within an area with a field development EIS, or within an area with high development potential. *See* Draft EA, pp. 35 – 45. BLM also evaluated the quality of the sage-grouse habitat within each of the parcels, including the amount and percentage of winter and brood-rearing

habitat and the distance of each parcel to nearby leks. *Id*. BLM clearly and carefully applied each of the relevant parcel specific factors to each of the parcels. It also directly addressed the "most important factor" - the proximity of the leases to existing leases and development.

These examples underscore the inadequacy of the EA for the MCFO December 2017 lease sale and confirm that when parcels are proposed in or near PHMA and GHMA, BLM must apply the prioritization sequence and weigh the parcel-specific factors in reaching a leasing decision. *See* IM 2016-143 ("This guidance is also intended to ensure *careful consideration* of the factors identified below when making any leasing and development decisions.") (emphasis added). It must also comply with the guidance in the Greater Sage Grouse EIS ROD and the MCFO ARMP to prioritize development outside of GHMA and PHMA, guiding development to lower conflict areas so as to thereby protect important habitat areas and reduce the time and cost associated with oil and gas development. In the final EA, BLM must actually prioritize leasing outside of greater sage-grouse habitat and carefully consider the parcel-specific factors described in IM 2016-143.

b. BLM failed to ensure a net conservation gain for greater sage-grouse.

BLM has not undertaken management actions necessary to ensure a net conservation gain to greater sage-grouse, even though this is required. Under the MCFO ARMP:

> In all GRSG habitat, in undertaking BLM management actions, and, consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation, the BLM will require and ensure mitigation that provides a net conservation gain to the species, including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.

ARMP, p. 2-8. Like the prioritization requirement, the net conservation gain requirement is a binding obligation of a governing land use plan. *See* 43 U.S.C. §1732(a) ("The Secretary shall manage public lands…in accordance with the land use plans developed by him…").
In the draft EA, BLM attempts to address the net conservation gain requirement by attaching LN 14-37 to the proposed parcels within GHMA. *See* EA, Appendix B, pp. 255-56. That LN provides: "The lessee/operator is given notice that prior to project-specific approval, the authorized officer may require mitigation measures and/or compensatory mitigation measures to conserve, enhance, and restore Greater Sage-Grouse (GRSG) habitat." *Id*. Again, the MCFO ARMP requires that "in authorizing third-party actions that result in habitat loss and degradation" (such as oil and gas leasing), BLM will "require and ensure mitigation that provides a net conservation gain…by *avoiding, minimizing, and compensating* for impacts by applying beneficial mitigation actions." ARMP, p. 2-8 (emphasis added). However, by only attaching LN 14-37, BLM defers these mitigating actions to subsequent stages of the oil and gas development process, without putting in place any measures prior to taking the leasing action that ensure a net conservation gain for sag-grouse.

Leasing confers valid existing rights and constitutes an irretrievable and irreversible commitment of resources. *New Mexico ex rel. Richardson v. BLM*, 565 F.3d at 717-18. For purposes of the net conservation gain requirement, leasing "authoriz[es] third-party action[] that result[s] in habitat loss and degradation." *See* MCFO ARMP, p. 2-9. The MCFO ARMP therefore requires that BLM take actions now, at the leasing stage, to avoid, minimize and compensate for the impacts of development within sage-grouse habitat. Because BLM did not contemplate or take these actions as part of this lease sale, the

draft EA contradicts the letter and intent of the MCFO ARMP. In the final EA, BLM must adopt beneficial mitigation actions that avoid, minimize and compensate for impacts of its leasing decision, and thus ensure a net conservation gain for sage-grouse.

c. BLM's review of the sage-grouse land use plans does not eliminate the conservation requirements for sage-grouse.

Pursuant to Secretarial Order No. 3353, the Department of Interior is considering changes to the sage-grouse resource management plan revisions as well as the associated IMs; the initial recommendations and next steps were just issued by the Secretary of Interior. While it is possible there will be changes to the Greater Sage Grouse EIS ROD, the MCFO ARMP, and to IM 2016-143 in some form or at some point, no changes have been made and all of these requirements govern the BLM's actions in sage-grouse habitat, including this lease sale. *See* 43 U.S.C. § 1732(a) (management of the public lands must be "in accordance with the land use plans") 43 C.F.R. § 1610.5-3(a) (resource management authorizations and actions "shall conform to the approved plan") (48 Fed. Reg. 20368 (May 5, 1983)). Thus, the provisions in the Greater Sage Grouse EIS ROD, MCFO ARMP, and IM 2016-143 remain fully operational and must continue to be implemented by the BLM.

IV. BLM must ensure any leases issued require reduction of wasted gas.

BLM must exercise its statutory obligation and authority to fulfill its federal obligation to reduce waste of natural gas by incorporating waste minimization requirements in lease terms. On November 15, 2016, BLM finalized its Waste Prevention, Production Subject to Royalties, and Resource Conservation rule (Methane Rule). This rule will curb the waste of natural gas from federal and tribal lands by requiring periodic leak detection and repair (LDAR) inspections, prohibiting venting, significantly limiting flaring and establishing a number of equipment specific requirements. According to BLM's own estimates, full implementation of the rule will cut methane emissions by 49% (or 180,000 tons per year) and could result in net benefits of over $204 million annually.[2]

The leasing stage provides the agency with the opportunity to ensure it is fulfilling its mandate prior to approving an Application for Permit to Drill (APD). This is especially relevant when proposed leases would be managed under an RMP without explicit waste reduction requirements, like the one governing the MCFO.

a. BLM has the legal obligation and authority to require waste reduction measures and has a mandate to reduce waste.

Under the Mineral Leasing Act (MLA), FLPMA, and the Federal Oil and Gas Royalty Management Act (FOGRMA), the Department of the Interior has a responsibility and an obligation to put forward regulations to manage federal resources in a way that benefits the public. The MLA provides for the Department of the Interior to manage lands for conservation and development of oil and gas, among other minerals and resources. BLM, under the MLA, is the only federal agency with a waste prevention mandate. The MLA directs DOI to require "all reasonable precautions to prevent waste of oil or gas developed in the land" (30 U.S.C. § 225) and mandates that "[e]ach lease shall contain provisions for the prevention of undue waste." *Id*. s 187. FLPMA further provides that "the public lands be managed in a manner that will protect the quality of…environmental, air and atmospheric…values" and for BLM to

[2] *See* Final Rule at: https://www.regulations.gov/document?D=BLM-2016-0001-9126

manage lands for conservation. These laws make it clear that BLM has a duty and obligation to prevent loss of public resources and to consider a wide range of values in managing our public lands. BLM's authority and duty to regulate waste was recently reaffirmed by the U.S. District Court for the District of Wyoming in an opinion denying a request for preliminary injunction of the BLM Methane Rule. There, Judge Skavdahl stated that the MLA and FOGRMA "unambiguously grant BLM authority to regulate the development of federal and Indian oil and gas resources for the prevention of waste."[3]

Further, the MLA's use of "all" to modify the term "reasonable precautions" shows that Congress intended BLM to aggressively control waste. The agency may not forego reasonable and effective measures limiting venting, flaring and leaks for the sake of administrative convenience or to enhance the bottom lines of operators. *See Halliburton, Inc. v. Admin. Review Bd.*, 771 F.3d 254, 266 (5th Cir. 2014) (ruling that statutory term "all relief necessary" authorized broad remedies against defendant because "we think Congress meant what it said. All means all." (internal quotation omitted)); *Cty. of Oakland v. Fed. Housing Fin. Agency*, 716 F.3d 935, 940 (6th Cir. 2013) ("a straightforward reading of the statute leads to the unremarkable conclusion that when Congress said 'all taxation,' it meant *all* taxation" (emphasis original)).

Given these circumstances, the MLA mandate that BLM require "all reasonable precautions," and that "each lease . . . contain provisions" to prevent waste, require BLM to address waste with stipulations in these leases. 30 U.S.C. ss 187, 225.

It should also be noted that there is overwhelming public support to reduce natural gas waste on public lands. According to a recent Colorado College poll, 84% of Montanans say we should "continue to require oil and gas producers who operate on national public lands to use updated equipment and technology to prevent leaks of methane gas during the extraction process and reduce the need to burn off excess natural gas into the air."[4] This sentiment was heard in the Senate where elected representatives – both Republican and Democrat - voted in early May to reject efforts to repeal the BLM rule using the Congressional Review Act (CRA).

b. The Methane Rule highlights the need for and benefits of methane waste capture requirements.

The issues associated with the federal onshore fluid minerals program are well documented and were partially responsible for the development of the Methane Rule. Starting in December 2007, a Royalty Policy Committee (RPC) report, *Mineral Revenue Collection from Federal and Indian Lands and the Outer Continental Shelf,* recommended that the BLM update its rules and identified specific actions to improve production accountability. This was followed by a March 2010 report by the OIG, *BLM and MMS Beneficial Use Deductions;* an October 2010 GAO report, *Federal Oil and Gas Leases – Opportunities Exist to Capture Vented and Flared Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases;* and eventually the July 2016 GAO report entitled, "*OIL AND GAS--Interior Could Do More to Account for and Manage Natural Gas Emissions".* In particular, the 2010 GAO report found that "in 2008, about 128 billion cubic feet (Bcf) of natural gas was either vented or flared from Federal leases, about 50 Bcf of which was economically recoverable (about 40% of the total volume lost). This

[3] *State of Wyoming v. United States Department of Interior*, 2:16-cv-00280-SWS (D.Wyo. Jan. 16, 2017).
[4] Colorado College State of the Rockies Project, Conservation in the West Poll (2017). Available at: https://www.coloradocollege.edu/other/stateoftherockies/conservationinthewest/2017/2017WesternStateInterviewScheduleMontana.pdf

economically recoverable volume represents about $23 million in lost Federal royalties and 16.5 million metric tons of carbon dioxide equivalent (CO2e) emissions."[5]

These issues were illuminated again as the BLM prepared the Regulatory Impact Analysis (RIA) for the Methane Rule. The BLM found that in 2013, 98 Bcf of natural gas was vented and flared from Federal and Indian leases. This volume had a sales value of $392 million and a royalty value of $49 million. Of the 98 Bcf, it is estimated that 22 Bcf was vented and 76 Bcf was flared.[6] According to the Office of Natural Resources Revenue (ONRR), Federal and Indian onshore lessees and operators reported that they vented or flared 462 billion cubic feet (Bcf) of natural gas between 2009 and 2015.[7]

The waste of federal resources is not just an historic issue, but one that continues to worsen. The total amount of annual reported flaring from Federal and Indian leases increased by over 1000 percent from 2009 through 2015. During this period, reported volumes of flared oil-well gas increased by 318 percent.[8] The problem can also be seen in requests for flaring and venting submitted as Sundry Notices to BLM field offices. In 2005, the BLM received just 50 applications to vent or flare gas. In 2011, the BLM received 622 applications, and this doubled again within 3 years to 1,248 applications in 2014.[9] This waste has very real financial and environmental impacts.

c. BLM has exercised its authority regarding capture of wasted gas prior to issuance of the current Methane Rule.

The Methane Rule was the agency's most recent attempt to comply with the mandates under the MLA, FLPMA, and FOGRMA, and the requirements should be fully implemented and enforced. However, even in the absence of the Methane Rule, BLM is still required to take proactive steps to minimize waste of taxpayer owned resources and manage public lands in a balanced manner. This is evidenced by the fact that some BLM field offices were already implementing unique measures to incentivize capture and reduce waste prior to finalization of the BLM rule.

To fulfill the waste prevention mandate, some BLM field offices have implemented measures intended to incentivize waste capture. For example, the Carlsbad Field Office in New Mexico approved long-term flaring of some gas but also determined that the flared gas was "avoidably lost" and therefore subject to royalties. Officials in the Carlsbad Field Office stated that they charged royalties on flared gas because "oil production in their region boomed and operators made an economic choice to flare gas associated with their oil wells—and pay the royalties—rather than wait until gas gathering pipeline was available."[10] According to a recent GAO study, the Carlsbad Field Office "concluded that within their region operators could generally restrict production at their established wells without endangering the amount of oil that these wells could ultimately produce. Therefore, these officials concluded that much of the gas flared from oil wells in the region was considered avoidably lost or 'wasted gas' and therefore

[5] RIA Available at: https://www.regulations.gov/document?D=BLM-2016-0001-9127
[6] *Ibid.*
[7] *See* Final Rule at: https://www.regulations.gov/document?D=BLM-2016-0001-9126
[8] *Ibid.*
[9] *Ibid.*
[10] GAO-16-607; Government Accountability Office, "Interior Could Do More to Account for and Manage Natural Gas Emissions", July 2016, p. 24 Available at: http://www.gao.gov/assets/680/678285.pdf

royalties were due." In their opinion, "charging royalties on flared gas could provide a small incentive for operators to develop infrastructure for gathering gas from oil wells."[11]

Similarly, in June of 2017, BLM finalized an environmental assessment proposing to evaluate pending Sundry Notice requests to flare in the North Dakota Field Office to ensure direct capture of or mitigation of impacts from associated gas from oil wells in the Bakken in western North Dakota.[12] The BLM will determine the environmental and social impacts from flaring and identify any design features and mitigation measures that may need to be applied to future flaring from new facilities as Conditions of Approval. The EA reiterated BLMs authority to regulating venting and flaring stating, "The BLM has the authority to protect the viewsheds of cultural and historic properties for federally administered wells on both federal and non-federal surface under the National Historic Preservation Act (NHPA), and 36 CFR 800 – Protection of Historic Properties. In addition, mitigation requirements for venting and flaring within the viewsheds of historic or cultural properties are authorized under the NEPA, section 6.8.4."[13] According to the EA, the agency will carry out this authority by, "analyz[ing] 1,7701 pending SN requests (Appendix A) to flare oil-well gas from Federal and Indian oil wells along with disclosing the reasonably foreseeable impacts from flaring in the western portion of North Dakota, and identify mitigation measures for flaring from future production facilities."[14] Those potential mitigation measures include the following:

- Construct a gathering pipeline which will ultimately be connected to a trunk pipeline;
- Liquefy the gas on location and store on location until it can be transported via truck to a pipeline injection location;
- Reinject the natural gas into a formation for possible future use;
- Reinject the natural gas into the reservoir for secondary enhanced oil recovery;
- Beneficial use on lease
- Camouflaging of flare using vegetation or architectural structures;
- Reduce flare stack height;
- Restriction of active flaring at night;
- Coordination with the appropriate SMA would be required for future flaring requests within the viewshed of a cultural or historic property.

The MCFO can and should use similarly proactive practices like those employed in Carlsbad or being considered by NDFO to analyze and incentivize methane capture.

d. BLM should develop and include waste minimization stipulations in the lease terms.

The best way to minimize waste from the leases included in the December 2017 sale is for BLM to incorporate waste minimization stipulations as lease notices in the lease terms. This could be accomplished in two ways. The field office could draft stipulations based on the requirements in the methane waste rule or develop its own stipulations that are more tailored to the area and pull from other successful waste minimization strategies.

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[11] *Id.* at 25.

[12] Bureau of Land Management, North Dakota Field Office, *Environmental Assessment: Sundry Notice Flaring Requests* (June 2017). Available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/62240/108472/132791/NDFO_Flaring_EA.pdf

[13] *Id.* at 33.

[14] *Id.* at 9.

Incorporating lease terms that reflect the requirements in the BLM rule makes sense given the robust development processes described above. These are strategies that will reduce waste while minimizing costs to operators and we have seen other field offices develop stipulations incorporating such strategies. The preliminary alternatives released by the Price Field Office for the San Rafael Desert MLP do so by addressing the issues of venting and flaring under stipulation AQ-11.[15] The stipulation explicitly calls out the requirement to eliminate venting and flaring of associated gas and to submit a waste minimization plan along with APDs.

Similarly, the Royal Gorge Field Office included stipulations in the preliminary alternatives for the Eastern Colorado RMP. There, the field office addressed venting and flaring in the planning area more generally. AU-23 states "Allow venting of gas only in emergency situations or under circumstances when capture is not technically feasible." While MA-6 reads, "Minimize flaring as much as is technically and economically feasible. Authorize flaring on a case by case basis. The BLM engineer will review requests and attach conditions of approval to any authorization. Operators must record volumes and amount of time flaring takes place, and submit the information to the BLM…"[16]

We encourage the MCFO to incorporate stipulations addressing venting and flaring, LDAR and waste minimization plans. We have provided the following stipulations as examples of what we believe might be reasonable.

While the Price Field Office referenced the Methane Rule, the stipulation the field office developed for the San Rafael Desert MLP also more explicitly called out the requirements operators would have to comply with. Stipulation AQ-11 illustrates how the BLM can draft a stipulation to address the flaring, venting and waste minimization plan requirements of the rule:

> In the absence of a pipeline, to capture gas associated with production from an oil well, use of a combustor or other best available technologies would be required. To minimize impacts on air quality and AQRVs, as well as minimize emissions of greenhouse gases, venting or open flaring would be prohibited except in the limited circumstances identified in the BLM's methane waste prevention rule. Evaluation of all reasonable and technically feasible gas capture technologies would be required as part of operator plan approvals. In the case of an exception, a visual screen must be used to minimize sky glow, glare, and adverse visual effects on night sky resources.[17]

BLM could also include a stipulation reiterating in clear terms the need to submit a waste minimization plan along with an APD. We recommend the following language for such a stipulation or lease notice:

> When submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well. The plan must set forth a strategy for controlling waste from venting and flaring, and must explain how the operator plans to capture

[15] See stipulation AQ-11 at: https://eplanning.blm.gov/epl-front-office/projects/nepa/61781/93139/112240/SRD_MLP_Chapter_2_Alternatives_-_Public_Review.pdf
[16] Preliminary Alternatives Report, Eastern Colorado Resource Management Plan (March 2017). Available at: https://eplanning.blm.gov/epl-front-office/projects/lup/39877/98740/119608/ECRMP_PrelimAltsReport.pdf
[17] See San Rafael Desert Preliminary Alternatives, Stipulation AQ-11.

associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture would be required.

The MCFO should consider how to fulfill its waste minimization mandate by looking to other state regulatory regimes. In 2014, the North Dakota Industrial Commission issued an order requiring operators to begin reducing the volume of flared gas.[18] The new rule established reduction percentage targets that were phased in over the course of nine years and become more stringent over time. We propose incorporating the following venting and flaring reduction stipulation or lease notice based on the North Dakota rule:

> Gas may not be flared or vented, except where it unavoidably lost. Gas produced with crude oil from an oil well may be flared during a one-year period from the date of first production from the well. After one year gas must be sent to a gathering line, used for electricity production, put to other beneficial use, or sent to a value-added process that reduces amount of gas sent to the flare by 74%. The gas capture goals apply as follows: 74% October 1, 2014 through December 31, 2014 77% January 1, 2015 through March 31, 2016 80% April 1, 2016 through October 31, 2016 85% November 1, 2016 through October 31, 2018 88% November 1, 2018 through October 31, 2020 91% beginning November 1, 2020. The gas capture percentage is calculated by summing monthly gas sold plus monthly gas used on lease plus monthly gas processed in a beneficial manner, divided by the total monthly volume of associated gas produced.

LDAR requirements based on the BLM, EPA or similar state rules could also be simplified to reflect the basic elements:

> Operators are required to develop and submit a comprehensive leak detection and repair (LDAR) plan along with an APD. The LDAR plan will identify the method and frequency of leak detection inspection; not to be conducted on a less than semi-annual basis. The operator will report to the agency annually the number of leaks identified, the date the leak was repaired and any leaks placed on a delay of repair list. Leaks must be repaired within 15 days unless the Authorized Official approves a request from the operator identifying the need to place the leak on the delay of repair list.

Currently, the only lease notice addressing air quality and GHG emissions applied to the parcels being offered is LN 14-18. This lease notice simply defers all additional air resource analysis and mitigation to the project specific approval stage. This lease notice alone is inadequate to ensure waste minimization. The BLM should seize the opportunity to reduce waste and increase federal revenues by ensuring lease terms include waste minimization requirements. Notably, these stipulations will also help to protect air quality, night skies, visual resources, and public health.

e. The uncertain status of BLM's current Methane Rule increases the likelihood of waste.

According to the analysis conducted by BLM in drafting the Regulatory Impact Analysis for the Methane Rule, in 2013 operators in Montana flared 1,959,261 Mcf, 965,555 Mcf or roughly 50 percent of that coming from federal lands. Using the average Henry Hub spot price for 2013 the amount of gas wasted from federal lands was roughly worth $3.7 million. Neither the volume of product or potential revenue

[18] Based on North Dakota Industrial Commission Order 2466, Available at: https://www.dmr.nd.gov/oilgas/GuidancePolicyNorthDakotaIndustrialCommissionorder24665.pdf

lost take into consideration the amount of gas lost through leaks which studies show can account for 1 – 15% of the total volume of gas produced. Using total federal production in Montana for 2013 and a conservative estimate of a 3% leak rate more than $5.3 million worth of gas was wasted from venting and flaring combined. Allowing these practices to continue without the guardrails provided by protective lease terms will taxpayers top continue to lose out on revenues owed to them.

Montanans won't just be losing money, failure to incentive methane capture will also result in increased pollution harming public health. While the stated goal of the BLM rule was to reduce methane emissions, its provisions provide numerous co-benefits including reducing VOC and HAP emissions. Again, state regulations and current RMP stipulations may not be adequate to protect public health and local as well as regional air quality.

In addition to financial and public health impacts, methane is a greenhouse gas 84 times more potent than carbon dioxide. It's contribution to climate change is well-documented as are the potential ramifications of a warming planet on a global, national and regional scale. The EA for this lease sale notes that fossil fuel development contributes significantly to global warming and that "The estimated quantity of GHG emissions from the combustion of fossil fuels that could be produced from the proposed lease sale parcels is approximately equivalent to the GHG emissions from 3,536 cars."[19] These emissions will contribute to climate change which as the EA notes, those impacts to Montana include:

- Temperature increases between 3 to 5°F at the mid- 21st century.
- More frequent, more severe, and possibly longer-lasting droughts are expected to occur.
- Increased evaporation leading to increase irrigation needs.
- Precipitation decreases of up to 20 percent may occur during summer, annual median runoff is expected to decrease between 2 and 5 percent.
- Mountain snowpack is expected to decline, reducing water availability in localities supplied by meltwater.
- Water temperatures are expected to increase in lakes, reservoirs, rivers, and streams impacting fish populations.
- Wildland fire risk is predicted to continue to increase. A 1°C global average temperature increase would increase risk of wildfire 241 to 515 percent.[20]

Despite these acknowledgements, the EA concludes that there is too much speculation and uncertainty in design details at this stage and therefore decisions regarding GHG emissions must be delayed to the project stage.

Consequently, there is a clear lack of adequate measures in place to ensure waste reduction from these leases. The lease notices included in the current lease sale, the stipulations included in the underlying RMP and the state oil and gas emissions requirements are insufficient to ensure compliance with the waste minimization mandates. At the same time, BLM's Methane Rule has been challenged in court, and the current administration moved in June 2017 to suspend or postpone many of its requirements indefinitely pending judicial review. 82 Fed. Reg. at 27431. Thus, while it is our position that these requirements are in effect and BLM must comply with the Methane Rule, the administration has created uncertainty as to whether or how BLM will ensure all reasonable precautions are required to prevent waste in these leases. The potential revision or repeal of the BLM Methane Rule will only further expose

[19] EA, p. 47.
[20] *Id.* at p.17-18

the inadequacy of these measures and make it all the more likely that the impacts described above will occur.

It is imperative that the BLM put in place stipulations on the leases it proposes to sell at the December 2017 oil and gas lease sale that would reduce venting, flaring, and leaks from any wells that are drilled. This is necessary to comply with the waste prevention provision in the Mineral Leasing Act, 30 U.S.C. §225, which is applicable whether or not the BLM's current Methane Rule is in effect. In order to comply with its statutory obligations, BLM must put in place provisions to reduce waste from these leases.

Thank you for consideration of our comments. We look forward to seeing these addressed prior to offering parcels for lease.

Sincerely,

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From:	Laura King
To:	NM_FOIA@blm.gov
Cc:	"Jeremy Nichols"; "Shannon Laun"
Subject:	FOIA Request
Date:	Monday, August 14, 2017 12:42:20 PM
Attachments:	FOIA Request_Trump EO and Zinke SO Farmington and Carlsbad FOs_Renewed Request.pdf

Dear Ms. Chavez,

On behalf of WildEarth Guardians, I submit the attached FOIA request for records related to Executive Order 13783 and Secretarial Order 3349 from the BLM's Farmington and Carlsbad Field Offices and the BLM New Mexico State Office. This request will also be arriving by certified mail, return receipt requested. We look forward to your determination on this request and the associated fee waiver request within FOIA's 20-day determination deadline.

Please note that this request is a reiteration of a request that we submitted on May 22, 2017 (and to which you indicated there were no responsive records), with a new date range for search.

Please let me know if you have any questions or if I can be of any assistance in the processing of this FOIA request.

Best,

Laura

Laura King

Staff Attorney

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August 14, 2017

Sent via Email and USPS Certified Mail Return Receipt Requested

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FREEDOM OF INFORMATION ACT REQUEST

Dear Ms. Chavez:

In a letter dated June 22, 2017, your office responded with a "no responsive records" response to a Freedom of Information Act (FOIA) request dated May 22, 2017 that I submitted on behalf of WildEarth Guardians (Guardians) for information from the Bureau of Land Management's (BLM) Farmington and Carlsbad Field Offices and New Mexico State Office pertaining to those offices' responses to Executive Order No. 13783, "Promoting Energy Independence and Economic Growth" and Secretarial Order No. 3349, "American Energy Independence."

This request is a reiteration of the May 22, 2017 request, but with a new date range. We request that you search for the following records from the Bureau of Land Management's Farmington and Carlsbad Field Offices and the Bureau of Land Management's New Mexico State Office produced between May 22, 2017 and today's date. We request:

- All agency records produced by the Bureau of Land Management's Farmington and Carlsbad Field Offices and the Bureau of Land Management's New Mexico State Office in the course of complying with Executive Order No. 13783, "Promoting Energy Independence and Economic Growth," which was published on March 28, 2017.
- All agency records produced by the Bureau of Land Management's Farmington and Carlsbad Field Offices and the Bureau of Land Management's New Mexico State Office in the course of complying with Secretarial Order No. 3349, "American Energy

Independence," which was published on March 29, 2017, under Secretary of the Interior Ryan Zinke.

For purposes of this request, "agency records" is consistent with the meaning of the term under FOIA. This includes, but is not limited to, documents of any kind including electronic as well as paper documents, emails, writings (handwritten, typed, electronic or otherwise produced, reproduced, or stored), correspondence, letters, memoranda, reports, consultations, notes, recordings, telephone conversation recordings, voice mails, telephone logs, messages, instant messages, G-chats, text messages, chats, telefaxes, photographs, videos, meeting notes or minutes, and electronic and magnetic recordings of meetings. All of the foregoing is included in this request if it is in BLM's possession and control. If such recordings are no longer under the control of BLM but were at any time, please refer this request to the relevant federal agency or agencies.

This request is not meant to exclude any other records that, although not specially requested, are reasonably related to the subject matter of this request. Please provide responsive records in digital format whenever possible.

*** * ***

Please identify and inform us of all responsive or potentially responsive records within 20 working days as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i), and the basis of any claimed exemptions or privilege, including the specific responsive or potentially responsive records(s) to which such exemption or privilege may apply. *See Citizens for Responsibility and Ethics in Washington v. Federal Election Com'n*, 711 F.3d 180, 182-183 (D.C. Cir. 2013) (holding that the agency must identify the exemptions it will claim with respect to any withheld documents within the time frame prescribed by FOIA). The Supreme Court has stated that FOIA establishes a "strong presumption in favor of disclosure" of requested information, and that the burden is on the government to substantiate why information may not be released under FOIA's limited exemptions. *Department of State v. Ray*, 502 U.S. 164, 173 (1991). Congress affirmed these tenets of FOIA in legislation as recently as December 2007, stating that government remains accessible to the American people and "is always based not upon the 'need to know' but upon the fundamental 'right to know.'" Public Law 110-175, 121 Stat. 2524, 2525 (Dec. 31, 2007).

If your office takes the position that any portion of the requested records is exempt from disclosure, we request that you provide us with an index of those records as required under *Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973), with sufficient specificity "to permit a reasoned judgment as to whether the material is actually exempt under FOIA." *Founding Church of Scientology v. Bell*, 603 F.2d 945, 959 (D.C. Cir. 1979). A *Vaughn* index must (1) identify each document or portion of document withheld; (2) state the statutory exemption claimed; and (3) explain how disclosure of the document or portion of document would damage the interests protected by the claimed exemption. *See Citizens Comm'n on Human Rights v. FDA*, 45 F.3d 1325, 1326 n.1 (9th Cir. 1995). "The description and explanation the agency offers should reveal as much detail as possible as to the nature of the document," in order to provide "the requestor with a realistic opportunity to challenge the agency's decision." *Oglesby v. U.S. Dept. of Army*, 79 F.3d 1172, 1176 (D.C. Cir. 1996). Such explanation will be helpful in deciding

whether to appeal a decision to withhold documents and may help to avoid unnecessary litigation.

In the event that some portions of the requested records are properly exempt from disclosure, please disclose any reasonably segregable, non-exempt portions of the requested records. *See* 5 U.S.C. §552(b). If it is your position that a document contains non-exempt segments and that those non-exempt segments are so dispersed throughout the documents as to make segregation impossible, please state what portion of the document is non-exempt and how the material is dispersed through the document. *See Mead Data Central v. U.S. Department of the Air Force*, 455 F.2d 242, 261 (D.C. Cir. 1977). Claims of non-segregability must be made with the same detail as required for claims of exemption in a *Vaughn* index. If a request is denied in whole, please state specifically that it is not reasonable to segregate portions of the record for release.

FOIA requires federal agencies to make their records "promptly available" to any person who makes a proper request for them. 5 U.S.C. § 552(a)(3)(A) (as amended by OPEN Government Act of 2007, Pub. L. No. 110-175, 121 Stat. 2524).

Presumption of Openness and "Foreseeable Harm" Standard

On his first full day in office President Obama demonstrated his commitment to the ideals of transparency and openness by issuing a Memorandum to the heads of all Executive Branch Departments and agencies by calling on them to "renew their commitment to the principles embodied in FOIA." *See* Presidential Memorandum for Heads of Executive Departments and Agencies Concerning the FOIA, 74 Fed. Reg. 4683 (Jan. 21, 2009). The President directed all agencies to administer the FOIA with a clear presumption in favor of disclosure, to resolve doubts in favor of openness, and to not withhold information based on "speculative or abstract fears." *Id.* In addition, the President called on agencies to ensure that requests are responded to in "a spirit of cooperation," that disclosures are timely made, and that modern technology is used to make information available to the public even before a request is made. *Id.*

In accordance with the President's directives, on March 19, 2009, Attorney General Holder issued new FOIA guidelines, calling on all agencies to reaffirm the government's "commitment to accountability and transparency." Memorandum from Att'y Gen. Eric Holder for Heads of Executive Departments and Agencies (Mar. 19, 2009), *available at* http://www.justice.gov/ag/foia-memo-march2009.pdf. The Guidelines stress that the FOIA is to be administered with the presumption of openness called for by the President. *Id*. at p. 1.

The Attorney General "strongly encourage[d] agencies to make discretionary disclosures of information." *Id*. He specifically directed agencies not to withhold information simply because they may do so legally and to consider making partial disclosures when full disclosures are not possible. *Id*. He also comprehensively addressed the need for each agency to establish effective systems for improving transparency. *Id*. at p. 2. In doing so he emphasized that "[e]ach agency must be fully accountable for its administration of the FOIA." *Id*.

In issuing these new guidelines, Attorney General Holder established a new "foreseeable harm" standard for defending agency decisions to withhold information. Under this new

standard, the U.S. Department of Justice will defend an agency's denial of a FOIA request "only if (1) the agency reasonably foresees that disclosure would harm an interest protected by one of the statutory exemptions, or (2) disclosure is prohibited by law." *Id*. As a result, "agencies must now include the 'foreseeable harm' standard as part of the FOIA analysis at the initial request stage and the administrative appeal stage." Department of Justice Guide to the FOIA (2009), p. 25, available at http://www.justice.gov/oip/foia_guide09.htm.

Request for Fee Waiver

FOIA was designed to grant a broad right of access to government information, with a focus on the public's "right to be informed about what their government is up to," thereby "open[ing] agency action to the light of public scrutiny." *U.S. Dep't of Justice v. Reporters Comm. for Freedom of Press*, 489 U.S. 749, 773-74 (1989) (internal quotation and citations omitted). A key component of providing public access to those records is FOIA's fee waiver provision, 5 U.S.C. § 552(a)(4)(A)(iii), which provides that "[d]ocuments shall be furnished without any charge or at a [reduced] charge . . . if disclosure of the information is in the public interest because it is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester."

FOIA's fee waiver requirement is to be "liberally construed." *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003); *Forest Guardians v. U.S. Dept. of Interior*, 416 F.3d 1173, 1178 (10th Cir. 2005). The fee waiver amendments of 1986 were designed specifically to provide organizations such as Guardians access to government documents without the payment of fees. As one Senator stated, "[a]gencies should not be allowed to use fees as an offensive weapon against requesters seeking access to Government information . . ." 132 Cong. Rec. S. 14298 (statement of Senator Leahy). Indeed, FOIA's waiver provision was intended "to prevent government agencies from using high fees to discourage certain types of requesters and requests, in clear reference to requests from journalists, scholars, and . . . non-profit public interest groups." *Better Gov't Ass'n v. Dep't of State*, 780 F.2d 86, 93-94 (D.C. Cir. 1986) (quoting *Ettlinger v. FBI*, 596 F. Supp. 867, 876 (D. Mass. 1984)).

Guardians, a non-commercial and public-interest requester, hereby requests a waiver of all fees associated with this request because disclosure "is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester." 5 U.S.C. § 552(a)(4)(A)(iii); *see also* 43 C.F.R § 2.45. This request satisfies both statutory and regulatory requirements for granting a fee waiver, including fees for search, review, and duplication.[1] Below, stated first in bold, are the criteria the BLM considers in assessing requests for fee waivers, followed by an explanation of

[1] Pursuant to FOIA, 5 U.S.C. § 552(a)(4)(A)(iv), no fee may be charged for the first two hours of search time or for the first one hundred pages of duplication.

Guardians' satisfaction of those requirements. *See* 43 C.F.R § 2.48.[2] Fee waiver requests must be evaluated based on the face of the request. *See Citizens for Responsibility & Ethics in Washington v. U.S. Dep't of Justice,* 602 F. Supp. 2d 121, 125 (D.D.C. 2009).

(1) The subject of Guardians' request concerns identifiable operations or activities of the Federal Government:

The subject matter of the requested records directly and specifically concerns identifiable operations or activities of the federal government, with a connection that is direct and clear, not remote. Guardians requests documents related to Executive Order No. 13783 and Secretarial Order No. 3349, which was designed to implement the directive in the Executive Order No. 13783, to, *inter alia*, "review all existing regulations, orders, guidance documents, policies, and any other similar agency actions . . . that potentially burden the development or use of domestically produced energy resources."

The Department of Justice Freedom of Information Act Guide expressly concedes that "in most cases records possessed by a federal agency will meet this threshold" of identifiable operations or activities of the government. *See* Department of Justice Guide to the FOIA (2009), p. 25. This requirement is clearly met in this case.

(2) How disclosure is likely to contribute to public understanding of those operations or activities:

Disclosure of these records is likely to contribute to public understanding of the operations and activities of the federal government. BLM "must not make value judgments about whether the information at issue is 'important' enough to be made public; it is not the bureau's role to attempt to determine the level of public interest in requested information." 43 C.F.R. § 2.45(f).

(i) How the contents of the records are meaningfully informative:

The requested records are meaningfully informative about government operations or activities and are likely to contribute to an increased public understanding of those operations or activities. The records requested will provide Guardians with the ability to communicate to the public about the activities of the BLM, and, more broadly, of the federal government. The documents will give Guardians, and therefore the public, crucial insight into the way the federal government intends to manage energy development on public lands. Regarding this issue, the actions and assessments of the BLM, and the actions and assessments of other branches of the federal government which would be revealed by records in the possession of BLM, are of concern to the public. Disclosure of the requested records will enhance the public's knowledge of this issue and support public oversight of federal agency operations.

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[2] *See also* Department of Justice Fee Waiver Guidance to Agency Heads From Stephan Markman, Assistant Att'y Gen. (Apr. 2, 1987) (advising agencies of factors to consider when construing fee waivers), *available at* http://www.justice.gov/oip/foia_updates/Vol_VIII_1/viii1page2.htm.

These documents are not currently in the public domain. Their release is "likely to contribute" to better public understanding of federal government's management of public lands. The public is always well served when it knows how government activities, particularly matters touching on legal and ethical questions, have been conducted. *See Judicial Watch*, 326 F.3d at 1314 ("[T]he American people have as much interest in knowing that key [agency] decisions are free from the taint of conflict of interest as they have in discovering that they are not.").

(ii) The logical connection between the content of the records and the operations or activities:

The requested records directly concern the operations or activities of the federal government.

(iii) How disclosure will contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

The public currently does not have the ability to fully evaluate the actions or inactions of the federal government regarding the management of public lands. Disclosure of these records will contribute to the understanding of a reasonably broad audience of persons interested in the subject because we will disseminate the information we receive to a large audience of interested persons. Once the information is made available, it will be analyzed and presented to the public in a manner that will meaningfully enhance the public's understanding of this issue.

(iv) Your identity, vocation, qualifications, and expertise regarding the requested information and information that explains how you plan to disclose the information in a manner that will be informative to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

WildEarth Guardians is a nonprofit organization dedicated to environmental protection. WildEarth Guardians protects and restores wild places, wildlife, and wild rivers in the American West. Through its Climate and Energy Program, Guardians works to sustain a transition from fossil fuels to clean energy in order to safeguard the American West.

WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding BLM actions and policy. For example, WildEarth Guardians has utilized FOIA to obtain records related to BLM's federal coal leasing activities in Wyoming and has disseminated this information through the media, its own website, and through other forms of public commentary. Guardians most recently utilized FOIA to obtain and disseminate information regarding BLM management of oil and gas resources in New Mexico. This information was related to the agency's decision to abruptly change the location of a planned oil and gas lease sale. The responsive FOIA documents have been shared with the media and have been reported on in various news stories.

Further, WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding other federal agency actions and is consistently granted fee waivers from these agencies. Just in the last five years, Guardians has been granted fee waivers in conjunction with FOIA requests to the U.S. Environmental Protection Agency, U.S. Office of Surface Mining Reclamation and Enforcement, U.S. Forest Service, U.S. Fish and Wildlife Service, and U.S. Bureau of Reclamation. In granting WildEarth Guardians' requests for fee waivers, these agencies have acknowledged Guardians' ability to obtain, analyze, and disseminate information to a reasonably broad audience.

(v) Your ability and intent to disseminate the information to a reasonably broad audience of persons interested in the subject (for example, how and to whom do you intend to disseminate the information):

Guardians has the ability and intention to disseminate the information requested to the public and its many members and supporters. Therefore, the disclosure of the requested documents will contribute to the understanding of a reasonably broad audience of persons interested in the subject.

Guardians plans to disseminate the information it obtains pursuant to this FOIA request in various effective ways, including through its website, newsletter, press releases, Facebook page, public education events, comments on proposed agency actions, and other public interest advocacy. Guardians' staff will first analyze and digest the documents. The information will then be disseminated to Guardians' members and supporters, members of other conservation organizations, as well as other interested members of the public.

(3) How disclosure is likely to significantly contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

(i) Whether the information being requested is new:

The information being requested is new. Although the full contents of the requested records are currently unknown to us, Guardians does not request any records previously provided to us by the Government.

(ii) Whether the information would confirm or clarify data that has been released previously:

The information Guardians requests has not, to our knowledge, been released previously.

(iii) How disclosure will increase the level of public understanding of the operations or activities of the Department or a bureau that existed prior to disclosure:

Because this information is not currently in the public domain, disclosure of these records will increase the level of public understanding of the operations or activities of DOI and BLM

that existed prior to disclosure. Guardians will disseminate the information obtained from this FOIA request to a large public audience, as explained above, and will help the public understand the information in a simple and informative way.

(iv) Whether the information is already publicly available:

The information Guardians requests is not, to our knowledge, publicly available. The Government may omit sending us requested records that are available in publicly accessible forums such as on the internet or that are routinely available at public or university libraries. However, please provide us with adequate references and/or website links so that we may obtain these materials on our own.

(4) How the public's understanding of the subject in question will be enhanced to a significant extent by the disclosure:

The public's understanding of the federal government's management of public lands will be enhanced to a significant extent by the disclosure of these records. The directives in Executive Order No. 13783 and Secretarial Order No. 3349 have the potential to create a dramatic shift in the way the Department of the Interior manages energy development on public lands. For example, depending on which policies or actions are deemed to "burden" energy development, public access, wildlife, and a range of public land recreation activities could be at risk. The public currently does not have the ability to evaluate the actions or inactions of DOI or BLM regarding management decisions on public lands as directed by Executive Order No. 13783 and Secretarial Order No. 3349.

Guardians' dissemination of the information obtained pursuant to this FOIA request will enhance the public's understanding of this issue because this information is not currently available to the public. *See Federal CURE*, 602 F. Supp. 2d at 205 (the existing public availability of the information is weighed when determining the degree of significance that will be derived from the disclosure of the information) (citing *Forest Guardians*, 416 F.3d at 1181). As described above, Guardians will disseminate the information it obtains pursuant to this FOIA in various effective ways, including through its website, newsletter, press releases, Facebook page, and public education events. Furthermore, the information obtained through this FOIA request will be used to contribute to one or more of the following: public interest litigation, petitions, newsletters, public presentations, e-mail and postal mail publications, press releases, and local and national news stories.

Given Guardians' positions and abilities, disclosure will lead to a significant enhancement of the public's understanding of the Government operations and activities at issue.

(5) Any commercial interest that would be furthered by the requested disclosure:

Guardians has no commercial, trade, or profit interest that would be furthered by the requested disclosure. Guardians is a tax-exempt organizations under section 501(c)(3) of the Internal Revenue Code. As such, Guardians has no commercial interests. The requested records

will be used in the furtherance of Guardians' mission as an education and advocacy group to protect and restore the natural environment.

Guardians, a non-profit organization, has no commercial interests and will realize no commercial benefit from the release of the requested information. Therefore, no assessment of the magnitude of the interest is required. *See* 43 C.F.R. § 2.48(b)(2)-(3).

Conclusion

Given Guardians' demonstrably successful efforts at educating the public on environmental issues, and the fact that their education programs have significantly contributed to an understanding of Government operations and activities, it is clear that Guardians is entitled to a fee waiver. *See* 43 C.F.R § 2.48. In the event that your agency denies Guardians a fee waiver, please send a written explanation for the denial along with a cost estimate. Please contact us for authorization before incurring any costs in excess of $50.

I look forward to your determination on this FOIA request within twenty days, as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i). The twenty-day statutory deadline is also applicable to Guardians' fee waiver request. *See, e.g., Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003) (finding where an agency "fails to answer the [fee waiver] request within twenty days," judicial review is appropriate).

Please direct all correspondence and responsive records to counsel for WildEarth Guardians:

Laura King, Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
king@westernlaw.org

Thank you for your attention to this request. If you have any questions about the requested documents or the requested fee waiver, please do not hesitate to contact me at the phone number or email address below.

Sincerely,



Laura King, Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
Email: king@westernlaw.org
Phone: (406) 204-4852

Attorney for WildEarth Guardians

From: Chavez, Eileen
To: king@westernlaw.org
Cc: BLM_NM FOIA; Jeremy Nichols; Shannon Laun
Subject: Re: FOIA Request
Date: Monday, August 21, 2017 3:47:54 PM

This serves as an acknowledgment of receipt of your Freedom of Information Act (FOIA) request dated August 14, 2017. Your request was received via email on the same date. You stated that you are submitting this request on behalf of Wild Earth Guardians.

You requested ". . . the following records from the BLM's Farmington and Carlsbad Field Offices and the BLM's NMSO produced between May 22, 2017 and today's date (August 14, 2017). You specifically requested:

* All agency records produced by the Bureau of Land Management's Farmington andCarlsbad Field Offices and the Bureau of Land Management's New Mexico State Officein the course of complying with Executive Order No. 13783, "Promoting EnergyIndependence and Economic Growth," which was published on March 28, 2017.
*

* •All agency records produced by the Bureau of Land Management's Farmington and Carlsbad Field Offices and the Bureau of Land Management's New Mexico State Office in the course of complying with Secretarial Order No. 3349, "American Energy Independence," which was published on March 29, 2017, under Secretary of the Interior Ryan Zinke.

Your request was assigned Request No. NM 2017-043/BLM 2017-00932. Please reference this number on correspondence concerning your request. Freedom of Information Act requests are processed on a first-in, first-out basis. If we anticipate a delay in processing your request, we will inform you of the delay.

Your request for a fee waiver has been granted based on your justification.

Questions regarding this FOIA may be directed to me at the contact information below.

Eileen Griego Chavez (formerly Vigil)
NM/OK/TX/KS FOIA/Privacy/Records Officer
(505) 954-2129
echavez@blm.gov

On Mon, Aug 14, 2017 at 10:42 AM, Laura King <king@westernlaw.org> wrote:

Dear Ms. Chavez,

On behalf of WildEarth Guardians, I submit the attached FOIA request for records related to Executive Order 13783 and Secretarial Order 3349 from the BLM's Farmington and Carlsbad Field Offices and the BLM New

Mexico State Office. This request will also be arriving by certified mail, return receipt requested. We look forward to your determination on this request and the associated fee waiver request within FOIA's 20-day determination deadline.

Please note that this request is a reiteration of a request that we submitted on May 22, 2017 (and to which you indicated there were no responsive records), with a new date range for search.

Please let me know if you have any questions or if I can be of any assistance in the processing of this FOIA request.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder's Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org

www.westernlaw.org

From: Nada Culver
To: Toevs, Gordon; Muller, Kit
Subject: in town next week?
Date: Tuesday, August 22, 2017 3:18:21 PM
Attachments: TWS Sage-grouse Plans Review letter - 8-15-17.pdf

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Hi Gordon and Kit – I'll be in town next week, along with my colleague Phil Hanceford, and would love the opportunity to touch base if you have time. We could meet up late afternoon on Monday the 28th or on Wednesday the 30th or morning of the 31st if any of those might work.

I also thought you might be interested in this letter TWS submitted last week.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org

August 15, 2017

Via electronic mail

Mike Nedd
Acting Director
Bureau of Land Management
1849 C Street NW, Rm. 5665
Washington DC 20240

Re: Review of 2015 Sage-Grouse Plans

Dear Acting Director Nedd:

We are writing to emphasize our interest and concerns in the review of the greater sage-grouse plans conducted pursuant to Secretarial Order (S.O.) 3353. The Wilderness Society has been engaging in efforts to conserve the greater sage-grouse for more than a decade, including in the plans developed by the Bureau of Land Management and U.S. Forest Service. We take pride in the collaborative efforts that resulted in the management plans signed in September 2015 and the finding by the U.S. Fish and Wildlife Service (FWS) that listing of the greater sage-grouse under the Endangered Species Act was no longer warranted. As part of implementing the recommendations of the August 4 Memorandum from Secretary Zinke and the Report from the Sage-Grouse Review Team, we urge you to take the following into consideration.

Maintain the critical elements of the 2015 Sage-Grouse Plans.

As the Western Governors Association's Sage-Grouse Task Force has stated, including in the context of the review being conducted by the Department of the Interior, wholesale changes are not likely needed although there may be opportunities to improve the 2015 Sage-Grouse Plans. There are a number of critical elements of the plans that must be maintained in order to support the finding of the FWS and to ensure the greater sage-grouse and the more than 350 species that depend on these lands are not put at risk.

1. Protect the highest value habitat.

The structure of the plans was developed to provide the most protections to the highest value habitat (thus ensuring it is sufficiently protected) while providing more flexibility for other activities to occur outside habitat and in other habitat areas. For example, while most plans did not close any lands to oil and gas development, no surface occupancy is permitted in priority

habitat management areas; development outside priority habitat is permitted subject to less restrictive conditions. Further, the vast majority of high and moderate oil and gas potential is outside of priority habitat.[1] Consequently, maintaining the overall structure of the plans to focus on protecting the highest value habitat is not only the most likely to succeed in conserving the species, it is also having limited impacts on activities like oil and gas development. It is essential for the functioning of the plans that Priority Habitat Management Areas (and/or Core Habitat), including Sagebrush Focal Areas, are maintained and provided with the most protections.

2. Maintain provisions to address the key threats to the greater sage-grouse.

In addition to invasive grasses and wildland fire, which are highlighted in S.O. 3353, FWS has identified other "leading threats" to the greater sage-grouse and its habitat. While these threats are particularly important in the Great Basin region, oil and gas development is identified as a primary threat in most of the Rocky Mountain region, except for Montana, where the principal threat is agricultural conversion. Further, development and habitat fragmentation are identified as priority threats by both the FWS and the states.[2]

Consequently, in order for the plans to be effective, provisions addressing energy development and other causes of habitat fragmentation must be incorporated. These provisions include:

- No surface occupancy provisions for oil and gas development;
- Similar direction on appropriate locations for development of wind, solar and transmission lines; and
- Limitations on the amount and timing of surface-disturbing activities, such as surface disturbance caps and buffers around leks.

Notably, these types of provisions are also integral parts of the approaches that western states utilize in managing and conserving greater sage-grouse, including in those states that have formal sage-grouse conservation plans.

3. Ensure unavoidable impacts to greater sage-grouse habitat are mitigated.

The 2015 Sage-Grouse Plans comply with the mitigation hierarchy (i.e., avoid impacts where possible; minimize impacts where avoidance is not practicable; and mitigate or offset unavoidable impacts) and this compliance is necessary for their success. By providing the greatest protection for the highest value habitat and setting out specific management provisions for different activities, the 2015 Sage-Grouse Plans seek to avoid or minimize impacts to sage-grouse habitat. Nonetheless, the plans also recognize that some harm to habitat cannot be sufficiently avoided or minimized, and therefore mitigation through compensatory actions is required to restore or replace the damaged habitat. Evaluation of mitigation is required by the

[1] *See* https://d3n8a8pro7vhmx.cloudfront.net/backcountryhunters/pages/3172/attachments/original/1497040181/Sage-Grouse_Energy_Overlap_Report_060917_(1).pdf?1497040181

[2] *See* https://www.fws.gov/greatersagegrouse/findings.php

National Environmental Policy Act[3] and management for multiple use and sustained yield and avoidance of unnecessary or undue degradation to these uses and values of the public lands (including wildlife) is required the Federal Land Policy and Management Act.[4] The BLM's current manual and handbook on mitigation (Manual 1794, Handbook H-1794-1) acknowledge the BLM's authority to condition land uses on mitigation and to deny approval of uses when impacts cannot be sufficiently mitigated.[5] Similarly, the Department of Interior's Manual on Mitigation "affirms its authority to identify and plan for the extent, nature, and location of mitigation, including compensatory mitigation, and to require the implementation of effective mitigation."[6]

By designing appropriate mitigation measures, the plans provide a path forward for permitting more activities on the public lands that may harm greater sage-grouse habitat (such as activities that would otherwise exceed the scientifically-set surface disturbance caps) while ensuring those harms will be sufficiently addressed to offset unavoidable harms (such as restoring habitat or providing intact habitat). Mitigation is a necessary part of the plans' structure and is also a key part of the management approaches taken by the western states, including those states that have formal sage-grouse conservation plans. Mitigation measures have been developed based on years of experience with various industries. These industries now rely on compensatory mitigation to provide certainty regarding requirements associated with development and assurances that the mitigation will be successful to actually offset the harm that has occurred. While these provisions in the plans can certainly be elaborated upon, they need to be maintained.

4. Provide for ongoing monitoring and adjustment of the plans.

In order to ensure that key goals of the plans are met, the plans must also be nimble - showing that any major problems (such as precipitous drops in population or habitat condition) will be identified and can be addressed quickly. The plans include a Habitat Objectives Table, Habitat Assessment Framework, and Assessment, Inventory and Monitoring procedures that provide for data collection and measurement of conditions and analysis. These elements of the plans yield detailed information to show that the plans are working. They can also feed into the plans' adaptive management framework, which leads to immediate action when certain triggers are met.

This constellation of tools is needed to demonstrate to FWS that its finding that listing is not warranted continues to be justified, including during the review expected no later than five years from the date the applicable records of decision were signed. While aspects of the adaptive management framework could be clarified going forward, its elements must be maintained.

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[3] *See* 40 C.F.R. §§ 1508.8, 1502.14, 1502.16.
[4] *See* 43 C.F.R. §§ 1701, 1732(b).
[5] *See, e.g.,* BLM Handbook, H-1794-1 Mitigation (P) (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM%20H-1794-1%20Mitigation%20FINAL.docx, and BLM Manual, MS-1794 Mitigation § 1.6.E.2 (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM_MS-1794%20Mitigation%20FINAL.docx
[6] See U.S. Dep't of Interior Manual, 600 DM § 6.5, Landscape-Scale Mitigation Policy (Oct. 23, 2015) https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf

Any changes to the 2015 Sage-Grouse Plans must be scientifically-supported.

We understand and support the need for additional clarifications regarding implementation of the 2015 Sage-Grouse Plans, including, for instance, updating habitat maps, elaborating on standards for mitigation and detailing various aspects of the monitoring and adaptive management process. Nonetheless, alterations to the plans, including both clarifications and more substantive changes, must be consistent with scientific standards.

For instance, as detailed by the Western Association of Fish and Wildlife Agencies, focusing on population objectives or using captive breeding, are unlikely to be successful as tools to measure the status of the species or support its health.[7]

In addition, current aspects of the plans, such as surface disturbance caps and lek buffers, are based on scientific consensus and cannot simply be ignored or reduced without accounting for the likely impacts from activities that would then harm grouse habitat, such as energy development. The scientific basis for the key provisions of the 2015 Sage-Grouse Plans, including the certainty in how they are applied, is the reason that FWS could rely on the plans to find that listing under the Endangered Species Act was no longer warranted. Any changes to the plans must meet this high standard.

Provide for public participation in implementation of the report.

Both the Secretary's Memorandum and the Report provide that BLM should work with the Sage-Grouse Task Force to engage with stakeholders, but does not commit the agency to public outreach or engagement. The Sage-Grouse Task Force is a key part of implementing the 2015 Sage-Grouse Plans and, as a vital partner in developing the plans, will also play a similar role in any changes. However, the Task Force is part of the Western Governors Association and does not owe the same obligation to the public as the BLM, which is obligated under its statutory mandate to manage the public lands for all Americans according to principles of multiple use and sustained yield.

BLM is subject to a multiple-use mandate, which prohibits the Department of the Interior from managing public lands primarily for energy development or in a manner that unduly or unnecessarily degrades other uses. *See* 43 U.S.C. § 1732(a).[8] Instead, the multiple-use mandate directs the agency to achieve "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations." 43 U.S.C. § 1702(c). Further, as co-equal, principal uses of public lands, outdoor recreation, fish and wildlife, grazing, and rights-of-way must receive the same consideration as energy development. 43 U.S.C. § 1702(l). The context of BLM's decisions requires the proactive engagement of the public.

[7] *See* WAFWA Sage-grouse White Papers, available at: http://www.wafwa.org/initiatives/sagebrush_ecosystem_initiative/

[8] *See also New Mexico ex rel. Richardson v. BLM,* 565 F.3d 683, 710 (10th Cir. 2009) ("It is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses.").

Where actions trigger the application of the National Environmental Policy Act (NEPA), BLM must make all diligent efforts to engage the public. NEPA requires BLM to meaningfully engage the public in analyzing the environmental effects of proposed federal actions, including soliciting and considering public comments, making "diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a). However, in this situation, BLM should not seek to avoid or delay public engagement unless or until there is a formal NEPA process.

The 2015 Sage-Grouse Plans were created with the input of millions of comments and extended efforts from a host of interested members of the public. Although the public was not provided an opportunity to provide input into the 60-day review that led to this report, numerous members of the public still echoed the input of the Western Governors Association's Sage-Grouse Task Force in urging that the fundamental structure of the plans be preserved. The BLM should not exclude the public from the evaluations that are being conducted pursuant to the recommendations in the report. Rather, the agency should provide opportunities for meaningful public participation as it considers and implements the report.

We appreciate the BLM's efforts to both implement and improve the 2015 Sage-Grouse Plans and hope these recommendations will be helpful. We would welcome the opportunity to discuss this letter and the ongoing process further at your convenience.

Sincerely,

Nada Culver
Senior Counsel and Senior Director, Agency Policy and Planning
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cc: James Cason
Kathleen Benedetto
Katherine MacGregor

From:	Kyle Tisdel
To:	SI_CRVFO_Webmail@blm.gov
Subject:	Comments, DOI-BLM-CO-N040-2016-0054-EA
Date:	Friday, August 25, 2017 6:58:45 PM
Attachments:	2017 August Fram Whitewater MDP Updated EA Comments_(final).pdf

Please find the attached comments regarding the Preliminary EA for the Updated Whitewater MDP. I will also be sending a hard copy and disc containing referenced exhibits via certified mail. Should you have any questions please do not hesitate to contact me.

Regards.

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Submitted via Electronic Mail and USPS Certified Mail

August 25, 2017

Colorado River Valley Field Office
Bureau of Land Management
2300 River Frontage Road
Silt, Colorado 81652

Re: Preliminary Environmental Assessment for the Fram Operating, LLC Updated Whitewater Unit Master Development Plan, DOI-BLM-CO-N040-2016-0054-EA

The Western Environmental Law Center, on behalf of Citizens for a Healthy Community, Western Colorado Congress, Citizens for Clean Air, Colorado Sierra Club, and Great Old Broad's Mesa County Broad Band (collectively, "Citizen Groups"), submits the following comments on the Bureau of Land Management's ("BLM") Updated Whitewater Unit Master Development Plan ("Whitewater MDP") Preliminary Environmental Assessment ("Updated EA"), identified as: DOI-BLM-CO-N040-2016-0054-EA.

Citizens for a Healthy Community is a grass-roots organization formed in 2010 for the purpose of protecting the Delta County region's air, water and foodsheds from the impact of oil and gas development. CHC's members and supporters include organic farmers, ranchers, vineyard and winery owners, sportsmen, realtors, and other concerned citizens impacted by oil and gas development. CHC members have been actively involved in commenting on BLM's oil and gas activities in the region, including this project.

Western Colorado Congress is an alliance for community action dedicated to healthy communities and landscapes. Since 1980, Western Colorado Congress has worked to foster public participation in decisions affecting land and public health in western Colorado. The membership-based nonprofit has nearly 2,000 members across western Colorado.

Citizens for Clean Air is a grassroots organization of volunteers established in 2013 to research the causes of air quality degradation and promote improvement of air quality in Mesa County, Colorado. We work cooperatively with government agencies, non-profits, the private sector and citizens' groups, and are involved in local, statewide and federal efforts to mitigate the effects of known air pollutants on humans, agriculture, animals and the environment.

With 20,000 members and 80,000 supporters, the Colorado Sierra Club works to promote the conservation of Colorado's natural environment and climate by influencing public policy

decisions through grassroots involvement. We're the Colorado affiliate of Sierra Club, America's oldest, largest and most influential grassroots environmental organization.

Great Old Broads for Wilderness is a national grassroots organization, led by elders, that engages and inspires activism to preserve and protect wilderness and wild lands. Conceived by older women who love wilderness, Broads gives voice to the millions of Americans who want to protect their public lands as Wilderness for this and future generations. We bring knowledge, commitment, and humor to the movement to protect our last wild places on earth. Great Old Broads for Wilderness began in 1989 on the 25th anniversary of the Wilderness Act. Today, Broads has a small staff and our ranks have grown to more than 8,000 members and supporters. There are nearly 40 Broadbands (chapters) in 15 states across the country dedicated to local and national wilderness issues.

Citizen Groups hereby incorporate comments previously submitted on this project: Citizens for a Healthy Community's August 13, 2013 Comments on the Preliminary Environmental Assessment (attached as Exhibit A); Citizens for a Healthy Community's February 14, 2014 Supplemental Comments (attached as Exhibit B); Citizens for a Healthy Community's July 14, 2014 Request for State Director Review (attached as Exhibit C); Western Colorado Congress et al.'s May 5, 2010 Scoping Comments (attached as Exhibit D); Western Colorado Congress et al.'s Comments (attached as Exhibit E); and TEDX's Comments (attached as Exhibit F). These comments contain technical information and legal analysis which should guide the BLM's decision-making on this project.

I. Background

On June 13, 2014, the Bureau of Land Management Grand Junction Field Office ("GJFO") approved the Whitewater MDP, a 108-well oil and gas exploration project involving the construction, operation, maintenance, and abandonment of wells, well pads, roads, gas gathering pipelines, oil gathering pipelines, and produced water gathering pipelines.

Shortly thereafter, the Western Environmental Law Center, on behalf of Citizens for a Healthy Community; Western Colorado Congress; and Citizens for Clean Air filed requests for State Director Review ("SDR"). In response to the Requests for SDR, on April 29, 2016, BLM Colorado State Office remanded the Whitewater MDP EA to the GJFO for further consideration. In response to the remand, the Colorado River Valley Field Office ("CRVFO") collaborated with the GJFO on a revised preliminary environmental assessment for the project.

For the reasons described below, the EA for the Whitewater MDP continues to violate NEPA by: (1) failing to perform an EIS for a project that may result in significant impacts to critical resource values in the region; (2) in the EA, failing to adequately consider and take a hard look at the direct, indirect, and cumulative effects of the project on those critical resource values, including the region's air quality and surface and groundwater resources, as well as important habitat and big game species; and (3) failing to take a hard look at the climate impacts of BLM's fossil fuel management, including by quantifying economic benefits while ignoring the economic and social costs caused by the project's greenhouse gas emissions.

II. Because it is a major federal action significantly affecting the quality of the human environment, the Whitewater MDP must be analyzed in an EIS.

The 108-well Whitewater MDP project requires an Environmental Impact Statement ("EIS") because it is a "major federal action" that "significantly affects the quality of the human environment." 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.4. A federal action "affects" the environment when it "will or *may* have an effect" on the environment. 40 C.F.R. § 1508.3 (emphasis added); *Airport Neighbors Alliance v. U.S.,* 90 F.3d 426, 429 (10th Cir. 1996) ("If the agency determines that its proposed action *may* 'significantly affect' the environment, the agency must prepare a detailed statement on the environmental impact of the proposed action in the form of an EIS.") (emphasis added). Similarly, according to the Ninth Circuit:

> We have held that an EIS *must* be prepared if 'substantial questions are raised as to whether a project ... *may* cause significant degradation to some human environmental factor.' To trigger this requirement a 'plaintiff need not show that significant effects *will in fact occur*[.]' [Instead,] raising 'substantial questions whether a project may have a significant effect' is sufficient.

Idaho Sporting Cong. v. Thomas, 137 F.3d 1146, 1149-50 (9th Cir. 1998) (citations omitted) (emphasis original). The Whitewater project may result in significant impacts to critical resource values, including: (1) a significant impact on air quality, including degradation to visibility; (2) potential contamination of the City of Grand Junction water supply (notably, proponent Fram will secure an exception to a lease stipulation in order to build a well pad upstream of and adjacent to a stream flowing into that supply); (3) impacts to endangered fish in the Colorado and Gunnison Rivers, including through sedimentation of selenium-containing soils, entrainment and impingement at pump water intakes, contaminated surface runoff, and accidental fuel spills; and (4) impacts to wildlife habitat, including the disturbance and displacement of mule deer, pronghorn, elk, and white-tailed prairie dogs. Given the magnitude of the proposed action and possible direct, indirect and cumulative impacts to both the natural environment and human communities, the Whitewater MDP project requires an EIS.

Critically, the BLM has failed to "put forth a convincing statement of reasons' that explains why the project will impact the environment no more than insignificantly. This account proves crucial to evaluating whether the [agency] took the requisite 'hard look.' " *Ocean Advoc. v. U.S. Army Corps of Engrs*., 402 F.3d 846, 864 (9th Cir. 2005). Nowhere in BLM's EA does there exist a convincing statement explaining the insignificance of impacts from the Whitewater MDP. If BLM proceeds in its refusal to perform an EIS, it must provide a detailed accounting of each NEPA significance factor, as provided in 40 C.F.R. § 1508.27, explaining why the project will impact the environment no more than insignificantly.

In determining significance, the BLM must consider two factors: "context" and "intensity." 40 C.F.R. 1508.27. "Either of these factors may be sufficient to require preparation of an EIS in appropriate circumstances." *Natl. Parks & Conserv. Assn. v. Babbitt*, 241 F.3d 722, 731 (9th Cir. 2001).

A. The Whitewater MDP's impacts are significant given the project's *context.*

The BLM ignored the contexts in which the project is taking place. Context means "society as a whole (human, national), the affected region, the affected interests, and the locality." 40 CFR § 1508.27(a). Here, the affected region and affected interests include organic farms, ranches, vineyards, and wineries. The Whitewater MDP will have significant impacts to these interests, including, but not limited to, the project's impacts to air, water, and climate. With respect to air, for example, prevailing winds will likely concentrate the particulate pollution created by development under the Whitewater MDP in the Grand Valley, rather than dispersing it.

The BLM must also consider "society as a whole (human, national)." We live in an era of human-caused climate change. "The findings presented in [the Intergovernmental Panel on Climate Change's Fifth Assessment Report from 2013] indicate that warming of the climate system is unequivocal and many of the observed changes are unprecedented over decades to millennia. . . . It is *extremely likely* (95 to 100 percent probability) that human influence has been the dominant cause of the observed warming since the mid-20th century (IPCC 2013)." Updated EA at 56. Our atmosphere today is akin to a bathtub that is filling with greenhouse gases faster than it is draining.[1] Every addition of GHG emissions into this bathtub brings us closer to the "tipping point" beyond which catastrophic change is inevitable.[2] In this context, a 108-well oil and gas development with projected GHG emissions of 70,588 metric tons per year is significant. Updated EA at 66.

If this amount of GHG emissions is not significant, the BLM must provide articulated criteria grounded in scientific evidence to demonstrate why it is not. *See Center for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1224 (9th Cir. 2008). The agency has not done so. Merely calculating the project's percentage contribution to overall Colorado and U.S. emissions and summarily concluding that that percentage is non-significant, Updated EA at 66, "cannot carry the day." *Id*.

B. The Whitewater MDP's impacts are significant given the *intensity* of the project's impacts.

In evaluating intensity, the BLM was obligated to consider the following factors: impacts that may be both beneficial and adverse; the degree to which the proposed action affects public health or safety; the unique characteristics of the geographic area; the degree to which the effects on the quality of the human environment are likely to be highly controversial; the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks; the degree to which the action may establish a precedent for future actions; whether the action is related to other actions with individually insignificant but cumulatively significant impacts; the degree to which the action may adversely affect significant scientific,

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[1] John D. Sterman & Linda Booth Sweeney, *Understanding Public Complacency About Climate Change: Adults' Mental Models of Climate Change Violate Conservation of Matter*, 80 CLIMATIC CHANGE 213, 216 (2007) (attached as Exhibit 1).

[2] See, e.g., James Hansen, *Tipping Point: Perspective of a Climatologist*, STATE OF THE WILD 2008-2009 (attached as Exhibit 2).

cultural, or historical resources; the degree to which the action may adversely affect an endangered or threatened species or its habitat; and whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. 40 C.F.R. § 1508.27(b). Where, as here, significance factors have been triggered, an EIS is required.

First, the BLM ignores the extent of the public health effects that will be caused by the project's air pollution. The EA reveals that the project will elevate PM-10, PM-2.5, NO-X, CO2, SO2, VOCs, and Hazardous Air Pollutants ("HAPs") including benzene, toluene, ethyl benzene, xylene, n-hexane, and formaldehyde. Updated EA at 61-62. The impacts from particulate matter are particularly striking. The project will increase the daily concentration of PM-10 by 64%, from 27 µg/m3 to 44.3 µg/m3, and the daily concentration of PM-2.5 by 72%, from 14 µg/m3 to 24.1 µg/m3 (and close to the legal limit for PM-2.5 of 35 µg/m3). Updated EA at 61. Major concerns for human health from exposure to particulate matter include effects on breathing and respiratory systems, damage to lung tissue, cancer, and premature death.[3] PM-2.5 is small enough to lodge deeply in the lungs.[4] The smallest particles can pass through the lungs to affect other organs.[5] Even small increases in particulate matter concentrations can have significant health impacts. For example, according to a recent study published in the British Medical Journal, an increase in estimated annual exposure to PM-2.5 of just 5 µg/m3 was linked with a 13% increased risk of heart attacks.[6]

The BLM concludes that the air pollution, including particulate matter pollution, from the project is non-significant because the air quality in the area will remain within legal limits. EA at 59 (impact significance criteria), 61. Violation of law is one of the ten factors indicating significance, but there are nine others, including the degree to which the proposed action affects public health or safety. Here, the project will add significant amounts of pollution into the air—in particular due to prevailing winds which blow pollutants into the Grand Valley metropolitan area of approximately 160,000 inhabitants—with significant health impacts that cannot be summarily dismissed. An EIS must be prepared to evaluate these impacts.

Additionally, BLM does not give adequate consideration to ozone. First, BLM provides background concentrations of ozone in micrograms per cubic meters ($\mu g/m^3$), rather than parts per million (ppm), Updated EA at 46, although ppm is the unit of measurement used by the EPA in the National Ambient Air Quality Standards ("NAAQS"). This makes it difficult for the public to understand whether background concentrations of ozone exceed the NAAQS, or whether the modeled addition from oil and gas emissions in the GJFO of 0.5 ppb, Updated EA at 198, would cause an exceedance of the NAAQS.

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[3] EPA, *Air Trends Summary*, available at: http://www.epa.gov/airtrends/aqtrnd95/pm10.html.
[4] EPA, *Particulate Matter*, available at: http://www.epa.gov/airquality/particulatematter/health.html.
[5] *Id*.
[6] Cesaroni et al., *Long Term Exposure to Ambient Air Pollution and Incidence of Acute Coronary Events: Prospective Cohort Study and Meta-Analysis in 11 European Cohorts from the ESCAPE Project,* BRITISH MEDICAL JOURNAL (2014), available at: http://www.bmj.com/content/348/bmj.f7412 (attached as Exhibit 3).

Second, background concentrations of ozone in some areas of the region are already at or exceed the National Ambient Air Quality Standards ("NAAQS"), leaving virtually no room for growth in emissions as contemplated by the Whitewater MDP EA. The EA notes that: "The base year DVBs [base design values using EPA's Modeled Attainment Test Software (MATS)] . . . indicate that there are areas nearby the Project Area in Mesa County that are above the 70 ppb NAAQS, in the range of 73 to 76 ppb," Updated EA at 196, and "The 2008 Base Case . . . indicates that there are areas nearby the Project Area in Mesa County that are above the 70 ppb NAAQS, in the range of 71 to 76 ppb," Updated EA at 197.

The EA discloses that there is a predominance of wind that blows generally from the southeast over the project site. Updated EA at 44 (Tables 3.2-2 and 3.2-3), 45 (Figure 3.2.1). The EA states that the average wind speed results in "presence of good dispersion and mixing of any potential pollutant emissions." Updated EA at 43. But when the pollutant of concern is ozone, this is not a good outcome. Ozone is not directly emitted from oil and gas operations. Rather it is a product of the availability of precursor materials and the high levels of UV radiation common in the project area and upwind. Precursor materials include volatile organics (VOCs, which could be released as part of drilling and regular operations) and oxides of nitrogen (NOx, which are released by fossil fuel engines, especially those that do not meet the latest EPA standards and combustion of excess natural gas). Hence, the prevailing wind patterns (with speeds to generate good mixing) with new emissions of VOCs and increased availability of NOx would potentially contribute to substantial increases in ozone over the agricultural areas to the north west of the project area, in particular the Palisade fruit and wine district. Ozone levels in this area are already high enough to have some negative effects on productivity and quality; higher levels could have significantly greater effects because the damages grow nonlinearly.

Ozone has also long been recognized to cause adverse health effects, in addition to effects on agriculture and wild plants and animals. With respect to human health effects, exposure to ozone can cause or exacerbate respiratory health problems—including shortness of breath, asthma, chest pain and coughing—can decrease lung function, and can even lead to long-term lung damage. *See also* EPA's National Ambient Air Quality Standards for Particulates and Ozone, 62 FR 38,856 (July 18, 1997). Short term exposure to ozone causes multiple negative respiratory effects, from inflammation of airways to more serious respiratory effects that can lead to use of medication, absences from school and work, hospital admissions, emergency room visits, and chronic obstructive pulmonary disease ("COPD"). According to a recent report by the National Research Council ("NRC"), short-term exposure to current levels of ozone in many areas is likely to contribute to premature deaths.[7] Even ozone concentrations as low as 60 ppb can be harmful to human health. Long-term exposure to elevated levels of ozone results in numerous negative harmful effects, such as permanent lung damage and abnormal lung development in children. Long-term exposure may also increase risk of death from respiratory problems. Short- and long-term exposure to elevated levels of ozone can also harm people's hearts and cardiovascular systems. *See* 79 Fed. Reg. 75234-311.

[7] National Research Council, *Link Between Ozone Air Pollution and Premature Death Confirmed,* (April 2008), available at: http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12198.

On October 26, 2015, EPA published a final rule to revise the NAAQS for ozone to 70 parts per billion (ppb) from the current 75 ppb. National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65292 (Oct. 26, 2015). This decision was driven by significant recent scientific evidence that the standard of 75 ppb was not adequately protecting public health. *Id.* at 136. In fact, recent studies have documented decreased lung functioning and airway inflammation in young, healthy adults at ozone concentrations as low as 60 ppb. *Id.* at 146.

Additionally, climate change is likely to worsen ozone pollution, offsetting the improvements in air quality and public health that would be expected from reductions in emissions of ozone precursors. As described by the EPA in its ozone rulemaking:

> In addition to being affected by changing emissions, future O_3 concentrations may also be affected by climate change. Modeling studies in the EPA's Interim Assessment (U.S. EPA, 2009a) that are cited in support of the 2009 Endangerment Finding under CAA section 202(a) (74 FR 66496, Dec. 15, 2009) as well as a recent assessment of potential climate change impacts (Fann et al., 2015) project that climate change may lead to future increases in summer O_3 concentrations across the contiguous U.S. While the projected impact is not uniform, climate change has the potential to increase average summertime O_3 concentrations by as much as 1-5 ppb by 2030, if greenhouse gas emissions are not mitigated. Increases in temperature are expected to be the principal factor in driving any O_3 increases, although increases in stagnation frequency may also contribute (Jacob and Winner, 2009). If unchecked, climate change has the potential to offset some of the improvements in O_3 air quality, and therefore some of the improvements in public health, that are expected from reductions in emissions of O_3 precursors.

80 Fed. Reg. 65292, 65300 (October 26, 2015). For example, climate change impacts include an increase in the area burned by wildfires, which, in turn are sources of O_3 precursors. *Id.* at 65371. Given the EA's acknowledgement that climate change can increase the occurrence and severity of wildfires on BLM-administered land, Updated EA at 57, the BLM should address this impact of climate change on ozone pollution.

Notably, much of air pollution from oil and gas development and operations also degrades visibility. Section 169A of the Clean Air Act ("CAA"), 42, U.S.C. § 7401 *et seq.* (1970) sets forth a national goal for visibility, which is the "prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas which impairment results from manmade air pollution." Congress adopted the visibility provisions in the CAA to protect visibility in "areas of great scenic importance." H.R. Rep. No. 294, 95th Cong. 1st Sess. at 205 (1977). In promulgating its Regional Haze Regulations, 64 Fed. Reg. 35,714 (July 1, 1999), the U.S. Environmental Protection Agency ("EPA") provided:

> Regional haze is visibility impairment that is produced by a multitude of sources and activities which emit fine particles and their precursors and which are located across a broad geographic area. Twenty years ago, when initially

> adopting the visibility protection provisions of the CAA, Congress specifically recognized that the "visibility problem is caused primarily by emission into the atmosphere of SO2, oxides of nitrogen, and particulate matter, especially fine particulate matter, from inadequate[ly] controlled sources." H.R. Rep. No. 95-294 at 204 (1977). The fine particulate matter (PM) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust) that impairs visibility by scattering and absorbing light can cause serious health effects and mortality in humans, and contribute to environmental effects such as acid deposition and eutrophication.

The visibility protection program under sections 169A, 169B, and 110(a)(2)(J) of the CAA is designed to protect Class I areas from impairment due to manmade air pollution. The current regulatory program addresses visibility impairment in these areas that is "reasonably attributable" to a specific source or small group of sources, such as, here, air pollution resulting from oil and gas development. *See* 64 Fed. Reg. 35,714.

Moreover, EPA finds the visibility protection provisions of the CAA to be quite broad. Although EPA is addressing visibility protection in phases, the national visibility goal in section 169A calls for addressing visibility impairment generally, including regional haze. *See e.g., State of Maine v. Thomas*, 874 F.2d 883, 885 (1st Cir. 1989) ("EPA's mandate to control the vexing problem of regional haze emanates directly from the CAA, which 'declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas which impairment results from manmade air pollution.' ") (citation omitted).

Here, there are at least 10 Class I areas near the Whitewater MDP project area that may be impacted by the proposed development, including: Maroon Bells-Snowmass Wilderness Area; Arches National Park; Black Canyon of the Gunnison National Park; Eagles Nest Wilderness Area; Flat Tops Wilderness Area; La Garita Wilderness Area; Weminuche Wilderness Area; Mesa Verde National Park; Canyon Lands National Park; and West Elk Wilderness Area. Visibility in nearby Class I areas is already impaired.

Additionally, in evaluating significance, BLM is required to consider the "[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas." 40 C.F.R. § 1508.27(b). The economy of GJ relies heavily on recreational visitors who come to enjoy the area's scenic surroundings, by traveling the wine and fruit byway, hiking on the flanks of the Grand Mesa and the Book Cliffs, or biking on the proposed Palisade Plunge bike trail. The area also includes prime farmlands. Both the development of the drilling operations and the operation of the trucks passing through the area will negatively affect these values, including by affecting the viewshed.

The BLM also erroneously finds no significance with respect to the project's impacts to water and endangered fish. The project will cause erosion and sedimentation and will likely increase selenium and salinity concentrations in streams. Updated EA at 91. The project also threatens the contamination of both surface and groundwater from accidental releases of drilling

fluids, produced water, condensate, lubricants, and fuels, and risks hydrocarbon leaks into groundwater. Updated EA at 94-95. These impacts implicate both human health and endangered species and their habitat, two factors that the BLM must consider when evaluating significance.

For example, selenium concentrations in the endangered pikeminnow are already at toxic levels near the project area. Updated EA at 122. All surface disturbance in the project area would be to selenium-containing soils. *Id*. 59 percent of the proposed surface disturbances would be to the particularly selenium-rich soils of the Mancos Shale. *Id*. An increase in selenium concentration in pikeminnow critical habitat—which the BLM concedes will be a consequence of the project—is significant, especially where the pikeminnow is already suffering from selenium toxicity. *Id.* BLM also notes that "[e]ffects on Blue Lineage cutthroat trout could also include increased salt loads and selenium concentrations similar to effects described for the Colorado pikeminnow." *Id.* at 125.

BLM also recognizes that endangered fish are at risk of entrainment and impingement in pump water intakes, noting in particular that "[w]ater withdrawn directly from North Fork Kannah Creek, tributary to the North Fork and Brandon Ditch[,] during any time of year could impinge and entrain juvenile and fry cutthroat trout in pump intakes." Updated EA at 125.

Contaminated surface runoff, inadvertent fuel spills, and release of other hazardous materials also might affect sensitive and endangered aquatic species in or downstream of the Project Area. Updated EA at 125. For all these reasons, an EIS is required.

Another significant impact is to the City of Grand Junction public water supply. The EA considers this impact to be of "special concern." Updated EA at 90. In particular, one of the project's proposed well pads will be located "upslope of" and "adjacent to an unnamed ephemeral stream flowing towards" the Juniata Reservoir, a major water storage facility for the City of Grand Junction. *Id.* The EA notes that, although the well pad has a "No Surface Occupancy" stipulation because of the potential for impact to the Grand Junction public water supply, Fram would need to obtain an exception to the lease stipulation to build this well pad in its current proposed location. *Id*. Locating a well pad upstream of and adjacent to a stream flowing into a major public water reservoir is significant given the serious risk to public health posed by contamination of the reservoir. The action deserves analysis in an EIS.

C. The BLM improperly relies on mitigation measures without demonstrating that the measures will reduce impacts below the level of significance.

Throughout the EA, the BLM relies on perfunctory descriptions (often in list form) of mitigation measures without meaningful analysis demonstrating that the measures will reduce impacts below the level of significance. *See Nat'l Parks*, 241 F.3d at 734. "[M]itigation measures, while necessary, are not alone sufficient to meet the [Agency's] NEPA obligations to determine the projected extent of the environmental harm to enumerated resources *before* a project is approved." *Northern Plains Resource Council v. Surface Transportation Board,* 668 F.3d 1067, 1085 (9th Cir. 2011) (emphasis in original). For example, in the context of selenium impacts to the pikeminnow, the BLM merely states that "application of measures proposed in the Biological Resources Protection Plan and SWMP" will "minimize potential discharge of

selenium-bearing sediments." Updated EA at 124. Similarly, the BLM relies on mitigation measures such as "pitless drilling systems" and "notification of potentially impacted Public Water Systems" to dismiss effects from the well pad upslope of Juniata Reservoir. EA at 90-91. Perfunctory descriptions of mitigating measures and conclusory statements like these—which appear throughout the EA—are insufficient to support a finding of no significant impact.

The key question is whether mitigation measures will reduce impacts below the threshold of significance. *See Nat'l Parks*, 241 F.3d at 734. "A 'perfunctory description,' or 'mere listing of mitigation measures, without supporting analytical data,' is insufficient to support a finding of no significant impact." *Id.* at 735. When determining the sufficiency of the mitigation measures, courts consider "whether they constitute an adequate buffer against the negative impacts that may result from the authorized activity. Specifically, [the court] examine[s] whether the mitigation measures will render such impacts so minor as to not warrant an EIS." *Id.; see also, Hill v. Boy,* 144 F.3d 1446, 1451 (11th Cir.1998) (explaining that where an agency relies on an assumption to reach a FONSI, the assumption must be supported by substantial evidence). Moreover, the proposed mitigation underlying the FONSI "must be more than a possibility" in that it is "imposed by statute or regulation or [has] been so integrated into the initial proposal that it is impossible to define the proposal without mitigation." *Wyoming Outdoor Council v. U.S. Army Corps of Eng'rs,* 351 F.Supp.2d 1232, 1250 (D.Wyo. 2005).

Here, the agency offers nothing more than empty assurances that mitigation measures will generically "reduce" impacts or "improve" outcomes. The agency does not provide the necessary analytical data to demonstrate specifically that impacts will be reduced below the threshold of significance. Indeed, in many cases, the agency does not even logically link mitigation measures to the reduced impacts. Instead, the agency merely mentions mitigation measures, or directs the reader to lists of mitigation measures elsewhere in the EA (e.g. Project Design Features and BLM COAs), without explaining how those measures will reduce impacts, and without any attention given to ensuring specifically that mitigation measures will cause impacts fall below the threshold of significance. For example, the agency notes that the project will have sedimentation impacts to streams due to (1) stream crossings and increased vehicular traffic, which will be on-going for 4 years, and (2) runoff from access roads, which will remain in place for approximately 20 years. Updated EA at 91. The EA assures the reader that "preventive measures, proper site management and spill response procedures . . . would reduce the effects of erosion and sedimentation." *Id.* at 94. According to the EA, these preventive measures include measures that would "follow" the "recommendations" outlined in BLM's "Gold Book"; requirements of the State's site-specific Storm Water Discharge Permit and SWMP; and "recommendations" from the Town of Palisade and City of Grand Junction Watershed Plan. *Id*. at 94-95. The agency's approach is flawed in several respects. First, two of the agency's three proposed mitigation measures are mere recommendations, not statutory or other requirements creating binding commitments. Second, the agency has failed to ensure that sedimentation impacts will fall below the level of significance. Indeed, the agency offers no explanation at all of how these mitigation measures will reduce sedimentation or erosion in any respect, much less below the level of significance. This conclusory approach, in which the agency merely assumes that mitigation measures are sufficient, cannot support a finding of no significant impact.

Notably, the fact that a best practice or mitigation measure improves a risky or harmful action does not necessarily mean that that measure lowers the action's impacts below the level of significance. For example, in the case of the pikeminnow, the EA reveals that selenium will be released into pikeminnow critical habitat even with mitigation. Thus, even with mitigation, the project will have a significant impact. If the impact is not significant, the BLM must explain why not. The BLM must "put forth 'a convincing statement of reasons' that explains why the project will not impact the environment no more than insignificantly." *Ocean Advoc.,* 402 F.3d at 864.

Similarly, with regard to cumulative impacts, the agency must provide *some* explanation of how or why compensatory mitigation will reduce the cumulative adverse impacts on the resources in question to insignificance. Bare assertions of mitigation are insufficient. *O'Reilly v. U.S. Army Corps of Eng'rs,* 477 F.3d 225, 235 (5th Cir.2007) ("[A] bare assertion is simply insufficient to explain *why* the mitigation requirements render the cumulative effects of this project less-than-significant, when considered with the past, present, and foreseeable future development in the project area." (emphasis in the original)). The agency's analysis of cumulative impacts—particularly with regard to air quality, climate, and water resource impacts—must explain how mitigation will reduce these impacts to a level of insignificance.

D. The BLM may not label discussion of future environmental effects as "crystal ball inquiry" to avoid a finding of significant impact.

The BLM refuses to undertake any meaningful analysis of climate impacts from the project, claiming: "Predicting the degree of impact any single emitter of GHGs may have on global climate change, or on the changes to biotic and abiotic systems that accompany climate change, is not possible at this time." Updated EA at 66. In refusing to undertake this analysis, the BLM evades its duty under NEPA. "Reasonable forecasting and speculation is . . . implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'" *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1246 n.9 (9th Cir. 1984) (quoting *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm.,* 481 F.2d 1079, 1092 (D.C. Cir. 1973)). The BLM is required to provide a "reasonably thorough discussion of the significant aspects of the probable environmental consequences" of the project on climate change, to "foster both informed decision-making and informed public participation." *Ctr. for Biological Diversity v. Natl Hwy. Traffic Safety Admin.*, 538 F.3d 1172, 1194 (9th Cir. 2008). Failure to meaningfully address the project's impacts on climate denies both the agency and the public information necessary for informed decision-making. Without a reasonably thorough climate analysis, the EA cannot support a finding of no significant impacts.

NEPA imposes "action forcing procedures … requir[ing] that agencies take a *hard look* at environmental consequences." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (citations omitted) (emphasis added). These "environmental consequences" may be direct, indirect, or cumulative. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8. BLM is required to take a hard look at those impacts as they relate to the agency action. "Energy-related activities contribute 70% of global GHG emissions; oil and gas together represent 60% of those energy-

related emissions through their extraction, processing and subsequent combustion."[8] Even if science cannot isolate each additional oil or gas well's contribution to these overall emissions, this does not obviate BLM's responsibility to consider oil and gas development from the Whitewater MDP from the cumulative impacts of the oil and gas sector. In other words, the BLM cannot ignore the larger relationship that oil and gas management decisions have to the broader climate crisis that we face. Here, the agency's analysis must include the full scope of GHG emissions. *See Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998) ("To 'consider' cumulative effects, some quantified or detailed information is required. Without such information, neither the courts nor the public, in reviewing the [agency's] decisions, can be assured that the [agency] provided the hard look that it is required to provide."). If we are to stem climate disaster – the impacts of which we are already experiencing – the agency's decision-making must be reflective of this reality and plan accordingly.

BLM is, at the end of the day, responsible for the management of 700 million acres of federal onshore subsurface minerals.[9] Indeed, "ultimate downstream GHG emissions from fossil fuel extraction from federal lands and waters by private leaseholders could have accounted for approximately 21% of total U.S. GHG emissions and 24% of all energy-related GHG emissions."[10] This suggests that "ultimate GHG emissions from fossil fuels extracted from federal lands and waters by private leaseholders in 2010 could be more than 20-times larger than the estimate reported in the CEQ inventory, [which estimates total federal emissions from agencies' operations to be 66.4 million metric tons]. Overall, ultimate downstream GHG emissions resulting from fossil fuel extraction from federal lands and waters by private leaseholders in 2010 are estimated to total 1,551 [million metric tons of CO_2 equivalent ("$MMTCO_2e$")]." *Id.* To suggest that the agency does not, here, have to account for GHG pollution from oil and gas development authorized in the Whitewater MDP, would be to suggest that the collective 700 million acres of subsurface mineral estate is not relevant to protecting against climate change. This sort of flawed, reductive thinking is problematic, and contradicted by the agency's very management framework, which provides a place-based lens to account for specific pollution sources to ensure that the broader public interest is protected. Therefore, even though climate change emissions from the Whitewater MDP may look minor when viewed on the scale of the global climate crisis we face, when considered cumulatively with all of the other GHG emissions from BLM-managed land, they become significant and cannot be ignored.

III. BLM must provide a hard look analysis of important resource values impacted by the Whitewater MDP, including air, water, and wildlife resources.

A. The BLM must sufficiently analyze impacts related to air.

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[8] International Investors Group on Climate Change, *Global Climate Disclosure Framework for Oil and Gas Companies* (attached as Exhibit 4).

[9] *See* DOI-BLM, *Mineral and Surface Acreage Managed By BLM,* available at: http://www.blm.gov/wo/st/en/info/About_BLM/subsurface.html.

[10] Stratus Consulting, prepared for: The Wilderness Society, *Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update*, Dec. 23, 2014 at 13 (attached as Exhibit 5).

The BLM failed to take a hard look at air quality impacts from the proposed development. For example, the EA ignored regional temperature inversion events and methane emissions. The BLM must take a hard look at the project's air quality impacts and reconsider its proposed alternative in light of those impacts.

1. The BLM must consider regional temperature inversions.

The BLM failed to consider the impact of temperature inversions on regional air quality, despite recognizing that "[t]he climate and topography of the region are conducive to the formation of temperature inversions." Updated EA at 43; *see also* BLM Response to Public Comments at 19 ("Inversions naturally occur within the Grand Junction air shed."). A temperature inversion is a layer of the atmosphere in which air temperature increases with height, where a cold layer of air is trapped under a warmer layer of air. That warmer air also traps air pollutants in that cold pool of air. According to researchers, "the resulting atmospheric stagnation inhibits pollutants from dispersing out of the region, resulting in higher pollution concentrations and longer periods of poor air quality than might otherwise be expected."[11] BLM acknowledges that air quality suffers during temperature inversions, noting that "[p]oor dispersion conditions do occur during periods with temperature inversions, which are common to the area." Updated EA at 43. However, BLM has declined to perform air quality analysis during times of inversions. BLM Response to Public Comments at 19 ("Specific air flow studies during times of inversions have not been performed for this EA.")

BLM must examine how these temperature inversion events will impact air pollution from the proposed alternative. The EA states that the "[t]he annual mean wind speed is 7.3 miles per hour (mph), a relatively high average indicating the presence of good dispersion and mixing of any potential pollutant emissions for most hours over the year." Updated EA at 43. The EA goes on to note that short-term emissions events, such as well pad construction, "would temporarily elevate pollutant levels, but impacts would be localized and would occur only for the short-term duration of the activities." *Id.* at 59. These statements ignore the seasonal variation in inversion events, where even temporary events may impact air quality and human health. They also ignore the significance of localized, short-term impacts (the locations of the northernmost pads proposed under the Whitewater MDP would be directly above the fruit and wine byway). The BLM must take a hard look at regional air quality impacts associated with inversions, especially when the National Oceanic and Atmospheric Administration ("NOAA") provides readily available inversion data for Grand Junction.[12]

2. The BLM must take a hard look at methane emissions from the project.

BLM must take steps to reduce methane emissions from the Whitewater MDP project, including (1) by undertaking a true hard-look analysis of methane waste; (2) by adopting

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[11] C. David Whiteman, et al., *Wintertime boundary layer structure in the Grand Canyon*, JOURNAL OF APPLIED METEOROLOGY (Aug. 1999) (attached as Exhibit 6).
[12] *See* National Ocean and Atmospheric Administration (NOAA)/Earth System Research Laboratory (ESRL), Radiosonde Database, available at: http://www.esrl.noaa.gov/raobs/.

enforceable mitigation requirements to minimize methane waste; and (3) by considering alternatives that require Fram to reduce methane waste. BLM must also discuss methane's contribution to ozone, and assess associated air quality and health impacts.

As detailed in our earlier comments, BLM's duty to prevent waste is expansive: "[a]ll leases of lands containing oil or gas ... shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to prevent waste of oil or gas developed in the land...." 30 U.S.C. § 225; *see also* 30 U.S.C. § 187 ("Each lease shall contain...a provision...for the prevention of undue waste...."). BLM is also required "to promote the orderly and efficient exploration, development and production of oil and gas." 43 C.F.R. § 3160.0-4. As the Mineral Leasing Act's ("MLA"), 30 U.S.C. § 181 *et seq.,* legislative history teaches, "conservation through control was the dominant theme of the debates." *Boesche v. Udall*, 373 U.S. 472, 481 (1963) (citing H.R.Rep. No. 398, 66th Cong., 1st Sess. 12-13; H.R.Rep. No. 1138, 65th Cong., 3d Sess. 19 ("The legislation provided for herein...will [help] prevent waste and other lax methods....")).

In order to fulfill its duty to prevent waste from the Whitewater MDP project, BLM must first take a true hard-look analysis of methane waste. This analysis must begin with the BLM's disclosure of the amount of methane emissions that it expects from the Whitewater MDP. Nowhere does BLM provide this information. *See* Updated EA at 61 (providing total GHG emissions in CO_2e, but not disclosing how much of this total is CH_4). BLM provides that: "The relatively low amount of natural gas expected to be co-produced with the oil would not be compressed and sold, but used to run production equipment on the well pads. Another potential use of this gas is for re-injection into the formation to increase formation pressure. Any "excess" natural gas beyond these uses would be combusted at the wellhead." *Id.* at 12. BLM should go further to quantify exactly how much gas will be co-produced with oil, how much gas is expected to be used in the operation of production equipment, how much gas is expected to be re-injected, and how much gas the agency anticipates will be flared or combusted (and whether flaring and combustion are different). Notably, aside from being a significant source of CO_2 emissions, gas flaring contributes to acid rain, and may emit NOx, PM_{10}, $PM_{2.5}$, SO_2, VOCs and HAPs. BLM must analyze these and other environmental impacts from gas flaring, as well as any air quality impacts associated with reinjection.

Additionally, in calculating and disclosing the project's GHG emissions, BLM must use a global warming potential ("GWP") that accurately reflects methane's impact on climate. Currently, BLM underestimates the climate impact of methane emissions by using an outdated GWP for methane of 25, meaning that methane is assumed to be 25 times as potent as CO_2. Updated EA at 61. This GWP apparently reflects methane's impact over a 100-year time frame. However, the 100-year GWP for methane was updated by the IPCC in a 2013 Report to reflect that methane is 36 times as potent as CO_2. [13] Additionally, the IPCC's new research has

[13] G. Myhre et al., Anthropogenic and Natural Radiative Forcing, in INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *Working Group I Contribution to the IPCC Fifth Assessment Report Climate Change 2013: The Physical Science Basis*, Table 8.7 at 714 (attached as Exhibit 7).

calculated that methane is 87 times as potent as CO_2 over a 20-year time horizon.[14] These values should be used—or at the very least acknowledged—in the EA.

Second, BLM should adopt enforceable mitigation requirements to minimize methane waste. The EA indicates that "no venting of natural gas should occur," Updated EA at 66, and "[n]o flaring of natural gas would take place," *id.* at 23. As an initial matter, it is not clear that "no flaring" will take place, as the agency indicates that "combustion" will occur and contemplates "completion venting/flaring." *Id.* at 12, 23 ("Any excess gas would be combusted at the well pad . . ."), 60 (Table 3.2-10). BLM should clarify whether or not flaring or venting will occur. Moreover, BLM should provide binding requirements to minimize venting or flaring or require capture. BLM merely provides that, "depending on the amount of excess gas, the BLM *may* require that Fram gather the gas and transport it via pipeline to 'sales' lines." *Id.* at 12 (emphasis added). BLM should include mitigation measures aimed at capturing or beneficially using methane, and should ensure that these measures are "verifiable, durable, enforceable, and will be implemented." CEQ, Final Climate Guidance at 19.

Third, BLM should provide an alternative requiring Fram to gather the excess gas and transport it via pipeline to sales lines. Such an alternative would inform the decision-making process and allow BLM and the public to evaluate the agency's choice to allow Fram to combust the "excess" gas. Such an alternative would include an evaluation supported by engineering, geologic, and economic data that demonstrates whether the expenditures necessary to market or beneficially use the gas are or are not economically justified. It appears that there are no technological barriers to gas sales, as the proposal includes the construction of gas gathering lines, a permitted gas compressor at Fram's Reeder Mesa Facility, and connections to the Trans-Colorado gas pipeline and Rocky Mountain Express pipeline. *Id.* Where Fram profits are the only barrier to natural gas collection and sale, the BLM should analyze a reasonable alternative involving methane capture and disclose associated air quality impacts.

Finally, BLM must discuss methane's contribution to ozone, and assess associated air quality and health impacts. Methane emissions are directly linked to the production of tropospheric ozone. Despite this impact, as noted above, the BLM failed to disclose methane emissions or sources, or model methane emissions in its air quality analysis. *See* Updated EA at 61. BLM must conduct such an analysis, which is particularly important in light of the fact that data from the EA indicates that air quality for regional ozone is poor. *Id.* at 196-97.

B. The BLM must sufficiently analyze impacts related to water.

1. Groundwater Impacts

The resource development proposed by the Whitewater MDP has the potential to contaminate groundwater resources in the project area – including groundwater springs and aquifers serving nearby residents and the surrounding communities. Such contamination may result during the following processes: (1) water withdrawals for hydraulic fracturing in times or areas of low water availability, particularly in areas with limited or declining groundwater

[14] *Id.*

resources; (2) spills during the management of hydraulic fracturing fluids and chemicals or produced water that result in large volumes or high concentrations of chemicals reaching groundwater resources; (3) injection of hydraulic fracturing fluids into wells with inadequate mechanical integrity, allowing gases or liquids to move to groundwater resources; (4) injection of hydraulic fracturing fluids directly into groundwater resources; (5) disposal or storage of hydraulic fracturing wastewater in unlined pits, resulting in contamination of groundwater resources.[15] Not all chemical used in fracking have been fully disclosed, Updated EA at 97, but many of those that have been disclosed or discovered are toxic, hazardous, or harmful to human health or welfare. Various instances of water pollution from fracking operations have been documented.[16]

Here, BLM's NEPA analysis of the Whitewater MDP fails to sufficiently analyze the direct, indirect, and cumulative impacts to groundwater. *See* 40 C.F.R. § 1508.25(c). BLM concludes that "use of HF technology in completions of oil and gas wells for the purpose of facilitating recovery of Federal fluid minerals does not represent a significant risk of adverse impacts to human health and the environment." Updated EA at 98. The BLM reaches this conclusion on the basis that groundwater wells typically extend to depths of less than 200 feet below the surface, while fracking occurs at depths of 3,000 to 11,000 feet below the surface. *Id*. at 97. BLM also notes that BLM and COGCC rules provide for "proper casing and cementing of wellbores to isolate the aquifers penetrated by the wellbore." *Id.* However, BLM must address the concerns with fracking outlined above, including the potential for spills, injection of fracking fluids into wells with inadequate mechanical integrity, injection of fracking fluids directing into groundwater resources, and disposal of fracking wastewater. Without addressing the potential for these key sources of contamination, BLM's discussion fails to satisfy the hard look requirements of NEPA.

2. Surface Water Impacts

A recent report has identified that there were 516 spills related to oil and gas development in 2011 in Colorado, and of those, the Colorado Oil and Gas Conservation Commission ("COGCC") only assessed 5 fines.[17] This is of particular note, here, because the agency recognizes that "there would be a potential risk of contamination of surface water during accidental releases of drilling fluids, fracking fluids, produced water, condensate, lubricants and fuels and other chemicals that could into [sic] flow into streams or ditches during transport." Updated EA at 94. Both the COGCC report and BLM's own admission regarding the risk of spills raise significant concerns about COGCC's enforcement capabilities and the likelihood that any subsequent spill in the Whitewater MDP would be sufficiently addressed.

2. Water Quantity

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[15] *See* U.S. Envtl. Protection Agency, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States (Final Report)* (Dec. 2016) at ES-3 (attached as Exhibit 8).
[16] *Id.* at ES-22, ES-30, ES-35, ES-40.
[17] Earthworks, *Enforcement Report, COGCC: Inadequate enforcement means current Colorado oil and gas development is irresponsible* (March 2012) (attached as Exhibit 9).

In addition to impacts on water quality, mineral development processes, and particularly fracking, may result in significant impacts on water quantity. Such impacts are not adequately addressed in the Whitewater MDP. Although Fram's "preferred" nitrogen foam fracking technique ("Access Frac") would reduce water consumption – with the EA providing that "[a]pproximately 1,950 barrels (0.25 acre-feet) of fresh water would be required for drilling each well," totaling 6.25 acre-feet for drilling annually – these quantities are still significant depletions to an already arid landscape. Updated EA at 20. Moreover, the water used for this project "would be purchased from the City of Grand Junction," potentially impacting the city's water supply. *Id.* at 94. However, "because water from existing water rights would be used, no new impacts on water rights beyond those already permitted would occur." *Id.* at 95. No analysis of water use, or the impact that this will have to municipal water supplies is provided. Such dismissive treatment is impermissible.

Notably, Fram has made no commitment to using the Access Frac method. BLM notes that "Fram is considering three different HF techniques to complete these wells"—the "Access Frac" method, the typical nitrogen foam frac method, and the slickwater frac method. Updated EA at 20. Taking into account water use for drilling, completion, dust control, and hydrostatic testing, BLM estimates that the project will use between 52.75 and 361.50 acre-feet of water annually depending on the fracking method used.

If Fram uses the "slickwater" technique, which "us[es] water to transport the proppant and other consituents and to exert hydrostatic pressure on the targeted bedrock zones," *id.*, vast additional quantities of water would be required. To frack a single well one time requires between 2 and 8 million gallons of water.[18] This massive use of water is of particular concern in states in the interior west, like Colorado, were water supplies are scarce and already stretched.[19]

Here, BLM's NEPA analysis has failed to closely assess the direct, indirect, and cumulative impacts of development from the Whitewater MDP on water supplies. 40 C.F.R. §§ 1508.7, 1508.8. This analysis has failed to consider the impacts of these water withdrawals on water availability for drinking, agriculture, and wildlife. And, further, it has failed to address the impacts to water quantity at annual, seasonal, monthly, and daily time scales because the impacts of such water withdrawals could be more acute during times, months, and seasons of scarcity. For example, increased withdrawal and irretrievable contamination of waters will be particularly harmful during times – like the present – when much of the state is experiencing drought conditions.[20] As noted above, the EA for the Whitewater MDP fails to provide adequate analysis or recognition of significant water quantity issues associated with oil and gas development, representing a fundamental shortcoming in the EA.

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[18] J. David Hughes, *Will Natural Gas Fuel America in the 21st Century?*, May 2011, at 23, (attached as Exhibit 10).

[19] *See* Western Organization of Resource Councils, *Gone for Good: Fracking and Water Loss in the West* (2013) at 7-8 (noting water scarcity in west and significant water demands of fracking) (attached as Exhibit 11).

[20] *See* WORC, attached above as Exhibit 11 at 8.

C. The BLM must sufficiently analyze impacts related to wildlife.

1. Big Game

The project area for the Whitewater MDP coincides with a Colorado Parks and Wildlife ("CPW") game management unit that includes mule deer, elk, pronghorn, moose, black bear and mountain lion. Updated EA at 141. BLM acknowledges that "[a]ll proposed well pads are either located within big game sensitive winter range or have access through big game sensitive winter range." *Id.* at 37. Specifically, "most of the eastern and southern portions of the Project Area are within mule deer or elk sensitive winter range, [and] include both winter concentration areas and severe winter range." *Id.* at 141.

In February 2014, Fram and CPW signed a Wildlife Mitigation Plan under which Fram will avoid construction within sensitive big game winter habitats from December 1 through April 30; will take steps to minimize traffic during that time; and will redistribute large, woody material salvaged during clearing operations to provide wildlife habitat and a deterrent to vehicular traffic. Biological Resources Protection Plan (Updated February 2017).

Although these measures provide protections for elk, deer, and pronghorn during the winter months, BLM must still adequately acknowledge and address the likely year-round, long-term impacts of the proposal, including from roads and surface disturbance associated with well pads. BLM notes that, under all alternatives, "construction of well pads, project roads, collocated pipelines, and other surface facilities would result in a combined loss of 50.4 acres of mule deer sensitive winter range, 66.6 acres of elk sensitive winter range, and 85.9 acres of total deer/elk winter range." Updated EA at 144. Nevertheless, BLM dismissively concludes that "[f]or most of the Project Area, the combination of a big game winter range TL stipulation on the Federal leases, and various COAs addressing noise, dust, and prompt reclamation would reduce the indirect impacts in sensitive winter range." *Id.* at 145. BLM must give more consideration to the habitat fragmentation and avoidance by big game associated with construction of well pads, roads, and other infrastructure.

Roads are one of the most pervasive impacts of human development on natural landscapes. Their greatest impact by far lies in the indirect effects of habitat fragmentation and avoidance by wildlife. An extensive literature review was conducted by Rowland in 2005 concerning elk avoidance of roads.[21] Numerous studies document that elk avoid roads and do not use habitat adjacent to roads to its full potential. For example, when road densities are as low as one mile per square mile, elk habitat effectiveness is reduced by 25 percent.[22] In another literature review prepared in 2008, Hebblewhite referenced almost 200 resources relating to this topic. In eight studies that measured the distance of ungulate avoidance from roads, the average

[21] Mary M. Rowland et al., *Effects of Roads on Elk: Implications for Management in Forested Ecosystems* (2005) (attached as Exhibit 12).

[22] Chris Weller et al., *Fragmenting Our Lands: The Ecological Footprint From Oil And Gas Development* (Sept. 2002) at 16 (emphasis added) (attached as Exhibit 13).

"zone" of influence extended approximately 1000 meters from roads and wells.[23] In another study, human access facilitated by road development indirectly resulted in a 43 to 50 percent loss of high-use elk habitat in Wyoming.[24] For example, in the sage-steppe ecosystem of Wyoming's Jack Marrow Hills, elk avoided roads the most during summer months, strongly selecting habitats greater than 2,000 meters from these features. In addition, elk in the study continued to show avoidance of wellsites long after the construction phase had been completed.[25] In a major volume reviewing elk ecology and management, Lyon and Christensen state: "Access — mainly that facilitated by roads — is perhaps the single most significant modifier of elk habitat and a factor that will remain central to elk management on public and private lands. *It is possible that in areas with no cover, road densities less than one mile per square mile may eliminate effective habitat*.[26] These studies indicate that the Unit's ability to remain elk habitat would be significantly compromised. In light of this, the EA must take the necessary hard look to determine direct, indirect, and cumulative impacts of roads on local big game populations.

Additionally, the EA must take a hard look at the impacts of disturbance from the construction of well pads and other infrastructure. There are two potential concerns with the avoidance of well pads. First, the avoidance or lower probability of use of areas near wells creates indirect habitat losses of winter range that are substantially larger in size than the direct habitat losses incurred when native vegetation is removed during construction of the well pad. Habitat losses, whether direct or indirect, have the potential to reduce carrying capacity of the range and result in population-level effects. Second, if big game animals do not respond by vacating winter ranges, distribution shifts will result in increased density in remaining portions of the winter range, exposing the population to greater risks of density-dependent effects.[27] For mule deer, lower predicted probabilities of use within 2.7 to 3.7 km of well pads suggested indirect habitat losses may be substantially larger than direct habitat losses.[28] Following three years of gas development in western Wyoming, 41 percent of areas classified as high deer use

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[23] Mark Hebblewhite, *A Literature Review of the Effects of Energy Development on Ungulates: Implications for Central and Eastern Montana* (Prepared for Montana Fish, Wildlife and Parks) at 85 (2008) (attached as Exhibit 14).

[24] Clay B. Buchanan et al., *Seasonal Resource Selection and Distributional Response by Elk to Development of a Natural Gas Field*, 67 RANGELAND ECOLOGY AND MGMT. 369, 377 (2014) (attached as Exhibit 15).

[25] Hebblewhite at 23 (attached above as Exhibit 14).

[26] Janice L. Thomson et al*., Wildlife at a Crossroads: Energy Development in Western Wyoming, Effects of Roads on Habitat in the Upper Green River Valley* (Feb. 2005) at 18 (attached as Exhibit 16).

[27] Hall Sawyer et al., *Winter Habitat Selection of Mule Deer Before and During Development of a Natural Gas Field* 70 J. OF WILDLIFE MGMT. 396, 402 (2006) (attached as Exhibit 17).

[28] *Id*. at 396.

prior to development changed to medium-low or low-use areas. This change in distribution occurred with only two percent direct habitat loss. Relatively small amounts of direct habitat loss can affect winter distribution patterns of mule deer and the effects of direct habitat loss may be long term for species like mule deer that rely on native shrubs (i.e., sagebrush) because reclamation of native shrubs in arid environments is difficult.[29]

BLM's failure to consider the year-round and long term impacts of the proposal is a significant failure and must be corrected.

2. White-Tailed Prairie Dogs

The white-tailed prairie dog is a BLM sensitive species that exists within the Project Area. Updated EA at 119. BLM notes: "Five prairie dog colonies, ranging from 1 acre to 64 acres, were mapped west and south of Horse Mountain in the northern part of the Project Area." *Id.* The Wildlife Mitigation Plan provides that "Fram will avoid construction within active white-tailed prairie dog towns, if feasible. However, if active towns cannot be avoided, Fram will avoid activities within active white-tailed prairie dog towns during pupping season on BLM-administered lands from April 1 through July 15." Biological Resource Protection Plan at 4. The prairie dogs warrant and deserve better protection than merely an effort to avoid construction during prairie dog towns "if feasible." Given that prairie dog colonies have been mapped, BLM should provide for site-specific stipulations for well pads overlapping or near prairie dog towns to avoid short-term and long-term habitat loss.

Additionally, the EA does not contain any analysis of the impacts of road noise associated with increased traffic that will result from oil and gas development on well pads, or other noise resulting from drilling, compressor stations and other oil and gas activities. There is significant new research that indicates that exposure to traffic noise significantly lowered aboveground activity, reduced foraging, and increased vigilance.[30] In addition, the study found no evidence of habituation to noise over a 3 month period.[31] This research demonstrates that noise can drive significant changes in behavior that could impact fitness through lost foraging opportunities.[32] Further, the authors suggest that marked shifts in critical behaviors of prairie dogs as a direct consequence of exposure to traffic noise, may act synergistically with other anthropogenic disturbances to further impact vulnerable prairie dog populations.[33] The EA does not analyze the potential impacts of traffic noise associated with oil and gas drilling on white tailed prairie dogs. The BLM should analyze these impacts and consider lease stipulations to address the potential impacts of oil and gas traffic noise on white-tailed prairie dogs, including, but not limited to seasonal timing limitations to protect prairie dogs from noise impacts during the time period when

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[29] Hall Sawyer, *Final Report for the Atlantic Rim Mule Deer Study* (Apr. 2007) at 25 (attached as Exhibit 18).

[30] Graeme Shannon, et al., *Road Traffic Noise Modifies Behavior of a Keystone Species*, 94 ANIMAL BEHAVIOR 135, 135 (2014) (attached as Exhibit 19).
[31] *Id.*
[32] *Id.* at 140.
[33] *Id.*

they are breeding and raising pups, noise standards that require that traffic noise remain below certain thresholds, and controlled surface use so that BLM could require placement of roads as far from white tailed prairie dog colonies as possible.

Further, the EA must also analyze the direct or cumulative impacts of a variety of other potential impacts of oil and gas drilling, including not only increased noise, but also direct loss of habitat from surface disturbance, potential collapse of burrows, facilitation of predation due to oil and gas infrastructure creating raptor perches, direct mortality from vehicles, potential for increased shooting of prairie dogs by oil and gas workers, and potential for oil and gas drilling impacts to interact with sylvatic plague impacts to cause decline or loss of colonies.

The U.S. Fish and Wildlife Service is currently under a court order to make a new finding regarding whether white tailed prairie dogs should be protected under the Endangered Species Act.[34] In remanding the USFWS decision that the white-tailed prairie dog does not warrant ESA protection, the court found that the Service's conclusion that there were adequate regulatory mechanisms in place on BLM land sufficient to sustain the prairie dog populations in light of the threat posed by oil and gas development was not reasonable.[35] In other words, the BLM does not currently have adequate regulatory mechanisms in place to protect white-tailed prairie dogs from the significant threat posed by oil and gas development. In addition, the USFWS found that oil and gas development poses a threat to white tailed prairie dogs (the most significant threat in combination with sylvatic plague).[36] Given the potential for oil and gas to have significant negative impacts on prairie dog colonies, and the fact that BLM currently has inadequate regulatory mechanisms in its existing Resource Management Plans to protect this sensitive species from oil and gas development, it is critical that the EA provide a thorough analysis of impacts and that BLM include lease stipulations that minimize and mitigate the impacts of oil and gas development on this species.

D. BLM Must Adequately Consider Cumulative Effects.

Of critical importance to BLM's hard look analysis is the agency's discussion of the cumulative impacts from development of the Whitewater MDP. Here, although BLM has dedicated Chapter 4 of the EA to cumulative effects, analysis in this section exists in name only and fails to provide the type of detailed look that NEPA demands. *See NRDC*, 865 F.2d at 298 (providing that section headings without the "requisite analysis" are insufficient).

A cumulative impact is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. "Notably, an agency must take a hard look at cumulative impacts whether an EIS or EA is involved." *Environmental Protection*

[34] *Rocky Mountain Wild et al. v. U.S. Fish & Wildlife Service*, No. CV 13-42-M-DWM, Order September 29, 2014 (ECF No. 42).
[35] *Id.* at 24-28.
[36] *Id.* at 55.

Information Center v. Blackwell, 389 F.Supp.2d 1174, 1185 (N.D.Cal. 2004) (citing *Churchill County v. Norton,* 276 F.3d 1060, 1081 (9th Cir. 2001) (interpreting the regulations implementing NEPA as requiring that an EIS consider the cumulative impacts of the proposed agency action); *Kern v. United States Bureau of Land Mgmt.,* 284 F.3d 1062, 1076 (9th Cir. 2002) (stating that an EA "may be deficient if it fails to include a cumulative impact analysis"). "Because cumulative impacts analysis is important to both an EIS as well as an EA … it is appropriate to look to case law on cumulative impacts analyses in EISs for guidance even though this case involves an EA rather than an EIS." *EPIC*, 389 F.Supp.2d at 1185.

Consideration of cumulative impacts requires "some quantified or detailed information; ... general statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided. The cumulative impact analysis must be more than perfunctory; it must provide a 'useful analysis of the cumulative impacts of past, present, and future projects.' " *Kern,* 284 F.3d at 1075. *See also Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 810 (9th Cir. 1999) (stating that an environmental analysis "must analyze the combined effects of the actions in sufficient detail to be 'useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts.' "); *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 298 (D.C. Cir. 1988) ("Conclusory remarks [on cumulative impacts] ... do not equip a decisionmaker to make an informed decision about alternative courses of action or a court to review the [agency's] reasoning.").

Here, BLM's cumulative effects section offers only a cursory assessment of impacts to various resource values. *See* Updated EA at 186-209. Notably, the agency doesn't even identify several resources as worthy of discussion. For example, the agency fails to provide any cumulative analysis of GHG emissions or climate change. For example, the BLM should consider the cumulative impacts of this oil and gas development (for example, stress to endangered fish from disturbance of soils containing toxic selenium) when combined with the impacts of climate change (for example, stress to endangered fish from drought or warming water). BLM should also consider the cumulative effect of the foreseeable full-build out of the 90,000-acre Whitewater Unit along with development of the 52,500-acre MDP.

IV. BLM Must Take a Hard Look at the Climate Impacts of BLM's Fossil Fuel Management.

A. BLM Must Consider Cumulative Climate Impacts.

BLM must address the cumulative impacts on the climate of the foreseeable fossil fuel development on BLM-managed land. NEPA requires a detailed analysis of "cumulative" effects, which are "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. §§ 1508.7, 1508.25(c). Analysis of cumulative impacts protects against "the tyranny of small decisions," *Kern v. BLM*, 284 F.3d 1062, 1078 (9th Cir. 2002), by confronting the possibility that agency action may contribute to cumulatively significant effects even where impacts appear insignificant in isolation. 40 C.F.R. §§ 1508.7, 1508.27(b)(2). Here, BLM must consider the cumulative, incremental contribution of greenhouse

gas emissions from the Whitewater MDP, *added* to other past, present and reasonably foreseeable BLM-managed fossil-fuel extraction emissions.

The scope of the cumulative impacts inquiry must include other projects potentially impacting the same resources. For example, the Ninth Circuit has indicated that, in reviewing a land exchange that would increase air pollution in the Las Vegas Valley, BLM must consider the cumulative impact of all other foreseeable land exchanges in that region. *Hall v. Norton*, 266 F.3d 969, 978 (9th Cir. 2001). Similarly, in reviewing a timber sale that risked spreading a fungus harmful to cedars in Oregon, BLM violated NEPA by confining its analysis to the boundaries of the proposed sale; as the Ninth Circuit explained, NEPA required analysis of the cumulative impact of foreseeable sales throughout the region. *Kern v. BLM*, 284 F.3d at 1078; *see also Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1215 (9th Cir. 1998) (Forest Service, in approving timber sale for salvage after fire, required to consider cumulative impact of foreseeable sales across 140-square mile burned area).

"The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Such an analysis would enable BLM to take a hard look at the significance and severity of cumulative emissions coupled with plan implementation.

B. BLM Must Consider Carbon Budgeting.

One of the measuring standards available to BLM for analyzing the magnitude and severity of BLM-managed fossil fuel emissions is to apply those emissions to the remaining global carbon budget. A "carbon budget" offers a cap on the remaining stock of greenhouse gases that can be emitted while still keeping global average temperature rise below scientifically researched warming thresholds[37]—beyond which climate change impacts may result in severe and irreparable harm to the biosphere and humanity.

The Paris Agreement commits all signatories—including the United States—to a target holding long-term global average temperature "to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels."[38] As articulated by a team of international climate scientists, including Dr. James Hansen, in a 2013 report: "The widely accepted target of limiting human-made global warming to 2 degrees Celsius (3.6 degrees Fahrenheit) above preindustrial level is too high and would subject young people, future generations and nature to irreparable harm…. Observational data reveal that some climate extremes are already increasing in response to warming of several tenths of a degree in recent

[37] The Paris Agreement states that global warming must be held "well below 2°C above pre-industrial levels" with a goal to "limit the temperature increase to 1.5°C." U.N. Framework Convention on Climate Change, Conference of the Parties, Adoption of the Paris Agreement, Art. 2, U.N. Doc. FCCC/CP/2015/L.9 (Dec. 12, 2015), *available at* http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf (Exhibit 20).

[38] Paris Agreement at Art. 2 (attached as Exhibit 20).

decades; these extremes would likely be much enhanced with warming of 2°C or more."[39] "Runaway climate change—in which feedback loops drive ever-worsening climate change, regardless of human activities—are now seen as a risk even at 2°C of warming."[40] "[T]here is an unacceptable risk that before 2°C of warming, significant 'long-term' feedbacks will be triggered, in which warming produces conditions that generate more warming, so that carbon sinks such as the oceans and forests become less efficient in storing carbon, and polar warming triggers the release of significant permafrost and clathrate carbon stores. Such an outcome could render ineffective human efforts to control the level of future warming to manageable proportions."[41] Indeed, the impacts of 2°C temperature rise have been "revised upwards, sufficiently so that 2°C now more appropriately represents the threshold between 'dangerous' and 'extremely dangerous' climate change."[42] "[T]he risks previously believed to be associated with an increase of around 4°C in global temperatures are now associated with the rise of a little over 2°C, while the risks previously associated with 2°C are now thought to occur with only 1°C rise."[43]

Although the Paris Agreement has underscored that immediate action is needed to avoid 'extremely dangerous' warming, meeting the voluntary commitments adopted in Paris alone will be insufficient to meet goal of limiting temperature change to between 1.5°C and 2.0°C above pre-industrial levels. As noted by a 2015 UNEP technical report:

> The emissions gap between what the full implementation of the unconditional [intended nationally determined contributions (INDCs)] contribute and the least-cost emission level for a pathway to stay below 2°C, is estimated to be 14 $GtCO_2e$ (range: 12-17) in 2030 and 7 $GtCO_2e$ (range: 5-10) in 2025. When conditional INDCs are included as fully implemented, the emissions gap in 2030 is estimated to be 12 GtCO2e (range: 10-15) and 5 $GtCO_2e$ (range: 4-8) in 2025.[44]

In other words, far greater emissions reductions are necessary to stay below and 2.0°C, let alone aspire to 1.5°C of warming. If no further progress were made beyond the Paris Agreement, expected warming by 2100 would be 3.5°C.[45] In the alternative, if no action is taken

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[39] James Hansen, *et al., Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature,* 8 PLoS ONE 8 e81648 (2013) (attached as Exhibit 21).
[40] Greg Muttitt, *et al.*, *The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production*, Oil Change International (Sept. 2016) at 6 (attached as Exhibit 22).
[41] David Spratt, *Climate Reality Check: After Paris, Counting the Cost* (March 2016) at 8 (attached as Exhibit 23).
[42] Kevin Anderson and Alice Bows, *Beyond 'Dangerous' Climate Change: Emission Scenarios for a New World*, Phil. Trans. R. Soc. (2011) (attached as Exhibit 24).
[43] International Energy Agency, *Redrawing the Energy-Climate Map* (June 2013) at 14, (attached as Exhibit 25).
[44] United Nations Environment Programme (UNEP), *The Emissions Gap Report 2015: A UNEP Synthesis Report* (Nov. 2015) at xviii (attached as Exhibit 26).
[45] Spratt, *Climate Reality Check* at 2 (attached as Exhibit 23).

and the status quo is maintained—a position long reflected in BLM's management of public lands—estimated warming by 2100 is upwards of 4.5°C.[46] To achieve an outcome consistent with a 50% chance of keeping warming to 2.0°C, the growth in global-energy related CO_2 emissions needs to halt and start to reverse within the current decade.[47] Delaying stronger climate action to 2020 would come at a cost: $1.5 trillion in low-carbon investments are avoided before 2020, but $5 trillion in additional investments would be required between 2020-2035 to get back on track.[48]

With specific regard to United States commitments under the Paris Agreement, the U.S. INDC set specific greenhouse gas emissions reduction target for 2025 of a 26% to 28% reduction below the 2005 emission levels, producing a range in 2005 net GHG emissions from 6,323 to 7,403 $MTCO_2e$.[49] The difference between this target and the estimated 2025 emissions without INDC policies results in an 'emissions gap' ranging from 896 to 2,121 $MTCO_2e$.[50]

Both the IPCC and National Climate Assessment recognize the dominant role of fossil fuels in driving climate change:

> While scientists continue to refine projections of the future, observations unequivocally show that climate is changing and that the warming of the past 50 years is primarily due to human-induced emissions of heat-trapping gases. These emissions come mainly from burning coal, oil, and gas, with additional contributions from forest clearing and some agricultural practices.[51]
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> CO_2 emissions from fossil fuel combustion and industrial processes contributed about 78% to the total GHG emission increase between 1970 and 2010, with a contribution of similar percentage over the 2000–2010 period (*high confidence*).[52]

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[46] *See* Climate Interactive, Climate Scorecard, available at: https://www.climateinteractive.org/programs/scoreboard/*; see also,* Andrew P. Schurer, *et al., Separating Forced from Chaotic Climate Variability over the Past Millennium*, Journal of Climate, Vol. 26 (March 2013) (attached as Exhibit 27).
[47] IEA (2013) at 13.
[48] IEA (2013) at 114.
[49] Jeffery Greenblatt & Max Wei, *Assessment of the climate commitments and additional mitigation policies of the Unites States*, Nature Climate Change (Sept. 2016), available at: http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate3125.html (attached as Exhibit 28).
[50] *Id.* at 2; *see also* UNEP, Emissions Gap Report (attached as Exhibit 26).
[51] Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds., 2014: *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program (attached as Exhibit 29).
[52] IPCC AR5 Synthesis Report at 46 (attached as Exhibit 30).

The energy sector accounts for around two-thirds of GHG emissions, and more than 80% of global energy consumption is based on fossil fuels.[53] To keep open a realistic chance of meeting the 2°C target, intensive action is required before 2020. As summarized in a recent report:

> The Paris Agreement aims to help the world avoid the worst effects of climate change and respond to its already substantial impacts. The basic climate science involved is simple: cumulative carbon dioxide (CO_2) emissions over time are the key determinant of how much global warming occurs. This gives us a finite *carbon budget* of how much may be emitted in total without surpassing dangerous temperature limits.[54]

According to the IPCC, as of 2011, the remaining carbon budget of cumulative CO_2 emissions from all anthropogenic sources must remain below 1,000 $GtCO_2$ to provide a 66% probability of limiting warming to 2°C above pre-industrial levels.[55] For years 2012-2014, approximately 107 $GtCO_2$ was emitted, averaging approximately 36 $GtCO_2$ per year, which left us at the start of 2016 with a carbon budget of only 850 $GtCO_2$.[56] These emissions were the highest in human history and 60% higher than in 1990 (the Kyoto Protocol reference year). Of course, the Paris Agreement aim of limiting global warming to 1.5°C requires adherence to a more stringent carbon budget of only 400 $GtCO_2$ from 2011 onward, of which about 250 $GtCO_2$ remained at the start of 2016.[57] "With global annual emissions amounting to 36 $GtCO_2$ in 2015, scientists predict that at current rates global emissions will exceed the carbon budgets necessary to stay under the 1.5°C target by 2021 and the 2°C target by 2036.[58]

The potential carbon emissions from *existing* fossil fuel reserves—the known belowground stock of extractable fossil fuels—considerably exceed both 2°C and 1.5°C of

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[53] IEA (2013) at 9.
[54] *The Sky's Limit* at 6 (attached as Exhibit 22).
[55] IPCC AR5 Synthesis Report at 63-64 & Table 2.2 (attached as Exhibit 30). For an 80% probability of staying below 2°C, the budget from 2000 is 890 $GtCO_2$, with less than 430 $GtCO_2$ remaining. Malte Meinshausen *et al., Greenhouse-gas emission targets for limiting global warming to 2°C*, Nature (2009) at 1159 (attached as Exhibit 31). Other sources offer slightly different calculations in order to have a 50% probability of keeping warming below 2°C, with total emissions to 2050 below 1,440 $GtCO_2$ from 2000 onward, of which 420 $GtCO_2$ has already been emitted (as of 2011). It is estimated that another 136 $GtCO_2$ will be emitted from non-energy sources up to 2050, meaning the energy sector can emit a maximum of 884 $GtCO_2$ by 2050. IEA (2013) at 16-17.
[56] *See* Annual Global Carbon Emissions, available at: https://www.co2.earth/global-co2-emissions; *see also* C. Le Quéré, *et al., Global Carbon Budget 2015*, Earth Syst. Sci. Data (Dec. 2015) (attached as Exhibit 32).
[57] Dustin Mulvaney, *et al.*, *Over-Leased: How Production Horizons of Already Leased Federal Fossil Fuels Outlast Global Carbon Budgets,* EcoShift Consulting (July 2016) (attached as Exhibit 33) at 2 (citing Joeri Rogelj, *et al., Difference between carbon budget estimates unraveled*, Nature Climate Change (2016) (attached as Exhibit 34).
[58] Mulvaney at 2 (citing Oak Ridge National Laboratories, Carbon Dioxide Information Analysis Center (2015), available at: http://cdiac.ornl.gov/GCP/).

warming. "Estimated total fossil carbon reserves exceed this remaining [carbon budget] by a factor of 4 to 7."[59] "For the 2°C or 1.5°C limits, respectively 68% or 85% of reserves must remain in the ground."[60] The reserves in currently operating oil and gas field alone, even with no coal, would take the world beyond 1.5°C.[61]

In order for the world to stay within a carbon budget consistent with Paris Agreement goals—"holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C"[62]—significant fossil fuel resources must remain in the ground. More specifically, to meet the target of 2°C, globally "a third of oil reserves, half of gas reserves and over 80 percent of current coal reserves should remain unused from 2010-2050."[63] These fossil fuel reserves represent "unburnable carbon" and as such would be are stranded assets in which countries, industries, and companies are heavily invested but on which they would be unable to recoup returns. Citigroup warned investors that "the total value of stranded assets could be over $100 trillion based on current market prices."[64] Studies estimate that global coal, oil and gas resources considered currently economically recoverable contain potential greenhouse gas emissions of 4,196 $GtCO_2$,[65] with other estimates as high as 7,120 $GtCO_2$.[66]

Critically, the United States carbon quota—equivalent to 11% of the global carbon budget needed for a 50% chance of limiting warming to 2°C—allocates approximately 158 $GtCO_2$ to the United States as of 2011.[67] By way of comparison, federal and non-federal fossil fuel emissions together would produce between 697 and 1,070 $GtCO_2$.[68] Regarding just federal fossil fuel resources, the United States contains enough recoverable coal, oil and gas that, if extracted and burned, would result in as much as 492 $GtCO_2$, far surpassing the entire global

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[59] IPCC AR5 Synthesis Report at 63 (attached as Exhibit 30).
[60] The Sky's Limit at 6 (attached as Exhibit 22); *see also* Kevin Anderson and Alice Bows, *Reframing the climate change challenge in light of post-2000 emission trends*, Phil. Trans. R. Soc. (2008) (attached as Exhibit 35) ("to provide a 93% mid-value probability of not exceeding 2°C, the concentration (of atmospheric greenhouse gases) would need to be stabilized at or below 350 parts per million carbon dioxide equivalent (ppm CO_2e)" compared to the current level of ~485 ppm CO_2e.).
[61] The Sky's Limit at 5, 17 (attached as Exhibit 22).
[62] Paris Agreement at Art. 2 (attached as Exhibit 20).
[63] Christophe McGlade & Paul Ekins, *The geographical distribution of fossil fuels unused when limiting global warming to 2°C*, Nature (Jan 2015) (attached as Exhibit 36).
[64] Jason Channell, *et al.*, *Energy Darwinism II*, Citi GPS: Global Perspectives & Solutions (August 2015) at 118 (attached as Exhibit 37).
[65] Michael Raupach, *et al., Sharing a quota on cumulative carbon emissions*, Nature Climate Change (Sept. 2014) (attached as Exhibit 38).
[66] IPCC AR5, Mitigation of Climate Change, Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014) at Table 7.2 (attached as Exhibit 39).
[67] Raupach at 875 (attached as Exhibit 38).
[68] Dustin Mulvaney, *et al.*, *The Potential Greenhouse Gas Emissions from U.S. Federal Fossil Fuels*, EcoShift Consulting (Aug. 2015) at 16 (attached as Exhibit 40).

carbon budget for a 1.5°C target and nearly eclipsing the 2°C target—to say nothing of the United States 'share' of global emissions.[69] Unleased federal fossil fuels comprise 91% of these potential emissions, with already leased federal fossil fuels accounting for as much as 43 $GtCO_2$.[70]

In 2012, "the GHG emissions resulting from the extraction of fossil fuels from federal lands by private leaseholders totaled approximately 1,344 $MMTCO_2e$."[71] Between 2003 and 2014, approximately 25% of all United States and 3-4% of global fossil fuel greenhouse gas emissions are attributable to federal minerals leased and developed by the Department of the Interior.[72] Continued leasing and development of federal fossil fuel resources commits the world to 'extremely dangerous' warming well beyond the 2°C threshold. As one study put it, "the disparity between what resources and reserves exist and what can be emitted while avoiding a temperature rise greater than the agreed 2°C limit is therefore stark."[73] In short, *any* new leasing of federal fossil fuel resources is inconsistent with a carbon budget that would seek to avoid catastrophic climate change.

The production horizons for already leased federal fossil fuel resources underscore how unwarranted any additional leasing is. Comparing these production horizons to dates at which carbon budgets would be exceeded if current emission levels continue:

- Federal crude oil already leased will continue producing for 34 years beyond the 1.5°C threshold and 19 years beyond the 2°C threshold;
- Federal natural gas already leased will continue producing 23 years beyond the 1.5°C threshold and 8 years beyond the 2°C threshold;
- Federal coal already leased will continue producing 20 years beyond the 1.5°C threshold and 5 years beyond the 2°C threshold.[74]

Not only can the federal government not afford to lease *any* additional public lands for fossil fuel development—underscoring the need to consider a no leasing alternative—but substantial efforts must also be made to limit the production horizon of fossil fuel resources already leased. Accordingly, the BLM must also consider taking an aggressive position on the non-renewal and expiration of non-producing leases, as well as review of agency policy on lease suspensions and unitization.

If new leasing and renewal of existing non-producing leases continues, by 2040 it will contribute about two-thirds of expected federal fossil fuel production (forecast based on EIA and

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[69] *Id.*
[70] *Id.*
[71] Stratus Consulting, *Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update* (Dec. 2014) at 9 (attached as Exhibit 5).
[72] *See* Energy Information Administration, *Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2014* (July 2015) (attached as Exhibit 41); *see also* Stratus Consulting (attached as Exhibit 5).
[73] McGlade at 188 (attached as Exhibit 36).
[74] Mulvaney (2016) at 5 (attached as Exhibit 40).

other sources).[75] On the other hand, if new leasing ceases and existing non-producing leases are not renewed, 40% of forecast coal production could be avoided in 2025 and 74% of coal production could be avoided in 2040. As for oil and gas, 12% of oil production could be avoided in 2025 and 65% could be avoided by 2040 while 6% of natural gas production could be avoided in 2025 and 59% could be avoided by 2040.[76]

This avoided production would significantly reduce future U.S. emissions. Cessation of new and renewed leases for federal fossil fuel extraction could reduce CO_2 emissions by about 100 Mt per year by 2030. Annual emission reductions could become greater than that over time as production declines on existing leases and maintaining or increasing production becomes dependent on yet-to-be issued leases.[77]

A comparison with other measures shows that "no leasing" could be a very significant part of U.S. efforts to address climate change. The 100 Mt CO_2 emissions savings that could result from no leasing in 2030 compares favorably with EPA standards for light- and medium-vehicles that are expected to yield 200 Mt in CO_2 savings in 2030, and with standards for heavy-duty vehicles that are expected to yield 70 Mt in CO_2 savings in the same year. The 100 Mt CO_2 emissions reduction from leasing restrictions would be greater than either the emission reductions that the EPA expects to achieve through its existing regulation of oil and gas industry emissions or reductions the BLM expects to achieve from its proposed methane waste standards on oil and gas operations on federal land. Clearly, cessation of new and renewed leases could make an important contribution to U.S. climate change mitigation efforts.[78]

Also, importantly, avoided production through no new leasing and the non-renewal of existing non-producing leases could help avoid further carbon lock-in in terms of investment in both fossil fuel-producing and fossil fuel-using infrastructure.[79] Simply put, the timeframe to avoid catastrophic climate change is short, and the management of our federal minerals is dangerously out of step with this reality. BLM must take carbon budgeting into account in its decision-making related to the Whitewater MDP.

C. BLM Must Consider Projected Energy Demands, International Finance, and Stranded Assets.

BLM must account for projected energy demands, international finance, and stranded assets in its decision-making on the Whitewater MDP. The world's energy needs continue to grow, with projections of a 30% rise in global energy demand to 2040. The International Energy Agency ("IEA") has estimated that for this increasing demand to be met, a cumulative $48

[75] Peter Erickson and Michael Lazarus, *How Would Phasing Out U.S. Federal Leases for Fossil Fuel Extraction Affect CO2 Emissions and 2°C Goals?,* Stockholm Environmental Institute (2016) at 12 (attached as Exhibit 42).
[76] Erickson and Lazarus at 16.
[77] Erickson and Lazarus at 26.
[78] Erickson and Lazarus at 27.
[79] Erickson and Lazarus at 30.

trillion in investment is needed in global energy supply,[80] of which 60% is comprised of fossil fuels and nearly 20% to renewables, with an additional $23 trillion invested in improvements in energy efficiency.[81] "Countries are generally on track to achieve, and even exceed in some instances, many of the targets set in their Paris Agreement pledges; this is sufficient to slow the projected rise in global energy-related CO_2 emissions, but not nearly enough to limit warming to less than 2°C."[82] By contrast, it would be exceedingly difficult to chart a course toward a 2°C pathway. A major reallocation of investment capital going to the energy sector would be needed, requiring an estimated $40 trillion in cumulative energy supply investment moving away from fossil fuels and toward renewables.[83] The more ambitious target of limiting warming to less than 1.5°C would be even more difficult to achieve, demanding net-zero emissions between 2040 and 2060, a goal that would require radical near-term reductions in energy sector CO_2 emissions.[84] IEA estimates that "$53 trillion in cumulative investment in energy supply and efficiency is required over the period to 2035 in order to get the world onto a 2°C emissions path."[85]

The liability exposure from not acting is enormous, with cumulative 'lost' GDP from the impacts of climate change equating to $44 trillion.[86] Yet, investment decisions being taken today are not consistent with a 2°C climate goal and are not aimed at creating infrastructure that is sufficiently resilient to withstand the increased physical risks that are expected to result from future climate change.[87] "[O]ur current energy infrastructure has already 'locked-in' future carbon-dioxide emissions."[88] Even as this energy infrastructure is quickly sealing our climate fate in the near term, it will become obsolete in the slightly longer term. Indeed, many new energy sector assets are destined to become stranded when carbon reduction policies that limit the utilization of those assets are inevitably adopted in response to climate change impacts. As of 2013, emissions from existing global fossil fuel energy infrastructure already represented four-fifths, or 550 $GtCO_2$, of the total volume of CO_2 emissions that the earth can accommodate under a 2°C trajectory.[89] With delayed climate action to date, in 2017 we now find ourselves at an investment watershed, where energy infrastructure now locks in the entire remaining carbon budget to 2035.[90] From this point forward, far more costly actions are going to be required to subsequently undo the lock-in effect, and every additional investment in the energy sector committed to fossil fuels would become stranded assets under policies to achieve a 2°C pathway.

At the same time, the capital expenditures required to maintain current energy sector

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[80] International Energy Agency, *World Energy Investment Outlook* (2014), at 3 (attached as Exhibit 43).
[81] International Energy Agency, *World Energy Outlook 2016: Executive Summary* (2016), at 2 (attached as Exhibit 44).
[82] IEA (2016) at 2.
[83] IEA (2016) at 5.
[84] IEA (2016) at 5.
[85] IEA (2014) at 14.
[86] Citi at 8 (attached as Exhibit 37).
[87] IEA (2013) at 84.
[88] IEA (2013) at 98.
[89] IEA (2013) at 99.
[90] IEA (2013) at 113.

demand for fossil fuels have more than doubled since 2000, to $950 billion annually.[91] In other words, more capital investment is being required to maintain our current reliance on fossil fuels at a time, paradoxically, when from a climate perspective all of the new investment must be redirected towards renewable energy sources to effect a radical transformation of the energy sector, as necessary to avoid catastrophic warming. The market value of oil and gas produced globally was around $4.2 trillion in 2012, which was almost double what it was in 2005.[92] Yet, this has not resulted in a financial windfall to the oil and gas industry, as costs and royalties have more than kept pace with increased revenues.[93] In short, oil and gas companies are merely maintaining a fossil fuel treadmill where increasingly costly investments are needed to meet demand but lead to rising costs for the oil and gas industry as well as significant costs to society as reliance on oil and gas fuels climate change, an irrational system. In the face of these increasing capital requirements, there is growing awareness of significant financial exposure for individual companies from the possible future stranding of new fossil fuel investments. For example, among major oil and gas companies, the estimated cost of stranded assets over the next decade ranges from $21.5 billion for ConocoPhillips to $76.9 billion for Shell.[94] Nevertheless, the global capital markets have yet to internalize these risks and charge premiums that would steer investment towards renewable energy.

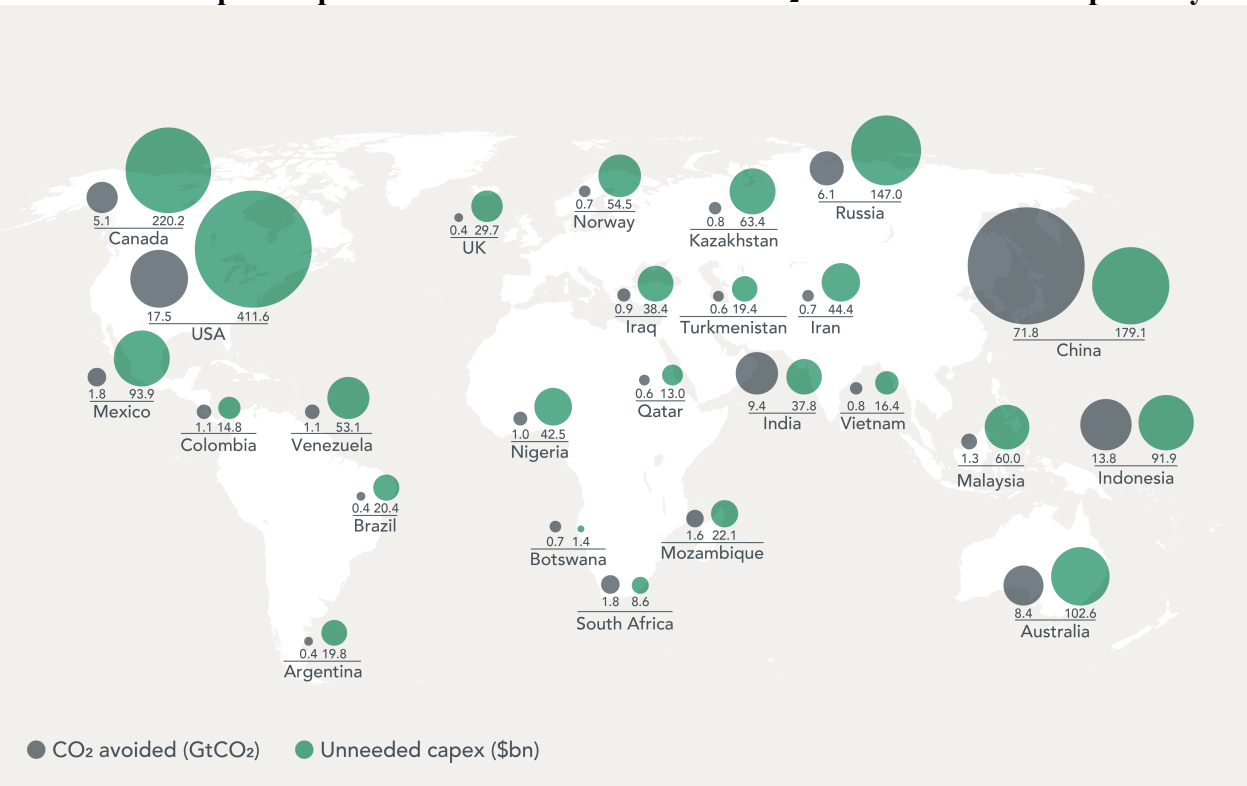
"Analysis of the entire energy system shows that delaying action on climate change is a false economy. Investments of around $1.5 trillion are avoided in the period to 2020, but an additional $5 trillion of investments are required between 2020 and 2035."[95]

According to the 2°C pathway modeled by IEA, from 2015-2035 the carbon budget for energy-based emissions from all fossil fuels is 593 $GtCO_2$.[96] If global energy investment continues on its current course, there will be over $2 trillion in investment in energy sources that will emit around 156 $GtCO_2$ of emissions over the 2°C target of 593 $GtCO_2$.[97] This can also be viewed through the lens of specific fossil fuel demand to 2035 under a 2°C pathway. For coal, zero additional capital investment is needed, as production from existing coalmines would exceed demand.[98] For gas, approximately $460 billion—or over 40% of anticipated capital expenditures—is unneeded, resulting in 9.3 $GtCO_2$ of avoided emissions.[99] For oil, it is projected that demand peaks around 2020, meaning that the oil sector does not need to continue to grow. Based on current Paris Agreement commitments, oil production required in the period to 2035 amounts to around 760 billion barrels, but falls to 690 billion barrels to maintain a course for 2°C.[100] Yet the estimated level of proven oil reserves are close to 1.7 trillion barrels.[101] This

[91] IEA (2014) at 51, 52.
[92] IEA (2014) at 54.
[93] IEA (2014) at 54.
[94] Carbon Tracker Initiative, *The $2 trillion stranded assets danger zone: How fossil fuel firms risk destroying investor returns* (Nov. 2015) at 23, (attached as Exhibit 45).
[95] IEA (2013) at 114.
[96] Carbon Tracker (2015) at 7.
[97] Carbon Tracker (2015) at 2.
[98] Carbon Tracker (2015) at 10.
[99] Carbon Tracker (2015) at 14.
[100] IEA (2014) at 87.

results in between a 940 and 1,010 billion barrel surplus of proven reserves that cannot be burned. Avoided capital expenditures for oil are nearly $1.5 trillion, avoiding 27.6 $GtCO_2$ of emissions.[102]

Unneeded capital expenditures to 2025 and related CO_2 to 2035 under a 2°C pathway



It is cheaper for the world to address climate change than bear its economic consequences. As detailed above, there are enough coal, oil and gas reserves that are technically recoverable to equal up to 7,120 $GtCO_2$ of emissions.[103] Only a portion of this carbon is already locked-in—i.e., total reserves held by fossil fuel companies and state owned assets—but this

[101] IEA (2014) at 87.
[102] Carbon Tracker (2015) at 18.
[103] IPCC AR5 at Table 7.2.

'embedded' carbon still amounts to 2,860 $GtCO_2$—already enough to take us beyond 3°C of warming.[104] Only 20% of these fossil fuel reserves can be burned to 2050 if the world is to have a chance of not exceeding global warming of 2°C.[105]

The total coal, oil and gas reserves listed on the world's stock exchanges equaled 762 $GtCO_2$ in 2013—an amount that continues to grow.[106] "If listed fossil fuel companies have a pro-rata allocation of the global carbon budget, this would amount to around 125–275 $GtCO_2$, or 20 - 40% of the 762 $GtCO_2$ currently booked as reserves. The scale of this carbon budget deficit poses a major risk for investors. They need to understand that 60 - 80% of coal, oil and gas reserves of listed firms are unburnable."[107] The systemic risks threatening the stability of financial markets related to unburnable carbon are growing more entrenched, with 200 fossil fuel companies having a market value of $4 trillion and debt of $1.5 trillion.[108]

As provided by Citigroup in a warning to investors:

> Emissions contained in current 'reserves' figures are around three times higher than the so called 'carbon budget'. Some studies suggest that globally a third of oil reserves, half of gas reserves and over 80% of current coal reserves would have to remain unused from 2010 to 2050 in order to have a chance of meeting the 2°C target. In financial terms, we estimate that the value of unburnable reserves could amount to over $100 trillion out to 2050.[109]

The longer climate action is delayed the more expensive it becomes to avoid each additional ton of GHG emissions, and the more capital expenditures will become stranded. [110] In other words, climate action is directly tied to economic resilience, and the longer action is delayed the larger the lead balloon becomes. This is not only a problem for the fossil fuel industry, but for our economy and the wellbeing of our communities. These financial implications also bear directly on BLM's decisionmaking relative to the leasing and development of our public lands for fossil fuel resources. Not only do each additional acre leased and well authorized contribute to society's collective carbon burden, but inherent financial risk and market instability has far-reaching implications for public lands remediation. When fossil fuel resources become stranded it is the public, not financially struggling fossil fuel companies, who are left holding the bag.

D. BLM must quantify the severity of harm from greenhouse gas emissions.

BLM violated NEPA by quantifying economic benefits, Updated EA at 168-69, while ignoring the social costs caused by the project's greenhouse gas emissions (including production

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[104] Carbon Tracker Initiative, *Unburnable Carbon 2013: Wasted capital and stranded assets* (2013), at 14 (attached as Exhibit 46).
[105] Carbon Tracker (2013) at 4.
[106] Carbon Tracker (2013) at 4.
[107] Carbon Tracker (2013) at 4.
[108] Carbon Tracker (2013) at 5, 30.
[109] Citi at 82.
[110] IEA (2014) at 43.

emissions, combustion emissions, and methane waste), despite the availability of a protocol for quantifying such costs: the Interagency Working Group's "social cost of carbon" protocol, which was recognized as an appropriate tool for NEPA analysis by the District of Colorado in *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174 (D.Colo. 2014).

BLM must take a hard look at the impact of the GHG emissions disclosed in the Updated EA. BLM estimated that the project would result in 70,587.8 metric tons of annual direct GHG emissions. Updated EA at 61, 66. However, NEPA requires a more searching analysis than a mere disclosure of the amount of pollution emanating from a project site. Rather, BLM must examine the "ecological[,]… economic, [and] social" impacts of those emissions, including an assessment of their "significance." 40 C.F.R. §§ 1508.8(b), 1502.16(a)-(b). *See also* Sec. Order 3289 (requiring BLM to "appl[y] scientific tools to increase understanding of climate change and to coordinate an effective response to its impacts," and mandating that "management decisions made in response to climate change impacts must be informed by [this] science."). In particular, having included in the EA its assessment of the economic benefits from oil and gas leasing and development under the RMP, Updated EA at 168-69, BLM was obligated to also present available information about the economic downsides of the consequent GHG emissions.

BLM asserts that such analysis is impossible. Updated EA at 66 ("Standardized protocols designed to measure factors that may contribute to climate change, and to quantify climatic impacts, are presently unavailable. Therefore, impact assessment of specific impacts related to anthropogenic activities on global climate change cannot be accurately estimated. Moreover, specific levels of significance have not yet been established by regulatory agencies."); *see also* Updated EA at 57-58 ("Given the global and complex nature of climate change, it is not possible to attribute a particular climate impact in any given region to GHG emissions from a particular source. The uncertainty in applying results from Global Climate Models to the regional or local scale (a process known as downscaling) limits our ability to quantify potential future impacts from GHGs emissions at this scale. When further information on the impacts of local emissions to climate change is known, such information would be incorporated into USFS [sic] planning and NEPA documents as appropriate.") These assertions do not justify BLM's failure to provide any analysis of the severity of ecologic, economic, or social impacts, because at least one tool for doing so "is and was available: the social cost of carbon protocol," which was "designed to quantify a project's contribution to costs associated with global climate change." *High Country,* 52 F.Supp.3d at 1190.

Research conducted by the National Research Council has confirmed that the negative impacts of energy generation from fossil fuels are not represented in the market price for such generation.[111] In other words, failing to internalize the externalities of energy generation from fossil fuels—such as the impacts to climate change and human health—has resulted in a market failure that requires government intervention. Executive Order 12866 directs federal

[111] *See, e.g.,* National Research Council, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use* (2010) (attached as Exhibit 47); Nicholas Muller, et. al., *Environmental Accounting for Pollution in the United States Economy*, AMERICAN ECONOMIC REVIEW (Aug. 2011) (attached as Exhibit 48); *see also* Generation Investment Management, *Sustainable Capitalism,* (Jan. 2012) (attached as Exhibit 49) (advocating a paradigm shift to "a framework that seeks to maximize long-term economic value creation by reforming markets to address real needs while considering *all* costs and stakeholders.").

agencies to assess and quantify such costs and benefits of regulatory action, including the effects on factors such as the economy, environment, and public health and safety, among others. *See* Exec. Order No. 12866, 58 Fed. Reg. 51,735 (Sept. 30, 1993).[112] The Ninth Circuit has ruled that agencies must include the climate benefits of a significant regulatory action in federal cost-benefit analyses to comply with EO 12866.

> [T]he fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency's] control ... does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming.

Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1217 (9th Cir. 2008) (quotations and citations omitted); *see also Border Power Plant Working Grp. v. U.S. Dep't of Energy*, 260 F. Supp. 2d 997, 1028-29 (S.D. Cal. 2003) (finding agency failure to disclose project's indirect carbon dioxide emissions violates NEPA).

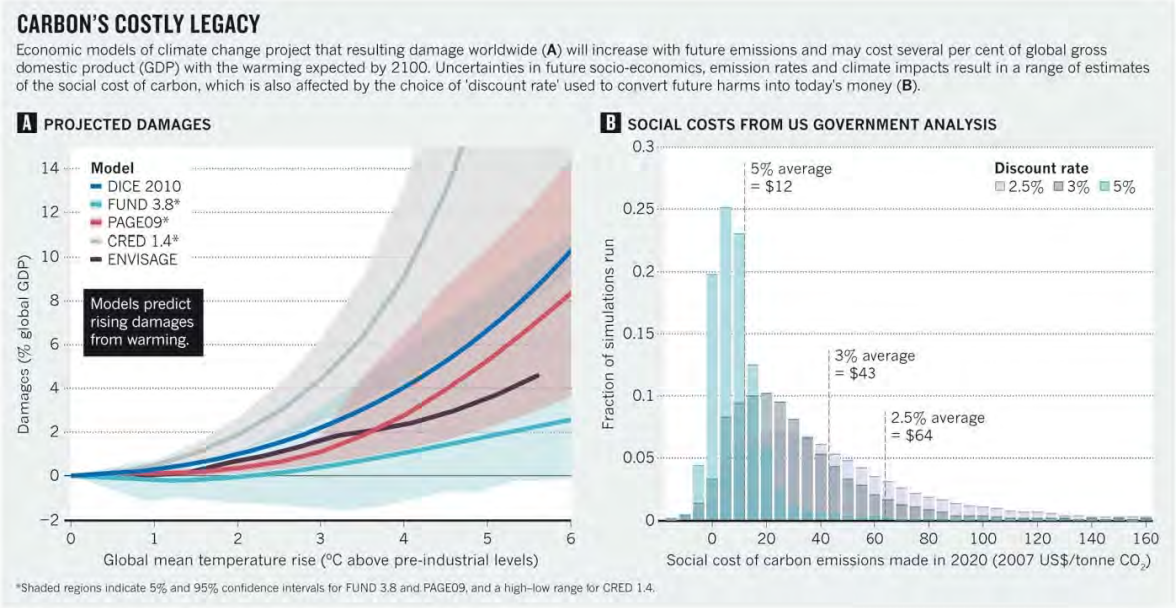
In response, an Interagency Working Group ("IWG") was formed to develop a consistent and defensible estimate of the social cost of carbon—allowing agencies to "incorporate the social benefits of reducing carbon dioxide (CO_2) emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions."[113] In other words, SCC is a measure of the benefit of reducing greenhouse gas emissions now and thereby avoiding costs in the future.[114] The charts below depict (A) dramatically increasing damages from global warming over time, as well as (B) the social cost of these carbon emissions based on 2013 TDS values.[115]

[112] *See also* Executive Order 13563, 76 Fed. Reg. 3821 (Jan. 18, 2011) (reaffirming the framework of EO 12866 and directing federal agencies to conduct regulatory actions based on the best available science).

[113] *See* Interagency Working Group on the Social Cost of Carbon, United States Government, *Technical Support Document: Technical Update on the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866* (May 2013, July 2015 Revision) at 2 (hereinafter 2013 TSD) (attached as Exhibit 50).

[114] *See* Ruth Greenspan and Dianne Callan, *More than Meets the Eye: The Social Cost of Carbon in U.S Climate Policy, in Plain English,* WORLD RESOURCES INSTITUTE (July 2011) (attached as Exhibit 51).

[115] *See* Richard Revesz, *et al., Global warming: Improve economic models of climate change,* NATURE 508, 173-175 (April 10, 2014) (attached as Exhibit 52).



Although the social cost of carbon protocol reflects global rather than exclusively domestic harms, it is a meaningful and important metric for use in NEPA analysis and is consistent with NEPA's intent. NEPA in fact mandates consideration of global harms by creating a national policy that, inter alia, is intended to "promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." 42 U.S.C. § 4321; *see also* 40 C.F.R. § 1508.27 ("Context . . . means that the significance of an action must be analyzed in several contexts such as *society as a whole (human,* national), the affected region, the affected interests, and the locality.") (emphasis added); *Anderson v. Evans*, 371 F.3d 475, 492 (9th Cir. 2004) (significance should be evaluated at different scales depending on context). NEPA's expansive language ("human," "biosphere," "man"), which mandates broad consideration of more than just domestic environmental harms, is especially appropriate now, when, with global climate change, the state of our domestic environment is intertwined with the state of the global environment.

Leading economic models all point in the same direction: that climate change causes substantial economic harm, justifying immediate action to reduce emissions.[116] The interagency process to develop SCC estimates—originally described in the 2010 interagency technical support document ("TSD"), and updated in 2013 and 2015—developed four values based on the average SCC from three integrated assessment models (DICE, PAGE, and FUND), at discount rates of 2.5, 3, and 5 percent,[117] as well as a fourth value, which represents the 95th percentile

[116] *See id.* at 174.

[117] The choice of which discount rate to apply—translating future costs into current dollars—is critical in calculating the social cost of carbon. The higher the discount rate, the less significant future costs become, which shifts a greater burden to future generations based on the notion that the world will be better able to make climate investments in the future. The underlying assumption of applying a higher discount rate is that the economy is continually growing. The IWG's "central value" of three percent is consistent with this school of thought—that successive generations will be increasingly wealthy and more able to carry the financial burden of climate impacts. "The difficultly with this argument is that, as climate change science becomes

SCC estimate across all three models at a 3 percent discount rate, and demonstrates the cost of worst-case impacts.[118] These models are intended to quantify damages, including health impacts, economic dislocation, agricultural changes, and other effects that climate change can impose on humanity. While these values are inherently speculative, a recent GAO report has confirmed the soundness of the methodology in which the IWG's SCC estimates were developed, therefore further underscoring the importance of integrating SCC analysis into the agency's decisionmaking process.[119] In fact, certain types of damages remain either unaccounted for or poorly quantified in IWG's estimates, suggesting that the SCC values are conservative and should be viewed as a lower bound.[120]

The updated interagency SCC estimates for 2020 are $12, $42, $62 and $123 per ton of CO_2 (in 2007$).[121] The IWG does not instruct federal agencies which discount rate to use, suggesting that the 3 percent discount rate ($42 per ton of CO_2) as the "central value," but further emphasizing "the importance and value of including all four SCC values[;]" i.e., that the agency should use the range of values in developing NEPA alternatives.[122] Moreover, recent outside research conducted by Stanford University has suggested that the numbers currently used by the EPA to calculate the social cost of carbon are too low. The Stanford study suggests that a more appropriate estimate of the social cost of carbon is $220/ton.[123] This higher value reflects the assumption that climate change can affect not only a country's economic output but also its growth and therefore have a permanent economic effect that accumulates over time.

Using this range of SCC estimates, the social cost of the *direct* (development and production) GHG emissions from the project (70,588 metric tons per year, Updated EA at 61 (Table 3.2-12)) are equivalent to **$847,056**, **$2,964,696**, **$4,376,456**, or **$8,682,324**. Moreover,

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increasingly concerning, it becomes a weaker bet that future generations will be better off. If they are not, lower or negative discount rates are justified." WRI Report, at 9 (attached as Exhibit 51). "Three percent values an environmental cost or benefit occurring 25 years in the future at about half as much as the same benefit today." *Id.*

[118] *See* 2013 TSD at 2 (attached as Exhibit 50).

[119] GAO-14-663, *Social Cost of Carbon* (July 24, 2014).

[120] *See* Peter Howard, et al., *Omitted Damages: What's Missing From the Social Cost of Carbon*, ENVIRONMENTAL DEFENSE FUND, INSTITUTE FOR POLICY INTEGRITY, NATURAL RESOURCES DEFENSE COUNCIL (March 13, 2014) (attached as Exhibit 53) (providing, for example, that damages such as "increases in forced migration, social and political conflict, and violence; weather variability and extreme weather events; and declining growth rates" are either missing or poorly quantified in SCC models).

[121] *See* 2013 TSD (July 2015 Revision) at 3 (attached as Exhibit 50) (including a table of revised SCC estimates from 2010-2050). To put these figures in perspective, in 2009 the British government used a range of $41-$124 per ton of CO_2, with a central value of $85 (during the same period, the 2010 TSD used a central value of $21). WRI Report at 4 (attached as Exhibit 51). The UK analysis used very different assumptions on damages, including a much lower discount rate of 1.4%. The central value supports regulation four times a stringent as the U.S. central value. *Id.*

[122] *See* 2013 TSD at 12 (attached as Exhibit 50).

[123] Frances C. Moore & Delavane B. Diaz, *Temperature Impacts on Economic Growth Warrant Stringent Mitigation Policy*, 5 Nature Climate Change 127 (2015) (attached as Exhibit 54).

the BLM fails to consider the *indirect* impacts of GHG emissions from the project, i.e. the impacts of combustion of the oil produced by the project. This is a significant oversight, as the potential GHG emission impact associated with the combustion of the produced oil appears to be substantial. The EA estimates that the Whitewater MDP would allow for production of up to 8.7 million barrels of oil over the 20-year life of the project. Updated EA at 3. Based on this figure, it appears that indirect greenhouse gas emissions would be approximately 3,741,000 million metric tons over 20 years, or approximately 187,050 metric tons/year under the proposed action.[124] This is a large amount of GHG emissions that the DEIS does not analyze or assess. Moreover, the BLM does not consider other hydrocarbons that may be produced, nor take into account gas that is flared, vented, or leaked. Direct methane emissions released to the atmosphere are much more powerful than CO2 in terms of their warming effect on the atmosphere.

Table 1: SCC Including Combustion – Whitewater MDP

Social cost/metric ton	$42	$123	$220
Estimated Annual CO2e Emissions in metric tons	70,588 (direct) + 187,050 (combustion) = 257,638	257,638	257,638
SCC	$10,820,796	$31,689,474	$56,680,360

In 2014, the district court for the District of Colorado faulted the Forest Service for failing to calculate the social cost of carbon, refusing to accept the agency's explanation that such a calculation was not feasible. *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174 (D.Colo. 2014) (a decision the agency decided not to appeal, thus implicitly recognizing the importance of incorporating a social cost of carbon analysis into NEPA decisionmaking). In his decision, Judge Jackson identified the IWG's SCC protocol as a tool to "quantify a project's contribution to costs associated with global climate change." *Id.* at 1190.[125] To fulfill this mandate, the agency must disclose the "ecological[,] … economic, [and] social" impacts of the proposed action. 40 C.F.R. § 1508.8(b).

Similarly, in 2017, the district court for the District of Montana similarly faulted the Office of Surface Mining Reclamation and Enforcement (OSMRE) for failing to calculate the social cost of carbon, again refusing to accept the agency's explanation that such a calculation was not possible. *Montana Envtl. Info. Ctr. v. U.S. Office of Surface Mining*, No. CV 15-106-M-DWM, 2017 WL 3480262 (D. Mont. Aug. 14, 2017). In his decision, Judge Donald Molloy affirmed the Court's determination in *High Country Conservation Advocates* that, contrary to the agency's

[124] U.S. Environmental Protection Agency, *Greenhouse Gases Equivalencies Calculator – Calculations and References*, https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references. For oil, the EPA estimates carbon emissions to average 0.43 metric tons CO_2/barrel.

[125] *See also* 2013 TSD at 18 (noting the EPA recommendation to "explore other means to characterize the impact of GHG emissions, including an estimate of the 'social cost of carbon' associated with potential increases in GHG emissions.") (citing Sarah E. Light, *NEPA's Footprint: Information Disclosure as a Quasi-Carbon Tax on Agencies*, 87 Tul. L. Rev. 511, 546 (Feb. 2013)).

position, in light of the social cost of carbon protocol, it is possible to assess the effects of a specific amount of CO2–equivalent emissions on global warming and climate change. *Id.* at *13. The Court held that it is arbitrary and capricious for a federal agency in NEPA analysis to provide a quantitative analysis of the benefits of the proposed action (e.g. in dollars from job creation) while failing to provide a quantitative analysis of the costs of the proposed action (e.g. in dollars from climate costs) when such an analysis is possible, that is where a tool (the social cost of carbon) is available for such an analysis. *Id.* at *12-15. Simple calculations applying the SCC to GHG emissions from this project offer a straightforward comparative basis for analyzing impacts, and identifying very significant costs.[126]

Notably, according to the IPCC, the global warming potential ("GWP") for methane over a 20-year timeframe—which is the relevant timeframe for consideration if we are to stem the worst of climate change—is 87.[127] Here, BLM's reliance on an outdated GWP based on a 100-year timeframe of 25 significantly underestimates the magnitude of emissions. Updated EA at 61. BLM does not disclose how much of the total of 70,587.8 metric tons of annual direct GHG emissions, in CO_2e is CH_4, how much is CO_2, and how much is N_2O. BLM should provide this information. Without it, the public cannot assess the true impact of direct planning area emissions.

Moreover, critically, BLM has only provided *direct* planning area emissions. BLM fails to consider the environmental impacts of GHG emissions resulting from combustion or other end uses of the oil and gas extracted from the planning area. BLM should consider these impacts as part of its indirect effects analysis. Instead of considering these impacts, the agency remarkably concludes that: "The environmental impacts of GHG emissions from oil and gas refining and from consumption, such as from vehicle operations, are not effects of USFS [sic] actions related to oil and gas development because they do not occur at the same time and place as the action. Thus, GHG emissions from refining and consumption of oil and gas do not constitute a direct effect that is analyzed under NEPA. Similarly, refining and consumption of oil and gas is not considered an indirect effect of oil and gas production because production is not a proximate cause of those GHG emissions." Updated EA at 58.

By failing to consider the costs of GHG emissions from the Proposed Action, the agency's analysis effectively assumes a price of carbon that is $0. *See High Country Conservation Advocates,* 52 F.Supp.3d at 1192 (holding that although there is a "wide range of estimates about the social cost of GHG emissions[,] neither the BLM's economist nor anyone else in the record appears to suggest the cost is as low as $0 per unit. Yet by deciding not to quantify the costs as all, the agencies effectively zeroed out the cost in its quantitative analysis."). The agency's failure to consider the SCC is arbitrary and capricious.

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[126] It is important to note that, although the 2010 IWG SCC protocol did not address methane impacts, the 2013 IWG Technical Update explicitly addresses methane impacts. Thus, it is appropriate to calculate a SCC outcome that takes into account the full CO_2e emissions associated with the proposed leasing.

[127] *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *Working Group I Contribution to the IPCC Fifth Assessment Report Climate Change 2013: The Physical Science Basis,* at 8-58 (Table 8.7) (Sept. 2013) (attached as Exhibit 7).

An agency must "consider every significant aspect of the environmental impact of a proposed action." *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council*, 462 U.S. 87, 107 (1983) (quotations and citation omitted). This includes the disclosure of direct, indirect, and cumulative impacts of its actions, including climate change impacts and emissions. 40 C.F.R. § 1508.25(c). The need to evaluate such impacts is bolstered by the fact that "[t]he harms associated with climate change are serious and well recognized," and environmental changes caused by climate change "have already inflicted significant harms" to many resources around the globe. *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007); *see also id.* at 525 (recognizing "the enormity of the potential consequences associated with manmade climate change"). Among other things, the agency's analysis must disclose "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity[,]" including the "energy requirements and conservation potential of various alternatives and mitigation measures." 42 U.S.C. § 4332(c); 40 C.F.R. § 1502.16(e). As explained by CEQ, this requires agencies to "analyze total energy costs, including possible hidden or indirect costs, and total energy benefits of proposed actions." 43 Fed. Red. 55,978, 55,984 (Nov. 29, 2978); *see also* Executive Order 13514, 74 Fed. Reg. 52,117 (Oct. 5, 2009) (requiring government agencies to disclose emissions information annually from direct and indirect activities). Failing to perform such analysis undermines the agency's decisionmaking process and the assumptions made.

Moreover, BLM measures the planning area's GHG emissions against a baseline of regional and national GHG emissions, *see* Updated EA at 66, thereby marginalizing the project's contribution to our climate crisis while concluding the agency is powerless to avoid or mitigate such impacts. CEQ has warned against such a comparison, providing:

> Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government. Therefore, the statement that emissions from a government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether to consider climate impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigation.

CEQ Final Climate Guidance at 9.[128] CEQ also provides that "[i]t is essential … that Federal agencies not rely on boilerplate text to avoid meaningful analysis, including consideration of alternatives or mitigation." *Id.* at 5-6 (citing 40 C.F.R. §§ 1500.2, 1502.2). Indeed, the EPA has also cautioned "against comparing GHG emissions associated with a single project to global GHG emission levels" because it erroneously leads to a conclusion that "on a global scale, emissions are not likely to change" as a result of the project.[129] Applying the SCC takes these abstract emissions and places them in concrete, economic terms, allowing the agency to easily examine the "ecological[,]… economic, [and] social" impacts of those emissions, including an assessment of their "significance." 40 C.F.R. §§ 1508.8(b), 1502.16(a)-(b). The agency simply

[128] CEQ Final Guidance on Climate Change, 81 Fed. Reg. 51, 866 at 11 (Aug. 5, 2016).
[129] *See* Light, 87 Tul. L. Rev. 511, 546.

cannot continue to ignore its obligation to consider the costs of GHG emissions in its decisionmaking, as it has done here.

Nor can the agency tout the benefits of oil and gas development without similarly disclosing the costs. *See* 40 C.F.R. § 1502.23. For example, BLM identifies benefits from area employment (48 construction jobs and 22 year-round production jobs) and royalties, severance tax, and property tax on oil production. Updated EA at 168-69. This type of misleading and one-sided analysis is expressly forbidden under NEPA. *See Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446-47 (4th Cir. 1996) ("it is essential that the EIS not be based on misleading economic assumptions); *Sierra Club v. Sigler,* 695 F.2d 957, 979 (5th Cir. 1983) (agency choosing to "trumpet" an action's benefits has a duty to disclose its costs).

E. BLM must present and analyze accurate economic information.

Economic information presented in an EIS may not be misleading or incomplete. *Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 811 (9th Cir. 2005). Accurate economic information allows the agency to fairly judge the benefit of a federal action when weighed against potential adverse environmental effects. By contrast, inaccurate economic information "may defeat the purpose of an EIS by impairing the agency's consideration of the adverse environmental effects and by skewing the public's evaluation of the proposed agency action." *Id.* (citation and quotations omitted).

BLM must include and analyze accurate economic and financial information in the Whitewater MDP EA that includes, among other things, consideration of the financial condition of the project's proponent, and the likelihood of the planned development. Such considerations are relevant to the agency's analysis of the value of this proposed use of public land, especially in light of the significant environmental impacts threatened by the project to nearby communities and the environment, as detailed in this comment letter.

Additionally, "the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks" is one of the "significance" factors that agencies must consider in determining whether an EIS is necessary. 40 C.F.R. § 1508.27. Here, given evidence suggesting that the project proponent's, parent company Fram Exploration, ASA based in Norway, is in financial crisis, there is uncertainty about whether Fram Operating, LLC will develop the Whitewater resources itself, or else will sell its drilling rights to a third party. In particular, Fram Exploration's secured convertible bonds are due on December 31, 2018 and these Fram Bonds are secured against Fram's Whitewater assets valued at $30 million.[130] Information that the agency and the public should rightly be aware of—such as the intentions and record (on issues such as bonding and reclamation) of the project developer—are uncertain in this situation. At a minimum, this uncertainty weighs in favor of preparation of an Environmental Impact Statement, instead of an Environmental Assessment.

[130] Loyz Energy Limited, 2016 Annual Report, page 3. Loyz Energy Limited, a Singaporean company has a 13.75% interest in Fram Exploration ASA, and Rex Holdings International, a Singaporean company has a 30.3% interest in Fram Exploration ASA. Fram Exploration ASA, 2015 Annual Report, page 42.

In addition, BLM bonding requirements are inadequate to ensure fiscal risk management in the event that the operator declares bankruptcy, sells off its assets, or defaults on its bond obligations. Fram Exploration's secured convertible bonds are redeemable on December 31, 2018 and these Fram Bonds are secured against Fram's Whitewater assets.

VI. Conclusion

The Conservation Groups appreciate your consideration of the information and concerns addressed herein, as well as the information included in the attached exhibits. This information is critical and must be reflected in the agency's decisionmaking.

Sincerely,



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From: Kyle Tisdel
To: BLM_CO_SI_Mail@blm.gov
Cc: cbjoyner@blm.gov
Subject: Comments, DOI-BLM-CO-N040-2016-0054-EA
Date: Monday, August 28, 2017 1:13:04 PM
Attachments: 2017 August Fram Whitewater MDP Updated EA Comments_(final).pdf

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Many thanks for your help, Chris. See email below and attached comments. You may also consider updating the email address for submission of comments on the ePlanning site for the Whitewater MDP.

Regards.

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Defending the West

From: Kyle Tisdel <tisdel@westernlaw.org>
Date: Friday, August 25, 2017 at 3:52 PM
To: <SI_CRVFO_Webmail@blm.gov>
Subject: Comments, DOI-BLM-CO-N040-2016-0054-EA

Please find the attached comments regarding the Preliminary EA for the Updated Whitewater MDP. I will also be sending a hard copy and disc containing referenced exhibits via certified mail. Should you have any questions please do not hesitate to contact me.

Regards.

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Western Environmental Law Center

Submitted via Electronic Mail and USPS Certified Mail

August 25, 2017

Colorado River Valley Field Office
Bureau of Land Management
2300 River Frontage Road
Silt, Colorado 81652

Re: Preliminary Environmental Assessment for the Fram Operating, LLC Updated Whitewater Unit Master Development Plan, DOI-BLM-CO-N040-2016-0054-EA

The Western Environmental Law Center, on behalf of Citizens for a Healthy Community, Western Colorado Congress, Citizens for Clean Air, Colorado Sierra Club, and Great Old Broad's Mesa County Broad Band (collectively, "Citizen Groups"), submits the following comments on the Bureau of Land Management's ("BLM") Updated Whitewater Unit Master Development Plan ("Whitewater MDP") Preliminary Environmental Assessment ("Updated EA"), identified as: DOI-BLM-CO-N040-2016-0054-EA.

Citizens for a Healthy Community is a grass-roots organization formed in 2010 for the purpose of protecting the Delta County region's air, water and foodsheds from the impact of oil and gas development. CHC's members and supporters include organic farmers, ranchers, vineyard and winery owners, sportsmen, realtors, and other concerned citizens impacted by oil and gas development. CHC members have been actively involved in commenting on BLM's oil and gas activities in the region, including this project.

Western Colorado Congress is an alliance for community action dedicated to healthy communities and landscapes. Since 1980, Western Colorado Congress has worked to foster public participation in decisions affecting land and public health in western Colorado. The membership-based nonprofit has nearly 2,000 members across western Colorado.

Citizens for Clean Air is a grassroots organization of volunteers established in 2013 to research the causes of air quality degradation and promote improvement of air quality in Mesa County, Colorado. We work cooperatively with government agencies, non-profits, the private sector and citizens' groups, and are involved in local, statewide and federal efforts to mitigate the effects of known air pollutants on humans, agriculture, animals and the environment.

With 20,000 members and 80,000 supporters, the Colorado Sierra Club works to promote the conservation of Colorado's natural environment and climate by influencing public policy

decisions through grassroots involvement. We're the Colorado affiliate of Sierra Club, America's oldest, largest and most influential grassroots environmental organization.

Great Old Broads for Wilderness is a national grassroots organization, led by elders, that engages and inspires activism to preserve and protect wilderness and wild lands. Conceived by older women who love wilderness, Broads gives voice to the millions of Americans who want to protect their public lands as Wilderness for this and future generations. We bring knowledge, commitment, and humor to the movement to protect our last wild places on earth. Great Old Broads for Wilderness began in 1989 on the 25th anniversary of the Wilderness Act. Today, Broads has a small staff and our ranks have grown to more than 8,000 members and supporters. There are nearly 40 Broadbands (chapters) in 15 states across the country dedicated to local and national wilderness issues.

Citizen Groups hereby incorporate comments previously submitted on this project: Citizens for a Healthy Community's August 13, 2013 Comments on the Preliminary Environmental Assessment (attached as Exhibit A); Citizens for a Healthy Community's February 14, 2014 Supplemental Comments (attached as Exhibit B); Citizens for a Healthy Community's July 14, 2014 Request for State Director Review (attached as Exhibit C); Western Colorado Congress et al.'s May 5, 2010 Scoping Comments (attached as Exhibit D); Western Colorado Congress et al.'s Comments (attached as Exhibit E); and TEDX's Comments (attached as Exhibit F). These comments contain technical information and legal analysis which should guide the BLM's decision-making on this project.

I. Background

On June 13, 2014, the Bureau of Land Management Grand Junction Field Office ("GJFO") approved the Whitewater MDP, a 108-well oil and gas exploration project involving the construction, operation, maintenance, and abandonment of wells, well pads, roads, gas gathering pipelines, oil gathering pipelines, and produced water gathering pipelines.

Shortly thereafter, the Western Environmental Law Center, on behalf of Citizens for a Healthy Community; Western Colorado Congress; and Citizens for Clean Air filed requests for State Director Review ("SDR"). In response to the Requests for SDR, on April 29, 2016, BLM Colorado State Office remanded the Whitewater MDP EA to the GJFO for further consideration. In response to the remand, the Colorado River Valley Field Office ("CRVFO") collaborated with the GJFO on a revised preliminary environmental assessment for the project.

For the reasons described below, the EA for the Whitewater MDP continues to violate NEPA by: (1) failing to perform an EIS for a project that may result in significant impacts to critical resource values in the region; (2) in the EA, failing to adequately consider and take a hard look at the direct, indirect, and cumulative effects of the project on those critical resource values, including the region's air quality and surface and groundwater resources, as well as important habitat and big game species; and (3) failing to take a hard look at the climate impacts of BLM's fossil fuel management, including by quantifying economic benefits while ignoring the economic and social costs caused by the project's greenhouse gas emissions.

II. Because it is a major federal action significantly affecting the quality of the human environment, the Whitewater MDP must be analyzed in an EIS.

The 108-well Whitewater MDP project requires an Environmental Impact Statement ("EIS") because it is a "major federal action" that "significantly affects the quality of the human environment." 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.4. A federal action "affects" the environment when it "will or *may* have an effect" on the environment. 40 C.F.R. § 1508.3 (emphasis added); *Airport Neighbors Alliance v. U.S.,* 90 F.3d 426, 429 (10th Cir. 1996) ("If the agency determines that its proposed action *may* 'significantly affect' the environment, the agency must prepare a detailed statement on the environmental impact of the proposed action in the form of an EIS.") (emphasis added). Similarly, according to the Ninth Circuit:

> We have held that an EIS *must* be prepared if 'substantial questions are raised as to whether a project ... *may* cause significant degradation to some human environmental factor.' To trigger this requirement a 'plaintiff need not show that significant effects *will in fact occur*[.]' [Instead,] raising 'substantial questions whether a project may have a significant effect' is sufficient.

Idaho Sporting Cong. v. Thomas, 137 F.3d 1146, 1149-50 (9th Cir. 1998) (citations omitted) (emphasis original). The Whitewater project may result in significant impacts to critical resource values, including: (1) a significant impact on air quality, including degradation to visibility; (2) potential contamination of the City of Grand Junction water supply (notably, proponent Fram will secure an exception to a lease stipulation in order to build a well pad upstream of and adjacent to a stream flowing into that supply); (3) impacts to endangered fish in the Colorado and Gunnison Rivers, including through sedimentation of selenium-containing soils, entrainment and impingement at pump water intakes, contaminated surface runoff, and accidental fuel spills; and (4) impacts to wildlife habitat, including the disturbance and displacement of mule deer, pronghorn, elk, and white-tailed prairie dogs. Given the magnitude of the proposed action and possible direct, indirect and cumulative impacts to both the natural environment and human communities, the Whitewater MDP project requires an EIS.

Critically, the BLM has failed to "put forth a convincing statement of reasons' that explains why the project will impact the environment no more than insignificantly. This account proves crucial to evaluating whether the [agency] took the requisite 'hard look.' " *Ocean Advoc. v. U.S. Army Corps of Engrs*., 402 F.3d 846, 864 (9th Cir. 2005). Nowhere in BLM's EA does there exist a convincing statement explaining the insignificance of impacts from the Whitewater MDP. If BLM proceeds in its refusal to perform an EIS, it must provide a detailed accounting of each NEPA significance factor, as provided in 40 C.F.R. § 1508.27, explaining why the project will impact the environment no more than insignificantly.

In determining significance, the BLM must consider two factors: "context" and "intensity." 40 C.F.R. 1508.27. "Either of these factors may be sufficient to require preparation of an EIS in appropriate circumstances." *Natl. Parks & Conserv. Assn. v. Babbitt*, 241 F.3d 722, 731 (9th Cir. 2001).

A. The Whitewater MDP's impacts are significant given the project's *context.*

The BLM ignored the contexts in which the project is taking place. Context means "society as a whole (human, national), the affected region, the affected interests, and the locality." 40 CFR § 1508.27(a). Here, the affected region and affected interests include organic farms, ranches, vineyards, and wineries. The Whitewater MDP will have significant impacts to these interests, including, but not limited to, the project's impacts to air, water, and climate. With respect to air, for example, prevailing winds will likely concentrate the particulate pollution created by development under the Whitewater MDP in the Grand Valley, rather than dispersing it.

The BLM must also consider "society as a whole (human, national)." We live in an era of human-caused climate change. "The findings presented in [the Intergovernmental Panel on Climate Change's Fifth Assessment Report from 2013] indicate that warming of the climate system is unequivocal and many of the observed changes are unprecedented over decades to millennia. . . . It is *extremely likely* (95 to 100 percent probability) that human influence has been the dominant cause of the observed warming since the mid-20th century (IPCC 2013)." Updated EA at 56. Our atmosphere today is akin to a bathtub that is filling with greenhouse gases faster than it is draining.[1] Every addition of GHG emissions into this bathtub brings us closer to the "tipping point" beyond which catastrophic change is inevitable.[2] In this context, a 108-well oil and gas development with projected GHG emissions of 70,588 metric tons per year is significant. Updated EA at 66.

If this amount of GHG emissions is not significant, the BLM must provide articulated criteria grounded in scientific evidence to demonstrate why it is not. *See Center for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1224 (9th Cir. 2008). The agency has not done so. Merely calculating the project's percentage contribution to overall Colorado and U.S. emissions and summarily concluding that that percentage is non-significant, Updated EA at 66, "cannot carry the day." *Id*.

B. The Whitewater MDP's impacts are significant given the *intensity* of the project's impacts.

In evaluating intensity, the BLM was obligated to consider the following factors: impacts that may be both beneficial and adverse; the degree to which the proposed action affects public health or safety; the unique characteristics of the geographic area; the degree to which the effects on the quality of the human environment are likely to be highly controversial; the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks; the degree to which the action may establish a precedent for future actions; whether the action is related to other actions with individually insignificant but cumulatively significant impacts; the degree to which the action may adversely affect significant scientific,

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[1] John D. Sterman & Linda Booth Sweeney, *Understanding Public Complacency About Climate Change: Adults' Mental Models of Climate Change Violate Conservation of Matter*, 80 CLIMATIC CHANGE 213, 216 (2007) (attached as Exhibit 1).

[2] See, e.g., James Hansen, *Tipping Point: Perspective of a Climatologist*, STATE OF THE WILD 2008-2009 (attached as Exhibit 2).

cultural, or historical resources; the degree to which the action may adversely affect an endangered or threatened species or its habitat; and whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. 40 C.F.R. § 1508.27(b). Where, as here, significance factors have been triggered, an EIS is required.

First, the BLM ignores the extent of the public health effects that will be caused by the project's air pollution. The EA reveals that the project will elevate PM-10, PM-2.5, NO-X, CO2, SO2, VOCs, and Hazardous Air Pollutants ("HAPs") including benzene, toluene, ethyl benzene, xylene, n-hexane, and formaldehyde. Updated EA at 61-62. The impacts from particulate matter are particularly striking. The project will increase the daily concentration of PM-10 by 64%, from 27 µg/m3 to 44.3 µg/m3, and the daily concentration of PM-2.5 by 72%, from 14 µg/m3 to 24.1 µg/m3 (and close to the legal limit for PM-2.5 of 35 µg/m3). Updated EA at 61. Major concerns for human health from exposure to particulate matter include effects on breathing and respiratory systems, damage to lung tissue, cancer, and premature death.[3] PM-2.5 is small enough to lodge deeply in the lungs.[4] The smallest particles can pass through the lungs to affect other organs.[5] Even small increases in particulate matter concentrations can have significant health impacts. For example, according to a recent study published in the British Medical Journal, an increase in estimated annual exposure to PM-2.5 of just 5 µg/m3 was linked with a 13% increased risk of heart attacks.[6]

The BLM concludes that the air pollution, including particulate matter pollution, from the project is non-significant because the air quality in the area will remain within legal limits. EA at 59 (impact significance criteria), 61. Violation of law is one of the ten factors indicating significance, but there are nine others, including the degree to which the proposed action affects public health or safety. Here, the project will add significant amounts of pollution into the air—in particular due to prevailing winds which blow pollutants into the Grand Valley metropolitan area of approximately 160,000 inhabitants—with significant health impacts that cannot be summarily dismissed. An EIS must be prepared to evaluate these impacts.

Additionally, BLM does not give adequate consideration to ozone. First, BLM provides background concentrations of ozone in micrograms per cubic meters ($\mu g/m^3$), rather than parts per million (ppm), Updated EA at 46, although ppm is the unit of measurement used by the EPA in the National Ambient Air Quality Standards ("NAAQS"). This makes it difficult for the public to understand whether background concentrations of ozone exceed the NAAQS, or whether the modeled addition from oil and gas emissions in the GJFO of 0.5 ppb, Updated EA at 198, would cause an exceedance of the NAAQS.

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[3] EPA, *Air Trends Summary*, available at: http://www.epa.gov/airtrends/aqtrnd95/pm10.html.
[4] EPA, *Particulate Matter*, available at: http://www.epa.gov/airquality/particulatematter/health.html.
[5] *Id*.
[6] Cesaroni et al., *Long Term Exposure to Ambient Air Pollution and Incidence of Acute Coronary Events: Prospective Cohort Study and Meta-Analysis in 11 European Cohorts from the ESCAPE Project,* BRITISH MEDICAL JOURNAL (2014), available at: http://www.bmj.com/content/348/bmj.f7412 (attached as Exhibit 3).

Second, background concentrations of ozone in some areas of the region are already at or exceed the National Ambient Air Quality Standards ("NAAQS"), leaving virtually no room for growth in emissions as contemplated by the Whitewater MDP EA. The EA notes that: "The base year DVBs [base design values using EPA's Modeled Attainment Test Software (MATS)] . . . indicate that there are areas nearby the Project Area in Mesa County that are above the 70 ppb NAAQS, in the range of 73 to 76 ppb," Updated EA at 196, and "The 2008 Base Case . . . indicates that there are areas nearby the Project Area in Mesa County that are above the 70 ppb NAAQS, in the range of 71 to 76 ppb," Updated EA at 197.

The EA discloses that there is a predominance of wind that blows generally from the southeast over the project site. Updated EA at 44 (Tables 3.2-2 and 3.2-3), 45 (Figure 3.2.1). The EA states that the average wind speed results in "presence of good dispersion and mixing of any potential pollutant emissions." Updated EA at 43. But when the pollutant of concern is ozone, this is not a good outcome. Ozone is not directly emitted from oil and gas operations. Rather it is a product of the availability of precursor materials and the high levels of UV radiation common in the project area and upwind. Precursor materials include volatile organics (VOCs, which could be released as part of drilling and regular operations) and oxides of nitrogen (NOx, which are released by fossil fuel engines, especially those that do not meet the latest EPA standards and combustion of excess natural gas). Hence, the prevailing wind patterns (with speeds to generate good mixing) with new emissions of VOCs and increased availability of NOx would potentially contribute to substantial increases in ozone over the agricultural areas to the north west of the project area, in particular the Palisade fruit and wine district. Ozone levels in this area are already high enough to have some negative effects on productivity and quality; higher levels could have significantly greater effects because the damages grow nonlinearly.

Ozone has also long been recognized to cause adverse health effects, in addition to effects on agriculture and wild plants and animals. With respect to human health effects, exposure to ozone can cause or exacerbate respiratory health problems—including shortness of breath, asthma, chest pain and coughing—can decrease lung function, and can even lead to long-term lung damage. *See also* EPA's National Ambient Air Quality Standards for Particulates and Ozone, 62 FR 38,856 (July 18, 1997). Short term exposure to ozone causes multiple negative respiratory effects, from inflammation of airways to more serious respiratory effects that can lead to use of medication, absences from school and work, hospital admissions, emergency room visits, and chronic obstructive pulmonary disease ("COPD"). According to a recent report by the National Research Council ("NRC"), short-term exposure to current levels of ozone in many areas is likely to contribute to premature deaths.[7] Even ozone concentrations as low as 60 ppb can be harmful to human health. Long-term exposure to elevated levels of ozone results in numerous negative harmful effects, such as permanent lung damage and abnormal lung development in children. Long-term exposure may also increase risk of death from respiratory problems. Short- and long-term exposure to elevated levels of ozone can also harm people's hearts and cardiovascular systems. *See* 79 Fed. Reg. 75234-311.

[7] National Research Council, *Link Between Ozone Air Pollution and Premature Death Confirmed,* (April 2008), available at: http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12198.

On October 26, 2015, EPA published a final rule to revise the NAAQS for ozone to 70 parts per billion (ppb) from the current 75 ppb. National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65292 (Oct. 26, 2015). This decision was driven by significant recent scientific evidence that the standard of 75 ppb was not adequately protecting public health. *Id.* at 136. In fact, recent studies have documented decreased lung functioning and airway inflammation in young, healthy adults at ozone concentrations as low as 60 ppb. *Id.* at 146.

Additionally, climate change is likely to worsen ozone pollution, offsetting the improvements in air quality and public health that would be expected from reductions in emissions of ozone precursors. As described by the EPA in its ozone rulemaking:

> In addition to being affected by changing emissions, future O_3 concentrations may also be affected by climate change. Modeling studies in the EPA's Interim Assessment (U.S. EPA, 2009a) that are cited in support of the 2009 Endangerment Finding under CAA section 202(a) (74 FR 66496, Dec. 15, 2009) as well as a recent assessment of potential climate change impacts (Fann et al., 2015) project that climate change may lead to future increases in summer O_3 concentrations across the contiguous U.S. While the projected impact is not uniform, climate change has the potential to increase average summertime O_3 concentrations by as much as 1-5 ppb by 2030, if greenhouse gas emissions are not mitigated. Increases in temperature are expected to be the principal factor in driving any O_3 increases, although increases in stagnation frequency may also contribute (Jacob and Winner, 2009). If unchecked, climate change has the potential to offset some of the improvements in O_3 air quality, and therefore some of the improvements in public health, that are expected from reductions in emissions of O_3 precursors.

80 Fed. Reg. 65292, 65300 (October 26, 2015). For example, climate change impacts include an increase in the area burned by wildfires, which, in turn are sources of O_3 precursors. *Id.* at 65371. Given the EA's acknowledgement that climate change can increase the occurrence and severity of wildfires on BLM-administered land, Updated EA at 57, the BLM should address this impact of climate change on ozone pollution.

Notably, much of air pollution from oil and gas development and operations also degrades visibility. Section 169A of the Clean Air Act ("CAA"), 42, U.S.C. § 7401 *et seq.* (1970) sets forth a national goal for visibility, which is the "prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas which impairment results from manmade air pollution." Congress adopted the visibility provisions in the CAA to protect visibility in "areas of great scenic importance." H.R. Rep. No. 294, 95th Cong. 1st Sess. at 205 (1977). In promulgating its Regional Haze Regulations, 64 Fed. Reg. 35,714 (July 1, 1999), the U.S. Environmental Protection Agency ("EPA") provided:

> Regional haze is visibility impairment that is produced by a multitude of sources and activities which emit fine particles and their precursors and which are located across a broad geographic area. Twenty years ago, when initially

> adopting the visibility protection provisions of the CAA, Congress specifically recognized that the "visibility problem is caused primarily by emission into the atmosphere of SO2, oxides of nitrogen, and particulate matter, especially fine particulate matter, from inadequate[ly] controlled sources." H.R. Rep. No. 95-294 at 204 (1977). The fine particulate matter (PM) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust) that impairs visibility by scattering and absorbing light can cause serious health effects and mortality in humans, and contribute to environmental effects such as acid deposition and eutrophication.

The visibility protection program under sections 169A, 169B, and 110(a)(2)(J) of the CAA is designed to protect Class I areas from impairment due to manmade air pollution. The current regulatory program addresses visibility impairment in these areas that is "reasonably attributable" to a specific source or small group of sources, such as, here, air pollution resulting from oil and gas development. *See* 64 Fed. Reg. 35,714.

Moreover, EPA finds the visibility protection provisions of the CAA to be quite broad. Although EPA is addressing visibility protection in phases, the national visibility goal in section 169A calls for addressing visibility impairment generally, including regional haze. *See e.g., State of Maine v. Thomas*, 874 F.2d 883, 885 (1st Cir. 1989) ("EPA's mandate to control the vexing problem of regional haze emanates directly from the CAA, which 'declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas which impairment results from manmade air pollution.' ") (citation omitted).

Here, there are at least 10 Class I areas near the Whitewater MDP project area that may be impacted by the proposed development, including: Maroon Bells-Snowmass Wilderness Area; Arches National Park; Black Canyon of the Gunnison National Park; Eagles Nest Wilderness Area; Flat Tops Wilderness Area; La Garita Wilderness Area; Weminuche Wilderness Area; Mesa Verde National Park; Canyon Lands National Park; and West Elk Wilderness Area. Visibility in nearby Class I areas is already impaired.

Additionally, in evaluating significance, BLM is required to consider the "[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas." 40 C.F.R. § 1508.27(b). The economy of GJ relies heavily on recreational visitors who come to enjoy the area's scenic surroundings, by traveling the wine and fruit byway, hiking on the flanks of the Grand Mesa and the Book Cliffs, or biking on the proposed Palisade Plunge bike trail. The area also includes prime farmlands. Both the development of the drilling operations and the operation of the trucks passing through the area will negatively affect these values, including by affecting the viewshed.

The BLM also erroneously finds no significance with respect to the project's impacts to water and endangered fish. The project will cause erosion and sedimentation and will likely increase selenium and salinity concentrations in streams. Updated EA at 91. The project also threatens the contamination of both surface and groundwater from accidental releases of drilling

fluids, produced water, condensate, lubricants, and fuels, and risks hydrocarbon leaks into groundwater. Updated EA at 94-95. These impacts implicate both human health and endangered species and their habitat, two factors that the BLM must consider when evaluating significance.

For example, selenium concentrations in the endangered pikeminnow are already at toxic levels near the project area. Updated EA at 122. All surface disturbance in the project area would be to selenium-containing soils. *Id*. 59 percent of the proposed surface disturbances would be to the particularly selenium-rich soils of the Mancos Shale. *Id*. An increase in selenium concentration in pikeminnow critical habitat—which the BLM concedes will be a consequence of the project—is significant, especially where the pikeminnow is already suffering from selenium toxicity. *Id.* BLM also notes that "[e]ffects on Blue Lineage cutthroat trout could also include increased salt loads and selenium concentrations similar to effects described for the Colorado pikeminnow." *Id.* at 125.

BLM also recognizes that endangered fish are at risk of entrainment and impingement in pump water intakes, noting in particular that "[w]ater withdrawn directly from North Fork Kannah Creek, tributary to the North Fork and Brandon Ditch[,] during any time of year could impinge and entrain juvenile and fry cutthroat trout in pump intakes." Updated EA at 125.

Contaminated surface runoff, inadvertent fuel spills, and release of other hazardous materials also might affect sensitive and endangered aquatic species in or downstream of the Project Area. Updated EA at 125. For all these reasons, an EIS is required.

Another significant impact is to the City of Grand Junction public water supply. The EA considers this impact to be of "special concern." Updated EA at 90. In particular, one of the project's proposed well pads will be located "upslope of" and "adjacent to an unnamed ephemeral stream flowing towards" the Juniata Reservoir, a major water storage facility for the City of Grand Junction. *Id.* The EA notes that, although the well pad has a "No Surface Occupancy" stipulation because of the potential for impact to the Grand Junction public water supply, Fram would need to obtain an exception to the lease stipulation to build this well pad in its current proposed location. *Id*. Locating a well pad upstream of and adjacent to a stream flowing into a major public water reservoir is significant given the serious risk to public health posed by contamination of the reservoir. The action deserves analysis in an EIS.

C. The BLM improperly relies on mitigation measures without demonstrating that the measures will reduce impacts below the level of significance.

Throughout the EA, the BLM relies on perfunctory descriptions (often in list form) of mitigation measures without meaningful analysis demonstrating that the measures will reduce impacts below the level of significance. *See Nat'l Parks*, 241 F.3d at 734. "[M]itigation measures, while necessary, are not alone sufficient to meet the [Agency's] NEPA obligations to determine the projected extent of the environmental harm to enumerated resources *before* a project is approved." *Northern Plains Resource Council v. Surface Transportation Board,* 668 F.3d 1067, 1085 (9th Cir. 2011) (emphasis in original). For example, in the context of selenium impacts to the pikeminnow, the BLM merely states that "application of measures proposed in the Biological Resources Protection Plan and SWMP" will "minimize potential discharge of

selenium-bearing sediments." Updated EA at 124. Similarly, the BLM relies on mitigation measures such as "pitless drilling systems" and "notification of potentially impacted Public Water Systems" to dismiss effects from the well pad upslope of Juniata Reservoir. EA at 90-91. Perfunctory descriptions of mitigating measures and conclusory statements like these—which appear throughout the EA—are insufficient to support a finding of no significant impact.

The key question is whether mitigation measures will reduce impacts below the threshold of significance. *See Nat'l Parks*, 241 F.3d at 734. "A 'perfunctory description,' or 'mere listing of mitigation measures, without supporting analytical data,' is insufficient to support a finding of no significant impact." *Id.* at 735. When determining the sufficiency of the mitigation measures, courts consider "whether they constitute an adequate buffer against the negative impacts that may result from the authorized activity. Specifically, [the court] examine[s] whether the mitigation measures will render such impacts so minor as to not warrant an EIS." *Id.; see also, Hill v. Boy,* 144 F.3d 1446, 1451 (11th Cir.1998) (explaining that where an agency relies on an assumption to reach a FONSI, the assumption must be supported by substantial evidence). Moreover, the proposed mitigation underlying the FONSI "must be more than a possibility" in that it is "imposed by statute or regulation or [has] been so integrated into the initial proposal that it is impossible to define the proposal without mitigation." *Wyoming Outdoor Council v. U.S. Army Corps of Eng'rs,* 351 F.Supp.2d 1232, 1250 (D.Wyo. 2005).

Here, the agency offers nothing more than empty assurances that mitigation measures will generically "reduce" impacts or "improve" outcomes. The agency does not provide the necessary analytical data to demonstrate specifically that impacts will be reduced below the threshold of significance. Indeed, in many cases, the agency does not even logically link mitigation measures to the reduced impacts. Instead, the agency merely mentions mitigation measures, or directs the reader to lists of mitigation measures elsewhere in the EA (e.g. Project Design Features and BLM COAs), without explaining how those measures will reduce impacts, and without any attention given to ensuring specifically that mitigation measures will cause impacts fall below the threshold of significance. For example, the agency notes that the project will have sedimentation impacts to streams due to (1) stream crossings and increased vehicular traffic, which will be on-going for 4 years, and (2) runoff from access roads, which will remain in place for approximately 20 years. Updated EA at 91. The EA assures the reader that "preventive measures, proper site management and spill response procedures . . . would reduce the effects of erosion and sedimentation." *Id.* at 94. According to the EA, these preventive measures include measures that would "follow" the "recommendations" outlined in BLM's "Gold Book"; requirements of the State's site-specific Storm Water Discharge Permit and SWMP; and "recommendations" from the Town of Palisade and City of Grand Junction Watershed Plan. *Id*. at 94-95. The agency's approach is flawed in several respects. First, two of the agency's three proposed mitigation measures are mere recommendations, not statutory or other requirements creating binding commitments. Second, the agency has failed to ensure that sedimentation impacts will fall below the level of significance. Indeed, the agency offers no explanation at all of how these mitigation measures will reduce sedimentation or erosion in any respect, much less below the level of significance. This conclusory approach, in which the agency merely assumes that mitigation measures are sufficient, cannot support a finding of no significant impact.

Notably, the fact that a best practice or mitigation measure improves a risky or harmful action does not necessarily mean that that measure lowers the action's impacts below the level of significance. For example, in the case of the pikeminnow, the EA reveals that selenium will be released into pikeminnow critical habitat even with mitigation. Thus, even with mitigation, the project will have a significant impact. If the impact is not significant, the BLM must explain why not. The BLM must "put forth 'a convincing statement of reasons' that explains why the project will not impact the environment no more than insignificantly." *Ocean Advoc.,* 402 F.3d at 864.

Similarly, with regard to cumulative impacts, the agency must provide *some* explanation of how or why compensatory mitigation will reduce the cumulative adverse impacts on the resources in question to insignificance. Bare assertions of mitigation are insufficient. *O'Reilly v. U.S. Army Corps of Eng'rs,* 477 F.3d 225, 235 (5th Cir.2007) ("[A] bare assertion is simply insufficient to explain *why* the mitigation requirements render the cumulative effects of this project less-than-significant, when considered with the past, present, and foreseeable future development in the project area." (emphasis in the original)). The agency's analysis of cumulative impacts—particularly with regard to air quality, climate, and water resource impacts—must explain how mitigation will reduce these impacts to a level of insignificance.

D. The BLM may not label discussion of future environmental effects as "crystal ball inquiry" to avoid a finding of significant impact.

The BLM refuses to undertake any meaningful analysis of climate impacts from the project, claiming: "Predicting the degree of impact any single emitter of GHGs may have on global climate change, or on the changes to biotic and abiotic systems that accompany climate change, is not possible at this time." Updated EA at 66. In refusing to undertake this analysis, the BLM evades its duty under NEPA. "Reasonable forecasting and speculation is . . . implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'" *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1246 n.9 (9th Cir. 1984) (quoting *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm.,* 481 F.2d 1079, 1092 (D.C. Cir. 1973)). The BLM is required to provide a "reasonably thorough discussion of the significant aspects of the probable environmental consequences" of the project on climate change, to "foster both informed decision-making and informed public participation." *Ctr. for Biological Diversity v. Natl Hwy. Traffic Safety Admin.*, 538 F.3d 1172, 1194 (9th Cir. 2008). Failure to meaningfully address the project's impacts on climate denies both the agency and the public information necessary for informed decision-making. Without a reasonably thorough climate analysis, the EA cannot support a finding of no significant impacts.

NEPA imposes "action forcing procedures … requir[ing] that agencies take a *hard look* at environmental consequences." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (citations omitted) (emphasis added). These "environmental consequences" may be direct, indirect, or cumulative. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8. BLM is required to take a hard look at those impacts as they relate to the agency action. "Energy-related activities contribute 70% of global GHG emissions; oil and gas together represent 60% of those energy-

related emissions through their extraction, processing and subsequent combustion."[8] Even if science cannot isolate each additional oil or gas well's contribution to these overall emissions, this does not obviate BLM's responsibility to consider oil and gas development from the Whitewater MDP from the cumulative impacts of the oil and gas sector. In other words, the BLM cannot ignore the larger relationship that oil and gas management decisions have to the broader climate crisis that we face. Here, the agency's analysis must include the full scope of GHG emissions. *See Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998) ("To 'consider' cumulative effects, some quantified or detailed information is required. Without such information, neither the courts nor the public, in reviewing the [agency's] decisions, can be assured that the [agency] provided the hard look that it is required to provide."). If we are to stem climate disaster – the impacts of which we are already experiencing – the agency's decision-making must be reflective of this reality and plan accordingly.

BLM is, at the end of the day, responsible for the management of 700 million acres of federal onshore subsurface minerals.[9] Indeed, "ultimate downstream GHG emissions from fossil fuel extraction from federal lands and waters by private leaseholders could have accounted for approximately 21% of total U.S. GHG emissions and 24% of all energy-related GHG emissions."[10] This suggests that "ultimate GHG emissions from fossil fuels extracted from federal lands and waters by private leaseholders in 2010 could be more than 20-times larger than the estimate reported in the CEQ inventory, [which estimates total federal emissions from agencies' operations to be 66.4 million metric tons]. Overall, ultimate downstream GHG emissions resulting from fossil fuel extraction from federal lands and waters by private leaseholders in 2010 are estimated to total 1,551 [million metric tons of CO_2 equivalent ("$MMTCO_2e$")]." *Id.* To suggest that the agency does not, here, have to account for GHG pollution from oil and gas development authorized in the Whitewater MDP, would be to suggest that the collective 700 million acres of subsurface mineral estate is not relevant to protecting against climate change. This sort of flawed, reductive thinking is problematic, and contradicted by the agency's very management framework, which provides a place-based lens to account for specific pollution sources to ensure that the broader public interest is protected. Therefore, even though climate change emissions from the Whitewater MDP may look minor when viewed on the scale of the global climate crisis we face, when considered cumulatively with all of the other GHG emissions from BLM-managed land, they become significant and cannot be ignored.

III. BLM must provide a hard look analysis of important resource values impacted by the Whitewater MDP, including air, water, and wildlife resources.

A. The BLM must sufficiently analyze impacts related to air.

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[8] International Investors Group on Climate Change, *Global Climate Disclosure Framework for Oil and Gas Companies* (attached as Exhibit 4).

[9] *See* DOI-BLM, *Mineral and Surface Acreage Managed By BLM,* available at: http://www.blm.gov/wo/st/en/info/About_BLM/subsurface.html.

[10] Stratus Consulting, prepared for: The Wilderness Society, *Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update*, Dec. 23, 2014 at 13 (attached as Exhibit 5).

The BLM failed to take a hard look at air quality impacts from the proposed development. For example, the EA ignored regional temperature inversion events and methane emissions. The BLM must take a hard look at the project's air quality impacts and reconsider its proposed alternative in light of those impacts.

1. The BLM must consider regional temperature inversions.

The BLM failed to consider the impact of temperature inversions on regional air quality, despite recognizing that "[t]he climate and topography of the region are conducive to the formation of temperature inversions." Updated EA at 43; *see also* BLM Response to Public Comments at 19 ("Inversions naturally occur within the Grand Junction air shed."). A temperature inversion is a layer of the atmosphere in which air temperature increases with height, where a cold layer of air is trapped under a warmer layer of air. That warmer air also traps air pollutants in that cold pool of air. According to researchers, "the resulting atmospheric stagnation inhibits pollutants from dispersing out of the region, resulting in higher pollution concentrations and longer periods of poor air quality than might otherwise be expected."[11] BLM acknowledges that air quality suffers during temperature inversions, noting that "[p]oor dispersion conditions do occur during periods with temperature inversions, which are common to the area." Updated EA at 43. However, BLM has declined to perform air quality analysis during times of inversions. BLM Response to Public Comments at 19 ("Specific air flow studies during times of inversions have not been performed for this EA.")

BLM must examine how these temperature inversion events will impact air pollution from the proposed alternative. The EA states that the "[t]he annual mean wind speed is 7.3 miles per hour (mph), a relatively high average indicating the presence of good dispersion and mixing of any potential pollutant emissions for most hours over the year." Updated EA at 43. The EA goes on to note that short-term emissions events, such as well pad construction, "would temporarily elevate pollutant levels, but impacts would be localized and would occur only for the short-term duration of the activities." *Id.* at 59. These statements ignore the seasonal variation in inversion events, where even temporary events may impact air quality and human health. They also ignore the significance of localized, short-term impacts (the locations of the northernmost pads proposed under the Whitewater MDP would be directly above the fruit and wine byway). The BLM must take a hard look at regional air quality impacts associated with inversions, especially when the National Oceanic and Atmospheric Administration ("NOAA") provides readily available inversion data for Grand Junction.[12]

2. The BLM must take a hard look at methane emissions from the project.

BLM must take steps to reduce methane emissions from the Whitewater MDP project, including (1) by undertaking a true hard-look analysis of methane waste; (2) by adopting

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[11] C. David Whiteman, et al., *Wintertime boundary layer structure in the Grand Canyon*, JOURNAL OF APPLIED METEOROLOGY (Aug. 1999) (attached as Exhibit 6).
[12] *See* National Ocean and Atmospheric Administration (NOAA)/Earth System Research Laboratory (ESRL), Radiosonde Database, available at: http://www.esrl.noaa.gov/raobs/.

enforceable mitigation requirements to minimize methane waste; and (3) by considering alternatives that require Fram to reduce methane waste. BLM must also discuss methane's contribution to ozone, and assess associated air quality and health impacts.

As detailed in our earlier comments, BLM's duty to prevent waste is expansive: "[a]ll leases of lands containing oil or gas ... shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to prevent waste of oil or gas developed in the land...." 30 U.S.C. § 225; *see also* 30 U.S.C. § 187 ("Each lease shall contain...a provision...for the prevention of undue waste...."). BLM is also required "to promote the orderly and efficient exploration, development and production of oil and gas." 43 C.F.R. § 3160.0-4. As the Mineral Leasing Act's ("MLA"), 30 U.S.C. § 181 *et seq.,* legislative history teaches, "conservation through control was the dominant theme of the debates." *Boesche v. Udall*, 373 U.S. 472, 481 (1963) (citing H.R.Rep. No. 398, 66th Cong., 1st Sess. 12-13; H.R.Rep. No. 1138, 65th Cong., 3d Sess. 19 ("The legislation provided for herein...will [help] prevent waste and other lax methods....")).

In order to fulfill its duty to prevent waste from the Whitewater MDP project, BLM must first take a true hard-look analysis of methane waste. This analysis must begin with the BLM's disclosure of the amount of methane emissions that it expects from the Whitewater MDP. Nowhere does BLM provide this information. *See* Updated EA at 61 (providing total GHG emissions in CO_2e, but not disclosing how much of this total is CH_4). BLM provides that: "The relatively low amount of natural gas expected to be co-produced with the oil would not be compressed and sold, but used to run production equipment on the well pads. Another potential use of this gas is for re-injection into the formation to increase formation pressure. Any "excess" natural gas beyond these uses would be combusted at the wellhead." *Id.* at 12. BLM should go further to quantify exactly how much gas will be co-produced with oil, how much gas is expected to be used in the operation of production equipment, how much gas is expected to be re-injected, and how much gas the agency anticipates will be flared or combusted (and whether flaring and combustion are different). Notably, aside from being a significant source of CO_2 emissions, gas flaring contributes to acid rain, and may emit NOx, PM_{10}, $PM_{2.5}$, SO_2, VOCs and HAPs. BLM must analyze these and other environmental impacts from gas flaring, as well as any air quality impacts associated with reinjection.

Additionally, in calculating and disclosing the project's GHG emissions, BLM must use a global warming potential ("GWP") that accurately reflects methane's impact on climate. Currently, BLM underestimates the climate impact of methane emissions by using an outdated GWP for methane of 25, meaning that methane is assumed to be 25 times as potent as CO_2. Updated EA at 61. This GWP apparently reflects methane's impact over a 100-year time frame. However, the 100-year GWP for methane was updated by the IPCC in a 2013 Report to reflect that methane is 36 times as potent as CO_2. [13] Additionally, the IPCC's new research has

[13] G. Myhre et al., Anthropogenic and Natural Radiative Forcing, in INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *Working Group I Contribution to the IPCC Fifth Assessment Report Climate Change 2013: The Physical Science Basis*, Table 8.7 at 714 (attached as Exhibit 7).

calculated that methane is 87 times as potent as CO_2 over a 20-year time horizon.[14] These values should be used—or at the very least acknowledged—in the EA.

Second, BLM should adopt enforceable mitigation requirements to minimize methane waste. The EA indicates that "no venting of natural gas should occur," Updated EA at 66, and "[n]o flaring of natural gas would take place," *id.* at 23. As an initial matter, it is not clear that "no flaring" will take place, as the agency indicates that "combustion" will occur and contemplates "completion venting/flaring." *Id.* at 12, 23 ("Any excess gas would be combusted at the well pad . . ."), 60 (Table 3.2-10). BLM should clarify whether or not flaring or venting will occur. Moreover, BLM should provide binding requirements to minimize venting or flaring or require capture. BLM merely provides that, "depending on the amount of excess gas, the BLM *may* require that Fram gather the gas and transport it via pipeline to 'sales' lines." *Id.* at 12 (emphasis added). BLM should include mitigation measures aimed at capturing or beneficially using methane, and should ensure that these measures are "verifiable, durable, enforceable, and will be implemented." CEQ, Final Climate Guidance at 19.

Third, BLM should provide an alternative requiring Fram to gather the excess gas and transport it via pipeline to sales lines. Such an alternative would inform the decision-making process and allow BLM and the public to evaluate the agency's choice to allow Fram to combust the "excess" gas. Such an alternative would include an evaluation supported by engineering, geologic, and economic data that demonstrates whether the expenditures necessary to market or beneficially use the gas are or are not economically justified. It appears that there are no technological barriers to gas sales, as the proposal includes the construction of gas gathering lines, a permitted gas compressor at Fram's Reeder Mesa Facility, and connections to the Trans-Colorado gas pipeline and Rocky Mountain Express pipeline. *Id.* Where Fram profits are the only barrier to natural gas collection and sale, the BLM should analyze a reasonable alternative involving methane capture and disclose associated air quality impacts.

Finally, BLM must discuss methane's contribution to ozone, and assess associated air quality and health impacts. Methane emissions are directly linked to the production of tropospheric ozone. Despite this impact, as noted above, the BLM failed to disclose methane emissions or sources, or model methane emissions in its air quality analysis. *See* Updated EA at 61. BLM must conduct such an analysis, which is particularly important in light of the fact that data from the EA indicates that air quality for regional ozone is poor. *Id.* at 196-97.

B. The BLM must sufficiently analyze impacts related to water.

1. Groundwater Impacts

The resource development proposed by the Whitewater MDP has the potential to contaminate groundwater resources in the project area – including groundwater springs and aquifers serving nearby residents and the surrounding communities. Such contamination may result during the following processes: (1) water withdrawals for hydraulic fracturing in times or areas of low water availability, particularly in areas with limited or declining groundwater

[14] *Id.*

resources; (2) spills during the management of hydraulic fracturing fluids and chemicals or produced water that result in large volumes or high concentrations of chemicals reaching groundwater resources; (3) injection of hydraulic fracturing fluids into wells with inadequate mechanical integrity, allowing gases or liquids to move to groundwater resources; (4) injection of hydraulic fracturing fluids directly into groundwater resources; (5) disposal or storage of hydraulic fracturing wastewater in unlined pits, resulting in contamination of groundwater resources.[15] Not all chemical used in fracking have been fully disclosed, Updated EA at 97, but many of those that have been disclosed or discovered are toxic, hazardous, or harmful to human health or welfare. Various instances of water pollution from fracking operations have been documented.[16]

Here, BLM's NEPA analysis of the Whitewater MDP fails to sufficiently analyze the direct, indirect, and cumulative impacts to groundwater. *See* 40 C.F.R. § 1508.25(c). BLM concludes that "use of HF technology in completions of oil and gas wells for the purpose of facilitating recovery of Federal fluid minerals does not represent a significant risk of adverse impacts to human health and the environment." Updated EA at 98. The BLM reaches this conclusion on the basis that groundwater wells typically extend to depths of less than 200 feet below the surface, while fracking occurs at depths of 3,000 to 11,000 feet below the surface. *Id*. at 97. BLM also notes that BLM and COGCC rules provide for "proper casing and cementing of wellbores to isolate the aquifers penetrated by the wellbore." *Id.* However, BLM must address the concerns with fracking outlined above, including the potential for spills, injection of fracking fluids into wells with inadequate mechanical integrity, injection of fracking fluids directing into groundwater resources, and disposal of fracking wastewater. Without addressing the potential for these key sources of contamination, BLM's discussion fails to satisfy the hard look requirements of NEPA.

2. Surface Water Impacts

A recent report has identified that there were 516 spills related to oil and gas development in 2011 in Colorado, and of those, the Colorado Oil and Gas Conservation Commission ("COGCC") only assessed 5 fines.[17] This is of particular note, here, because the agency recognizes that "there would be a potential risk of contamination of surface water during accidental releases of drilling fluids, fracking fluids, produced water, condensate, lubricants and fuels and other chemicals that could into [sic] flow into streams or ditches during transport." Updated EA at 94. Both the COGCC report and BLM's own admission regarding the risk of spills raise significant concerns about COGCC's enforcement capabilities and the likelihood that any subsequent spill in the Whitewater MDP would be sufficiently addressed.

2. Water Quantity

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[15] *See* U.S. Envtl. Protection Agency, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States (Final Report)* (Dec. 2016) at ES-3 (attached as Exhibit 8).
[16] *Id.* at ES-22, ES-30, ES-35, ES-40.
[17] Earthworks, *Enforcement Report, COGCC: Inadequate enforcement means current Colorado oil and gas development is irresponsible* (March 2012) (attached as Exhibit 9).

In addition to impacts on water quality, mineral development processes, and particularly fracking, may result in significant impacts on water quantity. Such impacts are not adequately addressed in the Whitewater MDP. Although Fram's "preferred" nitrogen foam fracking technique ("Access Frac") would reduce water consumption – with the EA providing that "[a]pproximately 1,950 barrels (0.25 acre-feet) of fresh water would be required for drilling each well," totaling 6.25 acre-feet for drilling annually – these quantities are still significant depletions to an already arid landscape. Updated EA at 20. Moreover, the water used for this project "would be purchased from the City of Grand Junction," potentially impacting the city's water supply. *Id.* at 94. However, "because water from existing water rights would be used, no new impacts on water rights beyond those already permitted would occur." *Id.* at 95. No analysis of water use, or the impact that this will have to municipal water supplies is provided. Such dismissive treatment is impermissible.

Notably, Fram has made no commitment to using the Access Frac method. BLM notes that "Fram is considering three different HF techniques to complete these wells"—the "Access Frac" method, the typical nitrogen foam frac method, and the slickwater frac method. Updated EA at 20. Taking into account water use for drilling, completion, dust control, and hydrostatic testing, BLM estimates that the project will use between 52.75 and 361.50 acre-feet of water annually depending on the fracking method used.

If Fram uses the "slickwater" technique, which "us[es] water to transport the proppant and other consituents and to exert hydrostatic pressure on the targeted bedrock zones," *id.*, vast additional quantities of water would be required. To frack a single well one time requires between 2 and 8 million gallons of water.[18] This massive use of water is of particular concern in states in the interior west, like Colorado, were water supplies are scarce and already stretched.[19]

Here, BLM's NEPA analysis has failed to closely assess the direct, indirect, and cumulative impacts of development from the Whitewater MDP on water supplies. 40 C.F.R. §§ 1508.7, 1508.8. This analysis has failed to consider the impacts of these water withdrawals on water availability for drinking, agriculture, and wildlife. And, further, it has failed to address the impacts to water quantity at annual, seasonal, monthly, and daily time scales because the impacts of such water withdrawals could be more acute during times, months, and seasons of scarcity. For example, increased withdrawal and irretrievable contamination of waters will be particularly harmful during times – like the present – when much of the state is experiencing drought conditions.[20] As noted above, the EA for the Whitewater MDP fails to provide adequate analysis or recognition of significant water quantity issues associated with oil and gas development, representing a fundamental shortcoming in the EA.

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[18] J. David Hughes, *Will Natural Gas Fuel America in the 21st Century?*, May 2011, at 23, (attached as Exhibit 10).

[19] *See* Western Organization of Resource Councils, *Gone for Good: Fracking and Water Loss in the West* (2013) at 7-8 (noting water scarcity in west and significant water demands of fracking) (attached as Exhibit 11).

[20] *See* WORC, attached above as Exhibit 11 at 8.

C. The BLM must sufficiently analyze impacts related to wildlife.

1. Big Game

The project area for the Whitewater MDP coincides with a Colorado Parks and Wildlife ("CPW") game management unit that includes mule deer, elk, pronghorn, moose, black bear and mountain lion. Updated EA at 141. BLM acknowledges that "[a]ll proposed well pads are either located within big game sensitive winter range or have access through big game sensitive winter range." *Id.* at 37. Specifically, "most of the eastern and southern portions of the Project Area are within mule deer or elk sensitive winter range, [and] include both winter concentration areas and severe winter range." *Id.* at 141.

In February 2014, Fram and CPW signed a Wildlife Mitigation Plan under which Fram will avoid construction within sensitive big game winter habitats from December 1 through April 30; will take steps to minimize traffic during that time; and will redistribute large, woody material salvaged during clearing operations to provide wildlife habitat and a deterrent to vehicular traffic. Biological Resources Protection Plan (Updated February 2017).

Although these measures provide protections for elk, deer, and pronghorn during the winter months, BLM must still adequately acknowledge and address the likely year-round, long-term impacts of the proposal, including from roads and surface disturbance associated with well pads. BLM notes that, under all alternatives, "construction of well pads, project roads, collocated pipelines, and other surface facilities would result in a combined loss of 50.4 acres of mule deer sensitive winter range, 66.6 acres of elk sensitive winter range, and 85.9 acres of total deer/elk winter range." Updated EA at 144. Nevertheless, BLM dismissively concludes that "[f]or most of the Project Area, the combination of a big game winter range TL stipulation on the Federal leases, and various COAs addressing noise, dust, and prompt reclamation would reduce the indirect impacts in sensitive winter range." *Id.* at 145. BLM must give more consideration to the habitat fragmentation and avoidance by big game associated with construction of well pads, roads, and other infrastructure.

Roads are one of the most pervasive impacts of human development on natural landscapes. Their greatest impact by far lies in the indirect effects of habitat fragmentation and avoidance by wildlife. An extensive literature review was conducted by Rowland in 2005 concerning elk avoidance of roads.[21] Numerous studies document that elk avoid roads and do not use habitat adjacent to roads to its full potential. For example, when road densities are as low as one mile per square mile, elk habitat effectiveness is reduced by 25 percent.[22] In another literature review prepared in 2008, Hebblewhite referenced almost 200 resources relating to this topic. In eight studies that measured the distance of ungulate avoidance from roads, the average

[21] Mary M. Rowland et al., *Effects of Roads on Elk: Implications for Management in Forested Ecosystems* (2005) (attached as Exhibit 12).

[22] Chris Weller et al., *Fragmenting Our Lands: The Ecological Footprint From Oil And Gas Development* (Sept. 2002) at 16 (emphasis added) (attached as Exhibit 13).

"zone" of influence extended approximately 1000 meters from roads and wells.[23] In another study, human access facilitated by road development indirectly resulted in a 43 to 50 percent loss of high-use elk habitat in Wyoming.[24] For example, in the sage-steppe ecosystem of Wyoming's Jack Marrow Hills, elk avoided roads the most during summer months, strongly selecting habitats greater than 2,000 meters from these features. In addition, elk in the study continued to show avoidance of wellsites long after the construction phase had been completed.[25] In a major volume reviewing elk ecology and management, Lyon and Christensen state: "Access — mainly that facilitated by roads — is perhaps the single most significant modifier of elk habitat and a factor that will remain central to elk management on public and private lands. *It is possible that in areas with no cover, road densities less than one mile per square mile may eliminate effective habitat*.[26] These studies indicate that the Unit's ability to remain elk habitat would be significantly compromised. In light of this, the EA must take the necessary hard look to determine direct, indirect, and cumulative impacts of roads on local big game populations.

Additionally, the EA must take a hard look at the impacts of disturbance from the construction of well pads and other infrastructure. There are two potential concerns with the avoidance of well pads. First, the avoidance or lower probability of use of areas near wells creates indirect habitat losses of winter range that are substantially larger in size than the direct habitat losses incurred when native vegetation is removed during construction of the well pad. Habitat losses, whether direct or indirect, have the potential to reduce carrying capacity of the range and result in population-level effects. Second, if big game animals do not respond by vacating winter ranges, distribution shifts will result in increased density in remaining portions of the winter range, exposing the population to greater risks of density-dependent effects.[27] For mule deer, lower predicted probabilities of use within 2.7 to 3.7 km of well pads suggested indirect habitat losses may be substantially larger than direct habitat losses.[28] Following three years of gas development in western Wyoming, 41 percent of areas classified as high deer use

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[23] Mark Hebblewhite, *A Literature Review of the Effects of Energy Development on Ungulates: Implications for Central and Eastern Montana* (Prepared for Montana Fish, Wildlife and Parks) at 85 (2008) (attached as Exhibit 14).

[24] Clay B. Buchanan et al., *Seasonal Resource Selection and Distributional Response by Elk to Development of a Natural Gas Field*, 67 RANGELAND ECOLOGY AND MGMT. 369, 377 (2014) (attached as Exhibit 15).

[25] Hebblewhite at 23 (attached above as Exhibit 14).

[26] Janice L. Thomson et al*., Wildlife at a Crossroads: Energy Development in Western Wyoming, Effects of Roads on Habitat in the Upper Green River Valley* (Feb. 2005) at 18 (attached as Exhibit 16).

[27] Hall Sawyer et al., *Winter Habitat Selection of Mule Deer Before and During Development of a Natural Gas Field* 70 J. OF WILDLIFE MGMT. 396, 402 (2006) (attached as Exhibit 17).

[28] *Id*. at 396.

prior to development changed to medium-low or low-use areas. This change in distribution occurred with only two percent direct habitat loss. Relatively small amounts of direct habitat loss can affect winter distribution patterns of mule deer and the effects of direct habitat loss may be long term for species like mule deer that rely on native shrubs (i.e., sagebrush) because reclamation of native shrubs in arid environments is difficult.[29]

BLM's failure to consider the year-round and long term impacts of the proposal is a significant failure and must be corrected.

2. White-Tailed Prairie Dogs

The white-tailed prairie dog is a BLM sensitive species that exists within the Project Area. Updated EA at 119. BLM notes: "Five prairie dog colonies, ranging from 1 acre to 64 acres, were mapped west and south of Horse Mountain in the northern part of the Project Area." *Id.* The Wildlife Mitigation Plan provides that "Fram will avoid construction within active white-tailed prairie dog towns, if feasible. However, if active towns cannot be avoided, Fram will avoid activities within active white-tailed prairie dog towns during pupping season on BLM-administered lands from April 1 through July 15." Biological Resource Protection Plan at 4. The prairie dogs warrant and deserve better protection than merely an effort to avoid construction during prairie dog towns "if feasible." Given that prairie dog colonies have been mapped, BLM should provide for site-specific stipulations for well pads overlapping or near prairie dog towns to avoid short-term and long-term habitat loss.

Additionally, the EA does not contain any analysis of the impacts of road noise associated with increased traffic that will result from oil and gas development on well pads, or other noise resulting from drilling, compressor stations and other oil and gas activities. There is significant new research that indicates that exposure to traffic noise significantly lowered aboveground activity, reduced foraging, and increased vigilance.[30] In addition, the study found no evidence of habituation to noise over a 3 month period.[31] This research demonstrates that noise can drive significant changes in behavior that could impact fitness through lost foraging opportunities.[32] Further, the authors suggest that marked shifts in critical behaviors of prairie dogs as a direct consequence of exposure to traffic noise, may act synergistically with other anthropogenic disturbances to further impact vulnerable prairie dog populations.[33] The EA does not analyze the potential impacts of traffic noise associated with oil and gas drilling on white tailed prairie dogs. The BLM should analyze these impacts and consider lease stipulations to address the potential impacts of oil and gas traffic noise on white-tailed prairie dogs, including, but not limited to seasonal timing limitations to protect prairie dogs from noise impacts during the time period when

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[29] Hall Sawyer, *Final Report for the Atlantic Rim Mule Deer Study* (Apr. 2007) at 25 (attached as Exhibit 18).

[30] Graeme Shannon, et al., *Road Traffic Noise Modifies Behavior of a Keystone Species*, 94 ANIMAL BEHAVIOR 135, 135 (2014) (attached as Exhibit 19).
[31] *Id.*
[32] *Id.* at 140.
[33] *Id.*

they are breeding and raising pups, noise standards that require that traffic noise remain below certain thresholds, and controlled surface use so that BLM could require placement of roads as far from white tailed prairie dog colonies as possible.

Further, the EA must also analyze the direct or cumulative impacts of a variety of other potential impacts of oil and gas drilling, including not only increased noise, but also direct loss of habitat from surface disturbance, potential collapse of burrows, facilitation of predation due to oil and gas infrastructure creating raptor perches, direct mortality from vehicles, potential for increased shooting of prairie dogs by oil and gas workers, and potential for oil and gas drilling impacts to interact with sylvatic plague impacts to cause decline or loss of colonies.

The U.S. Fish and Wildlife Service is currently under a court order to make a new finding regarding whether white tailed prairie dogs should be protected under the Endangered Species Act.[34] In remanding the USFWS decision that the white-tailed prairie dog does not warrant ESA protection, the court found that the Service's conclusion that there were adequate regulatory mechanisms in place on BLM land sufficient to sustain the prairie dog populations in light of the threat posed by oil and gas development was not reasonable.[35] In other words, the BLM does not currently have adequate regulatory mechanisms in place to protect white-tailed prairie dogs from the significant threat posed by oil and gas development. In addition, the USFWS found that oil and gas development poses a threat to white tailed prairie dogs (the most significant threat in combination with sylvatic plague).[36] Given the potential for oil and gas to have significant negative impacts on prairie dog colonies, and the fact that BLM currently has inadequate regulatory mechanisms in its existing Resource Management Plans to protect this sensitive species from oil and gas development, it is critical that the EA provide a thorough analysis of impacts and that BLM include lease stipulations that minimize and mitigate the impacts of oil and gas development on this species.

D. BLM Must Adequately Consider Cumulative Effects.

Of critical importance to BLM's hard look analysis is the agency's discussion of the cumulative impacts from development of the Whitewater MDP. Here, although BLM has dedicated Chapter 4 of the EA to cumulative effects, analysis in this section exists in name only and fails to provide the type of detailed look that NEPA demands. *See NRDC*, 865 F.2d at 298 (providing that section headings without the "requisite analysis" are insufficient).

A cumulative impact is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. "Notably, an agency must take a hard look at cumulative impacts whether an EIS or EA is involved." *Environmental Protection*

[34] *Rocky Mountain Wild et al. v. U.S. Fish & Wildlife Service*, No. CV 13-42-M-DWM, Order September 29, 2014 (ECF No. 42).
[35] *Id.* at 24-28.
[36] *Id.* at 55.

Information Center v. Blackwell, 389 F.Supp.2d 1174, 1185 (N.D.Cal. 2004) (citing *Churchill County v. Norton,* 276 F.3d 1060, 1081 (9th Cir. 2001) (interpreting the regulations implementing NEPA as requiring that an EIS consider the cumulative impacts of the proposed agency action); *Kern v. United States Bureau of Land Mgmt.,* 284 F.3d 1062, 1076 (9th Cir. 2002) (stating that an EA "may be deficient if it fails to include a cumulative impact analysis"). "Because cumulative impacts analysis is important to both an EIS as well as an EA … it is appropriate to look to case law on cumulative impacts analyses in EISs for guidance even though this case involves an EA rather than an EIS." *EPIC*, 389 F.Supp.2d at 1185.

Consideration of cumulative impacts requires "some quantified or detailed information; ... general statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided. The cumulative impact analysis must be more than perfunctory; it must provide a 'useful analysis of the cumulative impacts of past, present, and future projects.' " *Kern,* 284 F.3d at 1075. *See also Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 810 (9th Cir. 1999) (stating that an environmental analysis "must analyze the combined effects of the actions in sufficient detail to be 'useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts.' "); *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 298 (D.C. Cir. 1988) ("Conclusory remarks [on cumulative impacts] ... do not equip a decisionmaker to make an informed decision about alternative courses of action or a court to review the [agency's] reasoning.").

Here, BLM's cumulative effects section offers only a cursory assessment of impacts to various resource values. *See* Updated EA at 186-209. Notably, the agency doesn't even identify several resources as worthy of discussion. For example, the agency fails to provide any cumulative analysis of GHG emissions or climate change. For example, the BLM should consider the cumulative impacts of this oil and gas development (for example, stress to endangered fish from disturbance of soils containing toxic selenium) when combined with the impacts of climate change (for example, stress to endangered fish from drought or warming water). BLM should also consider the cumulative effect of the foreseeable full-build out of the 90,000-acre Whitewater Unit along with development of the 52,500-acre MDP.

IV. BLM Must Take a Hard Look at the Climate Impacts of BLM's Fossil Fuel Management.

A. BLM Must Consider Cumulative Climate Impacts.

BLM must address the cumulative impacts on the climate of the foreseeable fossil fuel development on BLM-managed land. NEPA requires a detailed analysis of "cumulative" effects, which are "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. §§ 1508.7, 1508.25(c). Analysis of cumulative impacts protects against "the tyranny of small decisions," *Kern v. BLM*, 284 F.3d 1062, 1078 (9th Cir. 2002), by confronting the possibility that agency action may contribute to cumulatively significant effects even where impacts appear insignificant in isolation. 40 C.F.R. §§ 1508.7, 1508.27(b)(2). Here, BLM must consider the cumulative, incremental contribution of greenhouse

gas emissions from the Whitewater MDP, *added* to other past, present and reasonably foreseeable BLM-managed fossil-fuel extraction emissions.

The scope of the cumulative impacts inquiry must include other projects potentially impacting the same resources. For example, the Ninth Circuit has indicated that, in reviewing a land exchange that would increase air pollution in the Las Vegas Valley, BLM must consider the cumulative impact of all other foreseeable land exchanges in that region. *Hall v. Norton*, 266 F.3d 969, 978 (9th Cir. 2001). Similarly, in reviewing a timber sale that risked spreading a fungus harmful to cedars in Oregon, BLM violated NEPA by confining its analysis to the boundaries of the proposed sale; as the Ninth Circuit explained, NEPA required analysis of the cumulative impact of foreseeable sales throughout the region. *Kern v. BLM*, 284 F.3d at 1078; *see also Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1215 (9th Cir. 1998) (Forest Service, in approving timber sale for salvage after fire, required to consider cumulative impact of foreseeable sales across 140-square mile burned area).

"The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Such an analysis would enable BLM to take a hard look at the significance and severity of cumulative emissions coupled with plan implementation.

B. BLM Must Consider Carbon Budgeting.

One of the measuring standards available to BLM for analyzing the magnitude and severity of BLM-managed fossil fuel emissions is to apply those emissions to the remaining global carbon budget. A "carbon budget" offers a cap on the remaining stock of greenhouse gases that can be emitted while still keeping global average temperature rise below scientifically researched warming thresholds[37]—beyond which climate change impacts may result in severe and irreparable harm to the biosphere and humanity.

The Paris Agreement commits all signatories—including the United States—to a target holding long-term global average temperature "to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels."[38] As articulated by a team of international climate scientists, including Dr. James Hansen, in a 2013 report: "The widely accepted target of limiting human-made global warming to 2 degrees Celsius (3.6 degrees Fahrenheit) above preindustrial level is too high and would subject young people, future generations and nature to irreparable harm…. Observational data reveal that some climate extremes are already increasing in response to warming of several tenths of a degree in recent

[37] The Paris Agreement states that global warming must be held "well below 2°C above pre-industrial levels" with a goal to "limit the temperature increase to 1.5°C." U.N. Framework Convention on Climate Change, Conference of the Parties, Adoption of the Paris Agreement, Art. 2, U.N. Doc. FCCC/CP/2015/L.9 (Dec. 12, 2015), *available at* http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf (Exhibit 20).

[38] Paris Agreement at Art. 2 (attached as Exhibit 20).

decades; these extremes would likely be much enhanced with warming of 2°C or more."[39] "Runaway climate change—in which feedback loops drive ever-worsening climate change, regardless of human activities—are now seen as a risk even at 2°C of warming."[40] "[T]here is an unacceptable risk that before 2°C of warming, significant 'long-term' feedbacks will be triggered, in which warming produces conditions that generate more warming, so that carbon sinks such as the oceans and forests become less efficient in storing carbon, and polar warming triggers the release of significant permafrost and clathrate carbon stores. Such an outcome could render ineffective human efforts to control the level of future warming to manageable proportions."[41] Indeed, the impacts of 2°C temperature rise have been "revised upwards, sufficiently so that 2°C now more appropriately represents the threshold between 'dangerous' and 'extremely dangerous' climate change."[42] "[T]he risks previously believed to be associated with an increase of around 4°C in global temperatures are now associated with the rise of a little over 2°C, while the risks previously associated with 2°C are now thought to occur with only 1°C rise."[43]

Although the Paris Agreement has underscored that immediate action is needed to avoid 'extremely dangerous' warming, meeting the voluntary commitments adopted in Paris alone will be insufficient to meet goal of limiting temperature change to between 1.5°C and 2.0°C above pre-industrial levels. As noted by a 2015 UNEP technical report:

> The emissions gap between what the full implementation of the unconditional [intended nationally determined contributions (INDCs)] contribute and the least-cost emission level for a pathway to stay below 2°C, is estimated to be 14 $GtCO_2e$ (range: 12-17) in 2030 and 7 $GtCO_2e$ (range: 5-10) in 2025. When conditional INDCs are included as fully implemented, the emissions gap in 2030 is estimated to be 12 GtCO2e (range: 10-15) and 5 $GtCO_2e$ (range: 4-8) in 2025.[44]

In other words, far greater emissions reductions are necessary to stay below and 2.0°C, let alone aspire to 1.5°C of warming. If no further progress were made beyond the Paris Agreement, expected warming by 2100 would be 3.5°C.[45] In the alternative, if no action is taken

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[39] James Hansen, *et al., Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature,* 8 PLoS ONE 8 e81648 (2013) (attached as Exhibit 21).
[40] Greg Muttitt, *et al.*, *The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production*, Oil Change International (Sept. 2016) at 6 (attached as Exhibit 22).
[41] David Spratt, *Climate Reality Check: After Paris, Counting the Cost* (March 2016) at 8 (attached as Exhibit 23).
[42] Kevin Anderson and Alice Bows, *Beyond 'Dangerous' Climate Change: Emission Scenarios for a New World*, Phil. Trans. R. Soc. (2011) (attached as Exhibit 24).
[43] International Energy Agency, *Redrawing the Energy-Climate Map* (June 2013) at 14, (attached as Exhibit 25).
[44] United Nations Environment Programme (UNEP), *The Emissions Gap Report 2015: A UNEP Synthesis Report* (Nov. 2015) at xviii (attached as Exhibit 26).
[45] Spratt, *Climate Reality Check* at 2 (attached as Exhibit 23).

and the status quo is maintained—a position long reflected in BLM's management of public lands—estimated warming by 2100 is upwards of 4.5°C.[46] To achieve an outcome consistent with a 50% chance of keeping warming to 2.0°C, the growth in global-energy related CO_2 emissions needs to halt and start to reverse within the current decade.[47] Delaying stronger climate action to 2020 would come at a cost: $1.5 trillion in low-carbon investments are avoided before 2020, but $5 trillion in additional investments would be required between 2020-2035 to get back on track.[48]

With specific regard to United States commitments under the Paris Agreement, the U.S. INDC set specific greenhouse gas emissions reduction target for 2025 of a 26% to 28% reduction below the 2005 emission levels, producing a range in 2005 net GHG emissions from 6,323 to 7,403 $MTCO_2e$.[49] The difference between this target and the estimated 2025 emissions without INDC policies results in an 'emissions gap' ranging from 896 to 2,121 $MTCO_2e$.[50]

Both the IPCC and National Climate Assessment recognize the dominant role of fossil fuels in driving climate change:

> While scientists continue to refine projections of the future, observations unequivocally show that climate is changing and that the warming of the past 50 years is primarily due to human-induced emissions of heat-trapping gases. These emissions come mainly from burning coal, oil, and gas, with additional contributions from forest clearing and some agricultural practices.[51]
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> CO_2 emissions from fossil fuel combustion and industrial processes contributed about 78% to the total GHG emission increase between 1970 and 2010, with a contribution of similar percentage over the 2000–2010 period (*high confidence*).[52]

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[46] *See* Climate Interactive, Climate Scorecard, available at: https://www.climateinteractive.org/programs/scoreboard/*; see also,* Andrew P. Schurer, *et al., Separating Forced from Chaotic Climate Variability over the Past Millennium*, Journal of Climate, Vol. 26 (March 2013) (attached as Exhibit 27).
[47] IEA (2013) at 13.
[48] IEA (2013) at 114.
[49] Jeffery Greenblatt & Max Wei, *Assessment of the climate commitments and additional mitigation policies of the Unites States*, Nature Climate Change (Sept. 2016), available at: http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate3125.html (attached as Exhibit 28).
[50] *Id.* at 2; *see also* UNEP, Emissions Gap Report (attached as Exhibit 26).
[51] Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds., 2014: *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program (attached as Exhibit 29).
[52] IPCC AR5 Synthesis Report at 46 (attached as Exhibit 30).

The energy sector accounts for around two-thirds of GHG emissions, and more than 80% of global energy consumption is based on fossil fuels.[53] To keep open a realistic chance of meeting the 2°C target, intensive action is required before 2020. As summarized in a recent report:

> The Paris Agreement aims to help the world avoid the worst effects of climate change and respond to its already substantial impacts. The basic climate science involved is simple: cumulative carbon dioxide (CO_2) emissions over time are the key determinant of how much global warming occurs. This gives us a finite *carbon budget* of how much may be emitted in total without surpassing dangerous temperature limits.[54]

According to the IPCC, as of 2011, the remaining carbon budget of cumulative CO_2 emissions from all anthropogenic sources must remain below 1,000 $GtCO_2$ to provide a 66% probability of limiting warming to 2°C above pre-industrial levels.[55] For years 2012-2014, approximately 107 $GtCO_2$ was emitted, averaging approximately 36 $GtCO_2$ per year, which left us at the start of 2016 with a carbon budget of only 850 $GtCO_2$.[56] These emissions were the highest in human history and 60% higher than in 1990 (the Kyoto Protocol reference year). Of course, the Paris Agreement aim of limiting global warming to 1.5°C requires adherence to a more stringent carbon budget of only 400 $GtCO_2$ from 2011 onward, of which about 250 $GtCO_2$ remained at the start of 2016.[57] "With global annual emissions amounting to 36 $GtCO_2$ in 2015, scientists predict that at current rates global emissions will exceed the carbon budgets necessary to stay under the 1.5°C target by 2021 and the 2°C target by 2036.[58]

The potential carbon emissions from *existing* fossil fuel reserves—the known belowground stock of extractable fossil fuels—considerably exceed both 2°C and 1.5°C of

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[53] IEA (2013) at 9.
[54] *The Sky's Limit* at 6 (attached as Exhibit 22).
[55] IPCC AR5 Synthesis Report at 63-64 & Table 2.2 (attached as Exhibit 30). For an 80% probability of staying below 2°C, the budget from 2000 is 890 $GtCO_2$, with less than 430 $GtCO_2$ remaining. Malte Meinshausen *et al., Greenhouse-gas emission targets for limiting global warming to 2°C*, Nature (2009) at 1159 (attached as Exhibit 31). Other sources offer slightly different calculations in order to have a 50% probability of keeping warming below 2°C, with total emissions to 2050 below 1,440 $GtCO_2$ from 2000 onward, of which 420 $GtCO_2$ has already been emitted (as of 2011). It is estimated that another 136 $GtCO_2$ will be emitted from non-energy sources up to 2050, meaning the energy sector can emit a maximum of 884 $GtCO_2$ by 2050. IEA (2013) at 16-17.
[56] *See* Annual Global Carbon Emissions, available at: https://www.co2.earth/global-co2-emissions; *see also* C. Le Quéré, *et al., Global Carbon Budget 2015*, Earth Syst. Sci. Data (Dec. 2015) (attached as Exhibit 32).
[57] Dustin Mulvaney, *et al.*, *Over-Leased: How Production Horizons of Already Leased Federal Fossil Fuels Outlast Global Carbon Budgets,* EcoShift Consulting (July 2016) (attached as Exhibit 33) at 2 (citing Joeri Rogelj, *et al., Difference between carbon budget estimates unraveled*, Nature Climate Change (2016) (attached as Exhibit 34).
[58] Mulvaney at 2 (citing Oak Ridge National Laboratories, Carbon Dioxide Information Analysis Center (2015), available at: http://cdiac.ornl.gov/GCP/).

warming. "Estimated total fossil carbon reserves exceed this remaining [carbon budget] by a factor of 4 to 7."[59] "For the 2°C or 1.5°C limits, respectively 68% or 85% of reserves must remain in the ground."[60] The reserves in currently operating oil and gas field alone, even with no coal, would take the world beyond 1.5°C.[61]

In order for the world to stay within a carbon budget consistent with Paris Agreement goals—"holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C"[62]—significant fossil fuel resources must remain in the ground. More specifically, to meet the target of 2°C, globally "a third of oil reserves, half of gas reserves and over 80 percent of current coal reserves should remain unused from 2010-2050."[63] These fossil fuel reserves represent "unburnable carbon" and as such would be are stranded assets in which countries, industries, and companies are heavily invested but on which they would be unable to recoup returns. Citigroup warned investors that "the total value of stranded assets could be over $100 trillion based on current market prices."[64] Studies estimate that global coal, oil and gas resources considered currently economically recoverable contain potential greenhouse gas emissions of 4,196 $GtCO_2$,[65] with other estimates as high as 7,120 $GtCO_2$.[66]

Critically, the United States carbon quota—equivalent to 11% of the global carbon budget needed for a 50% chance of limiting warming to 2°C—allocates approximately 158 $GtCO_2$ to the United States as of 2011.[67] By way of comparison, federal and non-federal fossil fuel emissions together would produce between 697 and 1,070 $GtCO_2$.[68] Regarding just federal fossil fuel resources, the United States contains enough recoverable coal, oil and gas that, if extracted and burned, would result in as much as 492 $GtCO_2$, far surpassing the entire global

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[59] IPCC AR5 Synthesis Report at 63 (attached as Exhibit 30).
[60] The Sky's Limit at 6 (attached as Exhibit 22); *see also* Kevin Anderson and Alice Bows, *Reframing the climate change challenge in light of post-2000 emission trends*, Phil. Trans. R. Soc. (2008) (attached as Exhibit 35) ("to provide a 93% mid-value probability of not exceeding 2°C, the concentration (of atmospheric greenhouse gases) would need to be stabilized at or below 350 parts per million carbon dioxide equivalent (ppm CO_2e)" compared to the current level of ~485 ppm CO_2e.).
[61] The Sky's Limit at 5, 17 (attached as Exhibit 22).
[62] Paris Agreement at Art. 2 (attached as Exhibit 20).
[63] Christophe McGlade & Paul Ekins, *The geographical distribution of fossil fuels unused when limiting global warming to 2°C*, Nature (Jan 2015) (attached as Exhibit 36).
[64] Jason Channell, *et al.*, *Energy Darwinism II*, Citi GPS: Global Perspectives & Solutions (August 2015) at 118 (attached as Exhibit 37).
[65] Michael Raupach, *et al., Sharing a quota on cumulative carbon emissions*, Nature Climate Change (Sept. 2014) (attached as Exhibit 38).
[66] IPCC AR5, Mitigation of Climate Change, Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014) at Table 7.2 (attached as Exhibit 39).
[67] Raupach at 875 (attached as Exhibit 38).
[68] Dustin Mulvaney, *et al.*, *The Potential Greenhouse Gas Emissions from U.S. Federal Fossil Fuels*, EcoShift Consulting (Aug. 2015) at 16 (attached as Exhibit 40).

carbon budget for a 1.5°C target and nearly eclipsing the 2°C target—to say nothing of the United States 'share' of global emissions.[69] Unleased federal fossil fuels comprise 91% of these potential emissions, with already leased federal fossil fuels accounting for as much as 43 $GtCO_2$.[70]

In 2012, "the GHG emissions resulting from the extraction of fossil fuels from federal lands by private leaseholders totaled approximately 1,344 $MMTCO_2e$."[71] Between 2003 and 2014, approximately 25% of all United States and 3-4% of global fossil fuel greenhouse gas emissions are attributable to federal minerals leased and developed by the Department of the Interior.[72] Continued leasing and development of federal fossil fuel resources commits the world to 'extremely dangerous' warming well beyond the 2°C threshold. As one study put it, "the disparity between what resources and reserves exist and what can be emitted while avoiding a temperature rise greater than the agreed 2°C limit is therefore stark."[73] In short, *any* new leasing of federal fossil fuel resources is inconsistent with a carbon budget that would seek to avoid catastrophic climate change.

The production horizons for already leased federal fossil fuel resources underscore how unwarranted any additional leasing is. Comparing these production horizons to dates at which carbon budgets would be exceeded if current emission levels continue:

- Federal crude oil already leased will continue producing for 34 years beyond the 1.5°C threshold and 19 years beyond the 2°C threshold;
- Federal natural gas already leased will continue producing 23 years beyond the 1.5°C threshold and 8 years beyond the 2°C threshold;
- Federal coal already leased will continue producing 20 years beyond the 1.5°C threshold and 5 years beyond the 2°C threshold.[74]

Not only can the federal government not afford to lease *any* additional public lands for fossil fuel development—underscoring the need to consider a no leasing alternative—but substantial efforts must also be made to limit the production horizon of fossil fuel resources already leased. Accordingly, the BLM must also consider taking an aggressive position on the non-renewal and expiration of non-producing leases, as well as review of agency policy on lease suspensions and unitization.

If new leasing and renewal of existing non-producing leases continues, by 2040 it will contribute about two-thirds of expected federal fossil fuel production (forecast based on EIA and

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[69] *Id.*
[70] *Id.*
[71] Stratus Consulting, *Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update* (Dec. 2014) at 9 (attached as Exhibit 5).
[72] *See* Energy Information Administration, *Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2014* (July 2015) (attached as Exhibit 41); *see also* Stratus Consulting (attached as Exhibit 5).
[73] McGlade at 188 (attached as Exhibit 36).
[74] Mulvaney (2016) at 5 (attached as Exhibit 40).

other sources).[75] On the other hand, if new leasing ceases and existing non-producing leases are not renewed, 40% of forecast coal production could be avoided in 2025 and 74% of coal production could be avoided in 2040. As for oil and gas, 12% of oil production could be avoided in 2025 and 65% could be avoided by 2040 while 6% of natural gas production could be avoided in 2025 and 59% could be avoided by 2040.[76]

This avoided production would significantly reduce future U.S. emissions. Cessation of new and renewed leases for federal fossil fuel extraction could reduce CO_2 emissions by about 100 Mt per year by 2030. Annual emission reductions could become greater than that over time as production declines on existing leases and maintaining or increasing production becomes dependent on yet-to-be issued leases.[77]

A comparison with other measures shows that "no leasing" could be a very significant part of U.S. efforts to address climate change. The 100 Mt CO_2 emissions savings that could result from no leasing in 2030 compares favorably with EPA standards for light- and medium-vehicles that are expected to yield 200 Mt in CO_2 savings in 2030, and with standards for heavy-duty vehicles that are expected to yield 70 Mt in CO_2 savings in the same year. The 100 Mt CO_2 emissions reduction from leasing restrictions would be greater than either the emission reductions that the EPA expects to achieve through its existing regulation of oil and gas industry emissions or reductions the BLM expects to achieve from its proposed methane waste standards on oil and gas operations on federal land. Clearly, cessation of new and renewed leases could make an important contribution to U.S. climate change mitigation efforts.[78]

Also, importantly, avoided production through no new leasing and the non-renewal of existing non-producing leases could help avoid further carbon lock-in in terms of investment in both fossil fuel-producing and fossil fuel-using infrastructure.[79] Simply put, the timeframe to avoid catastrophic climate change is short, and the management of our federal minerals is dangerously out of step with this reality. BLM must take carbon budgeting into account in its decision-making related to the Whitewater MDP.

C. BLM Must Consider Projected Energy Demands, International Finance, and Stranded Assets.

BLM must account for projected energy demands, international finance, and stranded assets in its decision-making on the Whitewater MDP. The world's energy needs continue to grow, with projections of a 30% rise in global energy demand to 2040. The International Energy Agency ("IEA") has estimated that for this increasing demand to be met, a cumulative $48

[75] Peter Erickson and Michael Lazarus, *How Would Phasing Out U.S. Federal Leases for Fossil Fuel Extraction Affect CO2 Emissions and 2°C Goals?,* Stockholm Environmental Institute (2016) at 12 (attached as Exhibit 42).
[76] Erickson and Lazarus at 16.
[77] Erickson and Lazarus at 26.
[78] Erickson and Lazarus at 27.
[79] Erickson and Lazarus at 30.

trillion in investment is needed in global energy supply,[80] of which 60% is comprised of fossil fuels and nearly 20% to renewables, with an additional $23 trillion invested in improvements in energy efficiency.[81] "Countries are generally on track to achieve, and even exceed in some instances, many of the targets set in their Paris Agreement pledges; this is sufficient to slow the projected rise in global energy-related CO_2 emissions, but not nearly enough to limit warming to less than 2°C."[82] By contrast, it would be exceedingly difficult to chart a course toward a 2°C pathway. A major reallocation of investment capital going to the energy sector would be needed, requiring an estimated $40 trillion in cumulative energy supply investment moving away from fossil fuels and toward renewables.[83] The more ambitious target of limiting warming to less than 1.5°C would be even more difficult to achieve, demanding net-zero emissions between 2040 and 2060, a goal that would require radical near-term reductions in energy sector CO_2 emissions.[84] IEA estimates that "$53 trillion in cumulative investment in energy supply and efficiency is required over the period to 2035 in order to get the world onto a 2°C emissions path."[85]

The liability exposure from not acting is enormous, with cumulative 'lost' GDP from the impacts of climate change equating to $44 trillion.[86] Yet, investment decisions being taken today are not consistent with a 2°C climate goal and are not aimed at creating infrastructure that is sufficiently resilient to withstand the increased physical risks that are expected to result from future climate change.[87] "[O]ur current energy infrastructure has already 'locked-in' future carbon-dioxide emissions."[88] Even as this energy infrastructure is quickly sealing our climate fate in the near term, it will become obsolete in the slightly longer term. Indeed, many new energy sector assets are destined to become stranded when carbon reduction policies that limit the utilization of those assets are inevitably adopted in response to climate change impacts. As of 2013, emissions from existing global fossil fuel energy infrastructure already represented four-fifths, or 550 $GtCO_2$, of the total volume of CO_2 emissions that the earth can accommodate under a 2°C trajectory.[89] With delayed climate action to date, in 2017 we now find ourselves at an investment watershed, where energy infrastructure now locks in the entire remaining carbon budget to 2035.[90] From this point forward, far more costly actions are going to be required to subsequently undo the lock-in effect, and every additional investment in the energy sector committed to fossil fuels would become stranded assets under policies to achieve a 2°C pathway.

At the same time, the capital expenditures required to maintain current energy sector

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[80] International Energy Agency, *World Energy Investment Outlook* (2014), at 3 (attached as Exhibit 43).
[81] International Energy Agency, *World Energy Outlook 2016: Executive Summary* (2016), at 2 (attached as Exhibit 44).
[82] IEA (2016) at 2.
[83] IEA (2016) at 5.
[84] IEA (2016) at 5.
[85] IEA (2014) at 14.
[86] Citi at 8 (attached as Exhibit 37).
[87] IEA (2013) at 84.
[88] IEA (2013) at 98.
[89] IEA (2013) at 99.
[90] IEA (2013) at 113.

demand for fossil fuels have more than doubled since 2000, to $950 billion annually.[91] In other words, more capital investment is being required to maintain our current reliance on fossil fuels at a time, paradoxically, when from a climate perspective all of the new investment must be redirected towards renewable energy sources to effect a radical transformation of the energy sector, as necessary to avoid catastrophic warming. The market value of oil and gas produced globally was around $4.2 trillion in 2012, which was almost double what it was in 2005.[92] Yet, this has not resulted in a financial windfall to the oil and gas industry, as costs and royalties have more than kept pace with increased revenues.[93] In short, oil and gas companies are merely maintaining a fossil fuel treadmill where increasingly costly investments are needed to meet demand but lead to rising costs for the oil and gas industry as well as significant costs to society as reliance on oil and gas fuels climate change, an irrational system. In the face of these increasing capital requirements, there is growing awareness of significant financial exposure for individual companies from the possible future stranding of new fossil fuel investments. For example, among major oil and gas companies, the estimated cost of stranded assets over the next decade ranges from $21.5 billion for ConocoPhillips to $76.9 billion for Shell.[94] Nevertheless, the global capital markets have yet to internalize these risks and charge premiums that would steer investment towards renewable energy.

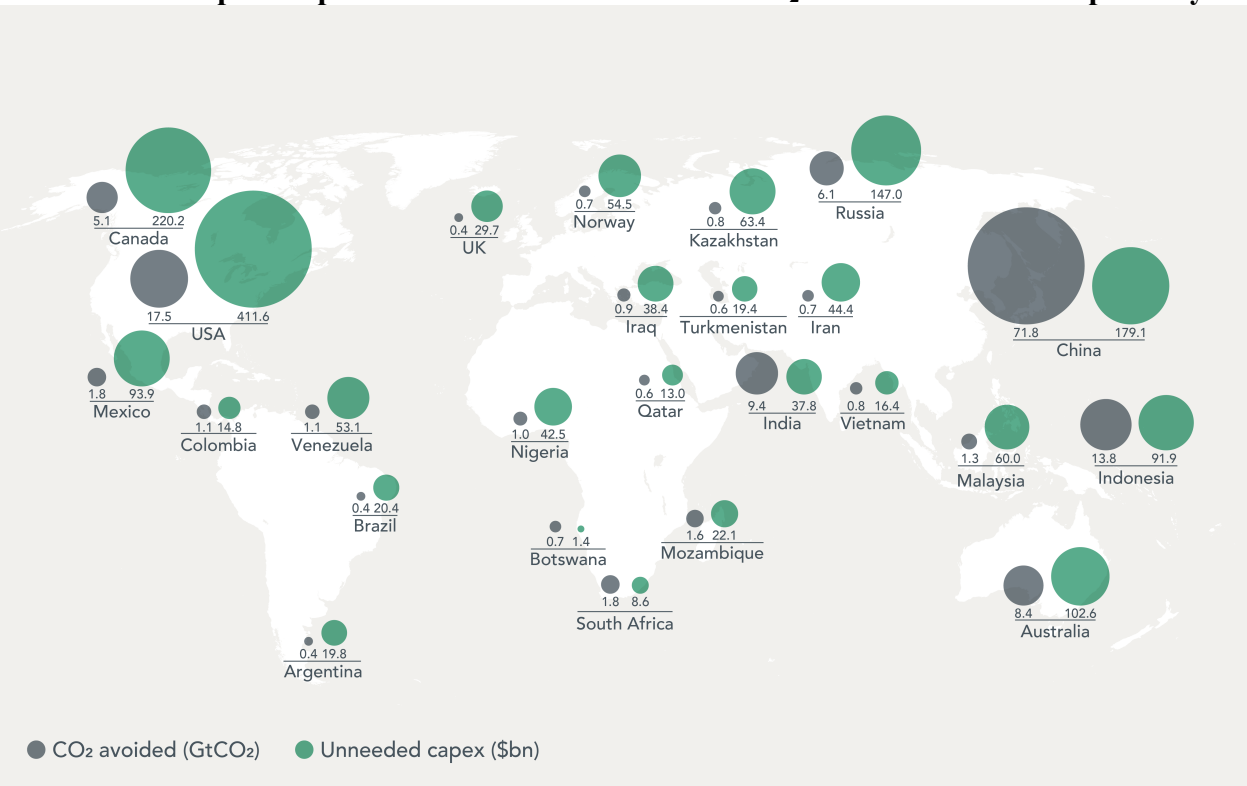
"Analysis of the entire energy system shows that delaying action on climate change is a false economy. Investments of around $1.5 trillion are avoided in the period to 2020, but an additional $5 trillion of investments are required between 2020 and 2035."[95]

According to the 2°C pathway modeled by IEA, from 2015-2035 the carbon budget for energy-based emissions from all fossil fuels is 593 $GtCO_2$.[96] If global energy investment continues on its current course, there will be over $2 trillion in investment in energy sources that will emit around 156 $GtCO_2$ of emissions over the 2°C target of 593 $GtCO_2$.[97] This can also be viewed through the lens of specific fossil fuel demand to 2035 under a 2°C pathway. For coal, zero additional capital investment is needed, as production from existing coalmines would exceed demand.[98] For gas, approximately $460 billion—or over 40% of anticipated capital expenditures—is unneeded, resulting in 9.3 $GtCO_2$ of avoided emissions.[99] For oil, it is projected that demand peaks around 2020, meaning that the oil sector does not need to continue to grow. Based on current Paris Agreement commitments, oil production required in the period to 2035 amounts to around 760 billion barrels, but falls to 690 billion barrels to maintain a course for 2°C.[100] Yet the estimated level of proven oil reserves are close to 1.7 trillion barrels.[101] This

[91] IEA (2014) at 51, 52.
[92] IEA (2014) at 54.
[93] IEA (2014) at 54.
[94] Carbon Tracker Initiative, *The $2 trillion stranded assets danger zone: How fossil fuel firms risk destroying investor returns* (Nov. 2015) at 23, (attached as Exhibit 45).
[95] IEA (2013) at 114.
[96] Carbon Tracker (2015) at 7.
[97] Carbon Tracker (2015) at 2.
[98] Carbon Tracker (2015) at 10.
[99] Carbon Tracker (2015) at 14.
[100] IEA (2014) at 87.

results in between a 940 and 1,010 billion barrel surplus of proven reserves that cannot be burned. Avoided capital expenditures for oil are nearly $1.5 trillion, avoiding 27.6 $GtCO_2$ of emissions.[102]

Unneeded capital expenditures to 2025 and related CO_2 to 2035 under a 2°C pathway



It is cheaper for the world to address climate change than bear its economic consequences. As detailed above, there are enough coal, oil and gas reserves that are technically recoverable to equal up to 7,120 $GtCO_2$ of emissions.[103] Only a portion of this carbon is already locked-in—i.e., total reserves held by fossil fuel companies and state owned assets—but this

[101] IEA (2014) at 87.
[102] Carbon Tracker (2015) at 18.
[103] IPCC AR5 at Table 7.2.

'embedded' carbon still amounts to 2,860 $GtCO_2$—already enough to take us beyond 3°C of warming.[104] Only 20% of these fossil fuel reserves can be burned to 2050 if the world is to have a chance of not exceeding global warming of 2°C.[105]

The total coal, oil and gas reserves listed on the world's stock exchanges equaled 762 $GtCO_2$ in 2013—an amount that continues to grow.[106] "If listed fossil fuel companies have a pro-rata allocation of the global carbon budget, this would amount to around 125–275 $GtCO_2$, or 20 - 40% of the 762 $GtCO_2$ currently booked as reserves. The scale of this carbon budget deficit poses a major risk for investors. They need to understand that 60 - 80% of coal, oil and gas reserves of listed firms are unburnable."[107] The systemic risks threatening the stability of financial markets related to unburnable carbon are growing more entrenched, with 200 fossil fuel companies having a market value of $4 trillion and debt of $1.5 trillion.[108]

As provided by Citigroup in a warning to investors:

> Emissions contained in current 'reserves' figures are around three times higher than the so called 'carbon budget'. Some studies suggest that globally a third of oil reserves, half of gas reserves and over 80% of current coal reserves would have to remain unused from 2010 to 2050 in order to have a chance of meeting the 2°C target. In financial terms, we estimate that the value of unburnable reserves could amount to over $100 trillion out to 2050.[109]

The longer climate action is delayed the more expensive it becomes to avoid each additional ton of GHG emissions, and the more capital expenditures will become stranded. [110] In other words, climate action is directly tied to economic resilience, and the longer action is delayed the larger the lead balloon becomes. This is not only a problem for the fossil fuel industry, but for our economy and the wellbeing of our communities. These financial implications also bear directly on BLM's decisionmaking relative to the leasing and development of our public lands for fossil fuel resources. Not only do each additional acre leased and well authorized contribute to society's collective carbon burden, but inherent financial risk and market instability has far-reaching implications for public lands remediation. When fossil fuel resources become stranded it is the public, not financially struggling fossil fuel companies, who are left holding the bag.

D. BLM must quantify the severity of harm from greenhouse gas emissions.

BLM violated NEPA by quantifying economic benefits, Updated EA at 168-69, while ignoring the social costs caused by the project's greenhouse gas emissions (including production

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[104] Carbon Tracker Initiative, *Unburnable Carbon 2013: Wasted capital and stranded assets* (2013), at 14 (attached as Exhibit 46).
[105] Carbon Tracker (2013) at 4.
[106] Carbon Tracker (2013) at 4.
[107] Carbon Tracker (2013) at 4.
[108] Carbon Tracker (2013) at 5, 30.
[109] Citi at 82.
[110] IEA (2014) at 43.

emissions, combustion emissions, and methane waste), despite the availability of a protocol for quantifying such costs: the Interagency Working Group's "social cost of carbon" protocol, which was recognized as an appropriate tool for NEPA analysis by the District of Colorado in *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174 (D.Colo. 2014).

BLM must take a hard look at the impact of the GHG emissions disclosed in the Updated EA. BLM estimated that the project would result in 70,587.8 metric tons of annual direct GHG emissions. Updated EA at 61, 66. However, NEPA requires a more searching analysis than a mere disclosure of the amount of pollution emanating from a project site. Rather, BLM must examine the "ecological[,]… economic, [and] social" impacts of those emissions, including an assessment of their "significance." 40 C.F.R. §§ 1508.8(b), 1502.16(a)-(b). *See also* Sec. Order 3289 (requiring BLM to "appl[y] scientific tools to increase understanding of climate change and to coordinate an effective response to its impacts," and mandating that "management decisions made in response to climate change impacts must be informed by [this] science."). In particular, having included in the EA its assessment of the economic benefits from oil and gas leasing and development under the RMP, Updated EA at 168-69, BLM was obligated to also present available information about the economic downsides of the consequent GHG emissions.

BLM asserts that such analysis is impossible. Updated EA at 66 ("Standardized protocols designed to measure factors that may contribute to climate change, and to quantify climatic impacts, are presently unavailable. Therefore, impact assessment of specific impacts related to anthropogenic activities on global climate change cannot be accurately estimated. Moreover, specific levels of significance have not yet been established by regulatory agencies."); *see also* Updated EA at 57-58 ("Given the global and complex nature of climate change, it is not possible to attribute a particular climate impact in any given region to GHG emissions from a particular source. The uncertainty in applying results from Global Climate Models to the regional or local scale (a process known as downscaling) limits our ability to quantify potential future impacts from GHGs emissions at this scale. When further information on the impacts of local emissions to climate change is known, such information would be incorporated into USFS [sic] planning and NEPA documents as appropriate.") These assertions do not justify BLM's failure to provide any analysis of the severity of ecologic, economic, or social impacts, because at least one tool for doing so "is and was available: the social cost of carbon protocol," which was "designed to quantify a project's contribution to costs associated with global climate change." *High Country,* 52 F.Supp.3d at 1190.

Research conducted by the National Research Council has confirmed that the negative impacts of energy generation from fossil fuels are not represented in the market price for such generation.[111] In other words, failing to internalize the externalities of energy generation from fossil fuels—such as the impacts to climate change and human health—has resulted in a market failure that requires government intervention. Executive Order 12866 directs federal

[111] *See, e.g.,* National Research Council, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use* (2010) (attached as Exhibit 47); Nicholas Muller, et. al., *Environmental Accounting for Pollution in the United States Economy*, AMERICAN ECONOMIC REVIEW (Aug. 2011) (attached as Exhibit 48); *see also* Generation Investment Management, *Sustainable Capitalism,* (Jan. 2012) (attached as Exhibit 49) (advocating a paradigm shift to "a framework that seeks to maximize long-term economic value creation by reforming markets to address real needs while considering *all* costs and stakeholders.").

agencies to assess and quantify such costs and benefits of regulatory action, including the effects on factors such as the economy, environment, and public health and safety, among others. *See* Exec. Order No. 12866, 58 Fed. Reg. 51,735 (Sept. 30, 1993).[112] The Ninth Circuit has ruled that agencies must include the climate benefits of a significant regulatory action in federal cost-benefit analyses to comply with EO 12866.

> [T]he fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency's] control ... does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming.

Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1217 (9th Cir. 2008) (quotations and citations omitted); *see also Border Power Plant Working Grp. v. U.S. Dep't of Energy*, 260 F. Supp. 2d 997, 1028-29 (S.D. Cal. 2003) (finding agency failure to disclose project's indirect carbon dioxide emissions violates NEPA).

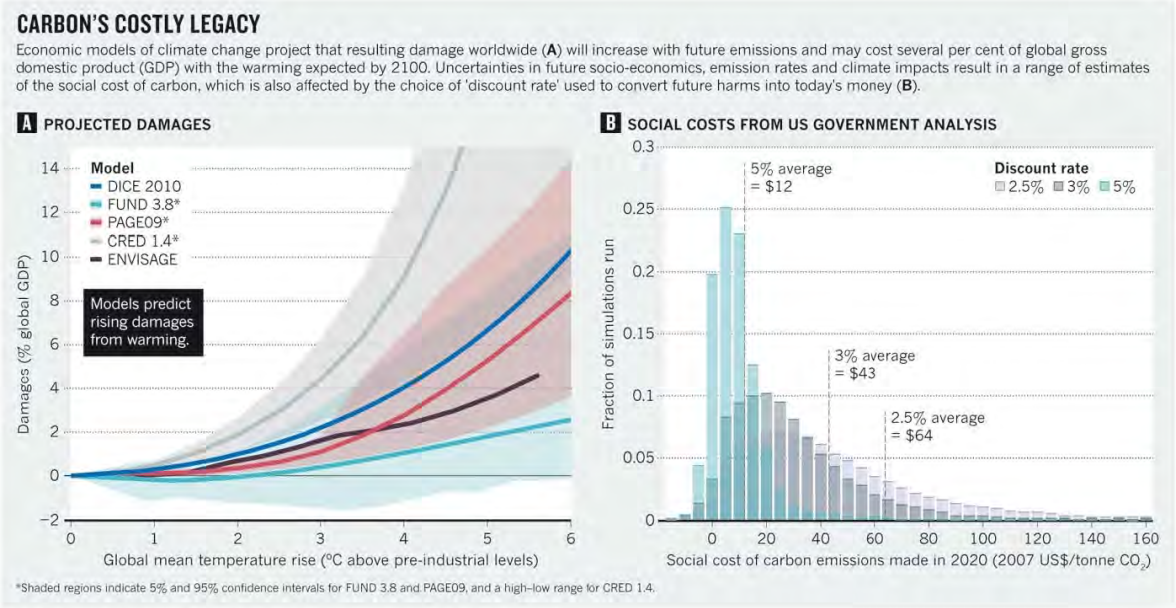
In response, an Interagency Working Group ("IWG") was formed to develop a consistent and defensible estimate of the social cost of carbon—allowing agencies to "incorporate the social benefits of reducing carbon dioxide (CO_2) emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions."[113] In other words, SCC is a measure of the benefit of reducing greenhouse gas emissions now and thereby avoiding costs in the future.[114] The charts below depict (A) dramatically increasing damages from global warming over time, as well as (B) the social cost of these carbon emissions based on 2013 TDS values.[115]

[112] *See also* Executive Order 13563, 76 Fed. Reg. 3821 (Jan. 18, 2011) (reaffirming the framework of EO 12866 and directing federal agencies to conduct regulatory actions based on the best available science).

[113] *See* Interagency Working Group on the Social Cost of Carbon, United States Government, *Technical Support Document: Technical Update on the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866* (May 2013, July 2015 Revision) at 2 (hereinafter 2013 TSD) (attached as Exhibit 50).

[114] *See* Ruth Greenspan and Dianne Callan, *More than Meets the Eye: The Social Cost of Carbon in U.S Climate Policy, in Plain English,* WORLD RESOURCES INSTITUTE (July 2011) (attached as Exhibit 51).

[115] *See* Richard Revesz, *et al., Global warming: Improve economic models of climate change,* NATURE 508, 173-175 (April 10, 2014) (attached as Exhibit 52).



Although the social cost of carbon protocol reflects global rather than exclusively domestic harms, it is a meaningful and important metric for use in NEPA analysis and is consistent with NEPA's intent. NEPA in fact mandates consideration of global harms by creating a national policy that, inter alia, is intended to "promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." 42 U.S.C. § 4321; *see also* 40 C.F.R. § 1508.27 ("Context . . . means that the significance of an action must be analyzed in several contexts such as *society as a whole (human,* national), the affected region, the affected interests, and the locality.") (emphasis added); *Anderson v. Evans*, 371 F.3d 475, 492 (9th Cir. 2004) (significance should be evaluated at different scales depending on context). NEPA's expansive language ("human," "biosphere," "man"), which mandates broad consideration of more than just domestic environmental harms, is especially appropriate now, when, with global climate change, the state of our domestic environment is intertwined with the state of the global environment.

Leading economic models all point in the same direction: that climate change causes substantial economic harm, justifying immediate action to reduce emissions.[116] The interagency process to develop SCC estimates—originally described in the 2010 interagency technical support document ("TSD"), and updated in 2013 and 2015—developed four values based on the average SCC from three integrated assessment models (DICE, PAGE, and FUND), at discount rates of 2.5, 3, and 5 percent,[117] as well as a fourth value, which represents the 95th percentile

[116] *See id.* at 174.

[117] The choice of which discount rate to apply—translating future costs into current dollars—is critical in calculating the social cost of carbon. The higher the discount rate, the less significant future costs become, which shifts a greater burden to future generations based on the notion that the world will be better able to make climate investments in the future. The underlying assumption of applying a higher discount rate is that the economy is continually growing. The IWG's "central value" of three percent is consistent with this school of thought—that successive generations will be increasingly wealthy and more able to carry the financial burden of climate impacts. "The difficultly with this argument is that, as climate change science becomes

SCC estimate across all three models at a 3 percent discount rate, and demonstrates the cost of worst-case impacts.[118] These models are intended to quantify damages, including health impacts, economic dislocation, agricultural changes, and other effects that climate change can impose on humanity. While these values are inherently speculative, a recent GAO report has confirmed the soundness of the methodology in which the IWG's SCC estimates were developed, therefore further underscoring the importance of integrating SCC analysis into the agency's decisionmaking process.[119] In fact, certain types of damages remain either unaccounted for or poorly quantified in IWG's estimates, suggesting that the SCC values are conservative and should be viewed as a lower bound.[120]

The updated interagency SCC estimates for 2020 are $12, $42, $62 and $123 per ton of CO_2 (in 2007$).[121] The IWG does not instruct federal agencies which discount rate to use, suggesting that the 3 percent discount rate ($42 per ton of CO_2) as the "central value," but further emphasizing "the importance and value of including all four SCC values[;]" i.e., that the agency should use the range of values in developing NEPA alternatives.[122] Moreover, recent outside research conducted by Stanford University has suggested that the numbers currently used by the EPA to calculate the social cost of carbon are too low. The Stanford study suggests that a more appropriate estimate of the social cost of carbon is $220/ton.[123] This higher value reflects the assumption that climate change can affect not only a country's economic output but also its growth and therefore have a permanent economic effect that accumulates over time.

Using this range of SCC estimates, the social cost of the *direct* (development and production) GHG emissions from the project (70,588 metric tons per year, Updated EA at 61 (Table 3.2-12)) are equivalent to **$847,056**, **$2,964,696**, **$4,376,456**, or **$8,682,324**. Moreover,

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increasingly concerning, it becomes a weaker bet that future generations will be better off. If they are not, lower or negative discount rates are justified." WRI Report, at 9 (attached as Exhibit 51). "Three percent values an environmental cost or benefit occurring 25 years in the future at about half as much as the same benefit today." *Id.*

[118] *See* 2013 TSD at 2 (attached as Exhibit 50).

[119] GAO-14-663, *Social Cost of Carbon* (July 24, 2014).

[120] *See* Peter Howard, et al., *Omitted Damages: What's Missing From the Social Cost of Carbon*, ENVIRONMENTAL DEFENSE FUND, INSTITUTE FOR POLICY INTEGRITY, NATURAL RESOURCES DEFENSE COUNCIL (March 13, 2014) (attached as Exhibit 53) (providing, for example, that damages such as "increases in forced migration, social and political conflict, and violence; weather variability and extreme weather events; and declining growth rates" are either missing or poorly quantified in SCC models).

[121] *See* 2013 TSD (July 2015 Revision) at 3 (attached as Exhibit 50) (including a table of revised SCC estimates from 2010-2050). To put these figures in perspective, in 2009 the British government used a range of $41-$124 per ton of CO_2, with a central value of $85 (during the same period, the 2010 TSD used a central value of $21). WRI Report at 4 (attached as Exhibit 51). The UK analysis used very different assumptions on damages, including a much lower discount rate of 1.4%. The central value supports regulation four times a stringent as the U.S. central value. *Id.*

[122] *See* 2013 TSD at 12 (attached as Exhibit 50).

[123] Frances C. Moore & Delavane B. Diaz, *Temperature Impacts on Economic Growth Warrant Stringent Mitigation Policy*, 5 Nature Climate Change 127 (2015) (attached as Exhibit 54).

the BLM fails to consider the *indirect* impacts of GHG emissions from the project, i.e. the impacts of combustion of the oil produced by the project. This is a significant oversight, as the potential GHG emission impact associated with the combustion of the produced oil appears to be substantial. The EA estimates that the Whitewater MDP would allow for production of up to 8.7 million barrels of oil over the 20-year life of the project. Updated EA at 3. Based on this figure, it appears that indirect greenhouse gas emissions would be approximately 3,741,000 million metric tons over 20 years, or approximately 187,050 metric tons/year under the proposed action.[124] This is a large amount of GHG emissions that the DEIS does not analyze or assess. Moreover, the BLM does not consider other hydrocarbons that may be produced, nor take into account gas that is flared, vented, or leaked. Direct methane emissions released to the atmosphere are much more powerful than CO2 in terms of their warming effect on the atmosphere.

Table 1: SCC Including Combustion – Whitewater MDP

Social cost/metric ton	$42	$123	$220
Estimated Annual CO2e Emissions in metric tons	70,588 (direct) + 187,050 (combustion) = 257,638	257,638	257,638
SCC	$10,820,796	$31,689,474	$56,680,360

In 2014, the district court for the District of Colorado faulted the Forest Service for failing to calculate the social cost of carbon, refusing to accept the agency's explanation that such a calculation was not feasible. *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174 (D.Colo. 2014) (a decision the agency decided not to appeal, thus implicitly recognizing the importance of incorporating a social cost of carbon analysis into NEPA decisionmaking). In his decision, Judge Jackson identified the IWG's SCC protocol as a tool to "quantify a project's contribution to costs associated with global climate change." *Id.* at 1190.[125] To fulfill this mandate, the agency must disclose the "ecological[,] … economic, [and] social" impacts of the proposed action. 40 C.F.R. § 1508.8(b).

Similarly, in 2017, the district court for the District of Montana similarly faulted the Office of Surface Mining Reclamation and Enforcement (OSMRE) for failing to calculate the social cost of carbon, again refusing to accept the agency's explanation that such a calculation was not possible. *Montana Envtl. Info. Ctr. v. U.S. Office of Surface Mining*, No. CV 15-106-M-DWM, 2017 WL 3480262 (D. Mont. Aug. 14, 2017). In his decision, Judge Donald Molloy affirmed the Court's determination in *High Country Conservation Advocates* that, contrary to the agency's

[124] U.S. Environmental Protection Agency, *Greenhouse Gases Equivalencies Calculator – Calculations and References*, https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references. For oil, the EPA estimates carbon emissions to average 0.43 metric tons CO_2/barrel.

[125] *See also* 2013 TSD at 18 (noting the EPA recommendation to "explore other means to characterize the impact of GHG emissions, including an estimate of the 'social cost of carbon' associated with potential increases in GHG emissions.") (citing Sarah E. Light, *NEPA's Footprint: Information Disclosure as a Quasi-Carbon Tax on Agencies*, 87 Tul. L. Rev. 511, 546 (Feb. 2013)).

position, in light of the social cost of carbon protocol, it is possible to assess the effects of a specific amount of CO2–equivalent emissions on global warming and climate change. *Id.* at *13. The Court held that it is arbitrary and capricious for a federal agency in NEPA analysis to provide a quantitative analysis of the benefits of the proposed action (e.g. in dollars from job creation) while failing to provide a quantitative analysis of the costs of the proposed action (e.g. in dollars from climate costs) when such an analysis is possible, that is where a tool (the social cost of carbon) is available for such an analysis. *Id.* at *12-15. Simple calculations applying the SCC to GHG emissions from this project offer a straightforward comparative basis for analyzing impacts, and identifying very significant costs.[126]

Notably, according to the IPCC, the global warming potential ("GWP") for methane over a 20-year timeframe—which is the relevant timeframe for consideration if we are to stem the worst of climate change—is 87.[127] Here, BLM's reliance on an outdated GWP based on a 100-year timeframe of 25 significantly underestimates the magnitude of emissions. Updated EA at 61. BLM does not disclose how much of the total of 70,587.8 metric tons of annual direct GHG emissions, in CO_2e is CH_4, how much is CO_2, and how much is N_2O. BLM should provide this information. Without it, the public cannot assess the true impact of direct planning area emissions.

Moreover, critically, BLM has only provided *direct* planning area emissions. BLM fails to consider the environmental impacts of GHG emissions resulting from combustion or other end uses of the oil and gas extracted from the planning area. BLM should consider these impacts as part of its indirect effects analysis. Instead of considering these impacts, the agency remarkably concludes that: "The environmental impacts of GHG emissions from oil and gas refining and from consumption, such as from vehicle operations, are not effects of USFS [sic] actions related to oil and gas development because they do not occur at the same time and place as the action. Thus, GHG emissions from refining and consumption of oil and gas do not constitute a direct effect that is analyzed under NEPA. Similarly, refining and consumption of oil and gas is not considered an indirect effect of oil and gas production because production is not a proximate cause of those GHG emissions." Updated EA at 58.

By failing to consider the costs of GHG emissions from the Proposed Action, the agency's analysis effectively assumes a price of carbon that is $0. *See High Country Conservation Advocates,* 52 F.Supp.3d at 1192 (holding that although there is a "wide range of estimates about the social cost of GHG emissions[,] neither the BLM's economist nor anyone else in the record appears to suggest the cost is as low as $0 per unit. Yet by deciding not to quantify the costs as all, the agencies effectively zeroed out the cost in its quantitative analysis."). The agency's failure to consider the SCC is arbitrary and capricious.

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[126] It is important to note that, although the 2010 IWG SCC protocol did not address methane impacts, the 2013 IWG Technical Update explicitly addresses methane impacts. Thus, it is appropriate to calculate a SCC outcome that takes into account the full CO_2e emissions associated with the proposed leasing.

[127] *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *Working Group I Contribution to the IPCC Fifth Assessment Report Climate Change 2013: The Physical Science Basis,* at 8-58 (Table 8.7) (Sept. 2013) (attached as Exhibit 7).

An agency must "consider every significant aspect of the environmental impact of a proposed action." *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council*, 462 U.S. 87, 107 (1983) (quotations and citation omitted). This includes the disclosure of direct, indirect, and cumulative impacts of its actions, including climate change impacts and emissions. 40 C.F.R. § 1508.25(c). The need to evaluate such impacts is bolstered by the fact that "[t]he harms associated with climate change are serious and well recognized," and environmental changes caused by climate change "have already inflicted significant harms" to many resources around the globe. *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007); *see also id.* at 525 (recognizing "the enormity of the potential consequences associated with manmade climate change"). Among other things, the agency's analysis must disclose "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity[,]" including the "energy requirements and conservation potential of various alternatives and mitigation measures." 42 U.S.C. § 4332(c); 40 C.F.R. § 1502.16(e). As explained by CEQ, this requires agencies to "analyze total energy costs, including possible hidden or indirect costs, and total energy benefits of proposed actions." 43 Fed. Red. 55,978, 55,984 (Nov. 29, 2978); *see also* Executive Order 13514, 74 Fed. Reg. 52,117 (Oct. 5, 2009) (requiring government agencies to disclose emissions information annually from direct and indirect activities). Failing to perform such analysis undermines the agency's decisionmaking process and the assumptions made.

Moreover, BLM measures the planning area's GHG emissions against a baseline of regional and national GHG emissions, *see* Updated EA at 66, thereby marginalizing the project's contribution to our climate crisis while concluding the agency is powerless to avoid or mitigate such impacts. CEQ has warned against such a comparison, providing:

> Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government. Therefore, the statement that emissions from a government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether to consider climate impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigation.

CEQ Final Climate Guidance at 9.[128] CEQ also provides that "[i]t is essential … that Federal agencies not rely on boilerplate text to avoid meaningful analysis, including consideration of alternatives or mitigation." *Id.* at 5-6 (citing 40 C.F.R. §§ 1500.2, 1502.2). Indeed, the EPA has also cautioned "against comparing GHG emissions associated with a single project to global GHG emission levels" because it erroneously leads to a conclusion that "on a global scale, emissions are not likely to change" as a result of the project.[129] Applying the SCC takes these abstract emissions and places them in concrete, economic terms, allowing the agency to easily examine the "ecological[,]… economic, [and] social" impacts of those emissions, including an assessment of their "significance." 40 C.F.R. §§ 1508.8(b), 1502.16(a)-(b). The agency simply

[128] CEQ Final Guidance on Climate Change, 81 Fed. Reg. 51, 866 at 11 (Aug. 5, 2016).
[129] *See* Light, 87 Tul. L. Rev. 511, 546.

cannot continue to ignore its obligation to consider the costs of GHG emissions in its decisionmaking, as it has done here.

Nor can the agency tout the benefits of oil and gas development without similarly disclosing the costs. *See* 40 C.F.R. § 1502.23. For example, BLM identifies benefits from area employment (48 construction jobs and 22 year-round production jobs) and royalties, severance tax, and property tax on oil production. Updated EA at 168-69. This type of misleading and one-sided analysis is expressly forbidden under NEPA. *See Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446-47 (4th Cir. 1996) ("it is essential that the EIS not be based on misleading economic assumptions); *Sierra Club v. Sigler,* 695 F.2d 957, 979 (5th Cir. 1983) (agency choosing to "trumpet" an action's benefits has a duty to disclose its costs).

E. BLM must present and analyze accurate economic information.

Economic information presented in an EIS may not be misleading or incomplete. *Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 811 (9th Cir. 2005). Accurate economic information allows the agency to fairly judge the benefit of a federal action when weighed against potential adverse environmental effects. By contrast, inaccurate economic information "may defeat the purpose of an EIS by impairing the agency's consideration of the adverse environmental effects and by skewing the public's evaluation of the proposed agency action." *Id.* (citation and quotations omitted).

BLM must include and analyze accurate economic and financial information in the Whitewater MDP EA that includes, among other things, consideration of the financial condition of the project's proponent, and the likelihood of the planned development. Such considerations are relevant to the agency's analysis of the value of this proposed use of public land, especially in light of the significant environmental impacts threatened by the project to nearby communities and the environment, as detailed in this comment letter.

Additionally, "the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks" is one of the "significance" factors that agencies must consider in determining whether an EIS is necessary. 40 C.F.R. § 1508.27. Here, given evidence suggesting that the project proponent's, parent company Fram Exploration, ASA based in Norway, is in financial crisis, there is uncertainty about whether Fram Operating, LLC will develop the Whitewater resources itself, or else will sell its drilling rights to a third party. In particular, Fram Exploration's secured convertible bonds are due on December 31, 2018 and these Fram Bonds are secured against Fram's Whitewater assets valued at $30 million.[130] Information that the agency and the public should rightly be aware of—such as the intentions and record (on issues such as bonding and reclamation) of the project developer—are uncertain in this situation. At a minimum, this uncertainty weighs in favor of preparation of an Environmental Impact Statement, instead of an Environmental Assessment.

[130] Loyz Energy Limited, 2016 Annual Report, page 3. Loyz Energy Limited, a Singaporean company has a 13.75% interest in Fram Exploration ASA, and Rex Holdings International, a Singaporean company has a 30.3% interest in Fram Exploration ASA. Fram Exploration ASA, 2015 Annual Report, page 42.

In addition, BLM bonding requirements are inadequate to ensure fiscal risk management in the event that the operator declares bankruptcy, sells off its assets, or defaults on its bond obligations. Fram Exploration's secured convertible bonds are redeemable on December 31, 2018 and these Fram Bonds are secured against Fram's Whitewater assets.

VI. Conclusion

The Conservation Groups appreciate your consideration of the information and concerns addressed herein, as well as the information included in the attached exhibits. This information is critical and must be reflected in the agency's decisionmaking.

Sincerely,



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COLORADO SIERRA CLUB

From: jeanett@blm.gov
To: king@westernlaw.org
Subject: FOIA Request 2017-00883
Date: Thursday, September 7, 2017 4:16:22 PM
Attachments: image.png
2017-00883_Signed_Interim Respone_1.pdf
2017-00883_Interim Response_1_Redacted.pdf

Ms. King,

Please see the attached response letter for the first interim release and responsive documents to your FOIA request.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
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NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

September 7, 2017

In Reply Refer To:
1278-FOIA (640)
FOIA# 2017-00883

Ms. Laura King
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601

Dear Ms. King:

This letter is in response to your Freedom of Information Act (FOIA) request, dated April 25, 2017 and received in our office on the same day. The tracking number is 2016-00883. In your letter, you asked for the following:

" I. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(ii) of Secretary of the Interior Ryan Zinke's Secretarial Order 3349 ("SO 3349"), ordering the Director of the Bureau of Land Management ("BLM") to "review the final rule entitled, 'Waste Prevention, Production Subject to Royalties, and Resource Conservation,' 81 Fed. Reg. 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O."

"II. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(v) of SO 3349, ordering that "[w]ithin 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources."

"III. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(b)(i) of SO 3349, ordering that "[w]ithin 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O. . . ."

While we continue to review additional records that are responsive to your requests, we are writing to provide you an Interim Response to your request. We have sent via electronic mail a PDF file consisting of 912 pages, which are being released to you in part. Portions of 725 pages are being withheld under FOIA Exemption 5.

Exemption 5 allows an agency to withhold "inter-agency or intra-agency memorandums or letters which would not be available by law to a party... in litigation with the agency." 5 U.S.C. § 552(b)(5); *see Nat'l Labor Relations Bd. v. Sears Roebuck & Co.*, 421 U.S. 132, 149 (1975). Exemption 5 therefore incorporates the privileges that protect materials from discovery in litigation, including the deliberative process, attorney work-product and attorney-client privileges. The deliberative process privilege protects the decision-making process of government agencies and encourages the "frank exchange of ideas on legal or policy matters" by ensuring agencies are not "forced to operate in a fish bowl." *Mead Data Cent., Inc. v. United States Dep't of the Air Force*, 566 F.2d 242, 256 (D.C. Cir. 1977) (internal citations omitted). A number of policy purposes have been attributed to the deliberative process privilege. Among the most important are to: (1) "assure that subordinates . . . will feel free to provide the decision maker with their uninhibited opinions and recommendations;" (2) "protect against premature disclosure of proposed policies;" and (3) "protect against confusing the issues and misleading the public." *Coastal States Gas Corp. v. United States Dep't of Energy*, 617 F.2d 854, 866 (D.C. Cir. 1980). The deliberative process privilege protects materials that are both pre-decisional and deliberative. The privilege covers records that "reflect the give-and-take of the consultative process" and may include "recommendations, draft documents, proposals, suggestions, and other subjective documents which reflect the personal opinions of the writer rather than the policy of the agency." *Id.*

The materials that have been withheld under the deliberative process privilege of Exemption 5 are both pre-decisional and deliberative. They do not contain or represent formal or informal agency policies or decisions. They are the result of frank and open discussions among employees of the Department of the Interior. Their contents have been held confidential by all parties and public dissemination of this information would have a chilling effect on the agency's deliberative processes; expose the agency's decision-making process in such a way as to discourage candid discussion within the agency, and thereby undermine its ability to perform its mandated functions.

As incorporated into Exemption 5, the attorney-client privilege protects "confidential communications between an attorney and his client relating to a legal matter for which the client has sought professional advice" and is not limited to the context of litigation. Mead Data Cent, Inc. v. United States Dep't of the Air Force, 566 F.2d 242, 252-53 (D.C. Cir. 1977). Moreover, although it fundamentally applies to confidential facts divulged by a client to his/her attorney, this privilege also encompasses any opinions given by an attorney to his/her client based upon, and thus reflecting, those facts, as well as communications between attorneys that reflect confidential client-supplied information. See Elec. Privacy Info. Ctr. v. United States Dep't of Homeland Sec., 384 F. Supp. 2d 100, 114-15 (D.D.C. 2005). The information that has been withheld under the attorney-client privilege of Exemption 5 constitutes confidential communications between agency attorneys and agency clients, related to legal matters for which the client sought professional legal assistance and services. Additionally, the Bureau employees who communicated with the attorneys regarding this information were clients of the attorneys at the time the information was generated and the attorneys were acting in their capacities as lawyers at the time they communicated legal advice. Finally, the Bureau has held this information confidential and has not waived the attorney-client privilege.

Ryan Witt, Bureau of Land Management (BLM) FOIA Officer, is responsible for this partial release. Brett Myrick, Attorney Advisor in the Office of the Solicitor, was consulted.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you have any questions regarding this request, please contact Jillian Eanett, BLM WO FOIA Specialist, at (202) 912-7035 or via email at BLM_WO_FOIA@blm.gov.

Sincerely,

FOR:

Jeff Krause, Chief
Division of Intergovernmental and
External Affairs

Nedd, Michael <mnedd@blm.gov>

BLM-Approved Report re: E.O. 13783

5 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 6:20 PM
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Jill:

As discussed, attached is the BLM-approved contribution to the report pursuant to E.O. 13783. Please call my cell (202-503-7460) if you have questions or need to discuss further.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Moran, Jill <jcmoran@blm.gov> Wed, Jul 12, 2017 at 6:21 PM
To: "Mali, Peter" <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Great - thank you, Peter.
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:51 PM
To: Michael Nedd <mnedd@blm.gov>

Mike:

I'm re-sending this to you -- Chris McAlear said you are looking for a clean version.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:57 PM
To: Michael Nedd <mnedd@blm.gov>, Kristin Bail <kbail@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>

Folks:

Thanks for the work of your staff on this product -- here's a clean version of what we sent to ASLM.

Safe travels home.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 12, 2017 at 6:20 PM
Subject: BLM-Approved Report re: E.O. 13783
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Michael Nedd <mnedd@blm.gov> Thu, Jul 13, 2017 at 11:36 AM
To: Peter Mali <pmali@blm.gov>

I am? Thx anyway…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 11:51 PM
To: Michael Nedd <mnedd@blm.gov>
Subject: Fwd: BLM-Approved Report re: E.O. 13783

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Nedd, Michael <mnedd@blm.gov>

Draft Mitigation Policy for Awareness and Review

3 messages

Bail, Kristin <kbail@blm.gov> Fri, Jun 23, 2017 at 2:35 PM
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

DraftMitigationIM.docx
31K

Michael Nedd <mnedd@blm.gov> Tue, Jun 27, 2017 at 9:36 AM
To: Kristin Bail <kbail@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Kristin,

Thx for the information and I do have a few things/suggestions, but it can wait until you have gotten feedback from the states. I'll have some time schedule for us to meet after the ELT, given the holiday next week.

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Bail, Kristin [mailto:kbail@blm.gov]
Sent: Monday, June 26, 2017 5:34 PM
To: Michael Nedd
Cc: John Ruhs; Kathleen Benedetto
Subject: Re: Draft Mitigation Policy for Awareness and Review - No action required before Monday

Mike - as promised, here is a copy of the side-by-side that was included in your briefing packet. [redacted] A list of the needs that States have identified is also attached and was included in the packet. –Kristin

On Sun, Jun 25, 2017 at 5:54 PM, Michael Nedd <mnedd@blm.gov> wrote:

Kristin,

[redacted]

[redacted]

[redacted]

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

On Jun 23, 2017, at 2:36 PM, Bail, Kristin <kbail@blm.gov> wrote:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director

Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

<image001.png>

<DraftMitigationIM.docx>

Kristin Bail <kbail@blm.gov> Wed, Jul 12, 2017 at 11:58 AM
To: BLM_ELT@blm.gov, gshoop@blm.gov, aseidlitz@blm.gov, Marci Todd <m1todd@blm.gov>, jraby@blm.gov

As discussed at the ELT this morning, here is a re-send. Comments would be most helpful by COB on the 18th.
-Kristin

Sent from my iPhone

Begin forwarded message:

From: "Bail, Kristin" <kbail@blm.gov>
Date: June 23, 2017 at 12:35:40 PM MDT
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>
Subject: Draft Mitigation Policy for Awareness and Review

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

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4 attachments



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(b) (5)

Nedd, Michael <mnedd@blm.gov>

Draft Report under E.O. 13783

11 messages

Howarth, Robert <robert_howarth@ios.doi.gov> Thu, Jun 29, 2017 at 11:22 AM
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

Cason Memo EO 13783.pdf
154K

Appel, Elizabeth <elizabeth.appel@bia.gov> Thu, Jun 29, 2017 at 12:17 PM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

[Quoted text hidden]
--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Template for Input into July Draft Report on Energy FINAL.docx
23K

Michael Nedd <mnedd@blm.gov> Mon, Jul 3, 2017 at 11:25 AM
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM

To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

[Quoted text hidden]

2 attachments

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

Michael Nedd <mnedd@blm.gov> Wed, Jul 5, 2017 at 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: "Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

From: Michael Nedd <mnedd@blm.gov>
Date: July 3, 2017 at 11:25:01 AM EDT
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: FW: Draft Report under E.O. 13783

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4 attachments

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Template for Input into July Draft Report on Energy FINAL.docx
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Cason Memo EO 13783.pdf
154K

noname.html
1K

Appel, Elizabeth <elizabeth.appel@bia.gov> Fri, Jul 7, 2017 at 9:18 AM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

[Quoted text hidden]

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Moran, Jill <jcmoran@blm.gov> Fri, Jul 7, 2017 at 12:49 PM
To: Peter Mali <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter,

Following is the report I was speaking about earlier. Kate has asked that the BLM's report be delivered to ASLM no later than COB Tuesday, July 11.

Please send it to me as she has asked me to consolidate the reports from ASLM's four bureaus.

Thanks,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
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Cason Memo EO 13783.pdf
154K

Mali, Peter <pmali@blm.gov> Fri, Jul 7, 2017 at 5:43 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460
[Quoted text hidden]

2 attachments

Cason Memo EO 13783.pdf
154K

EO13783 Energy Report_DRAFT as of 5.30pm_07072017.docx
36K

Michael Nedd <mnedd@blm.gov> Mon, Jul 10, 2017 at 12:19 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
41K

Shannon, Timothy <tshannon@blm.gov> Mon, Jul 10, 2017 at 12:45 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.
[Quoted text hidden]

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

Moran, Jill <jcmoran@blm.gov> Mon, Jul 10, 2017 at 1:58 PM
To: Peter Mali <pmali@blm.gov>, Thomas Lillie <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, "Cruickshank, Walter" <walter.cruickshank@boem.gov>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, gowens@osmre.gov

Good afternoon,

With Rich Cardinale out of the office this week, I've been asked to gather your submissions for this report for Kate's review by **COB tomorrow**. Once Kate has reviewed and approved, I will send the submissions for all 4 agencies

together to Exec Sec. Please let me know if you anticipate any issues with meeting this deadline.

Thank you,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Moran, Jill <jcmoran@blm.gov> Mon, Jul 17, 2017 at 11:28 AM
To: Peter Mali <pmali@blm.gov>, Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter-

Attached is the narrative template the BLM submitted to Exec Sec in response to Jim Cason's memo on EO 13783. Exec Sec has asked that you add two or so paragraphs under the Executive Summary and return through ASLM by COB today.

Also, they have inquired about the status of the spreadsheet template which also needs to be filled out.

Do you think you could get the revised narrative to me today and the spreadsheet tomorrow?

Thanks,
Jill
[Quoted text hidden]

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

Nedd, Michael <mnedd@blm.gov>

Draft Tribal Consultation Letter re: Hydraulic Fracturing Rule and Venting & Flaring Rule

1 message

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 7:49 PM
To: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>, "Moran, Jill" <jcmoran@blm.gov>, Kelly Orr <korr@blm.gov>

Rich and Rob:

Attached is the draft tribal consultation letter for BLM's Hydraulic Fracturing Rule and Venting & Flaring Rule. The attached serves as a template to be sent to our SOs to send to their Tribal partners, and it deliberately covers both rules under one letter. Acting Director Nedd asked that I send this to ExecSec and ASLM simultaneously for clearance so that BLM can initiate the tribal consultation process as soon as practical.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Draft.Tribal.Consult.Ltr.Combined.HF_VF_Rules_7.12.12.docx
30K

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Nedd, Michael <mnedd@blm.gov>

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

3 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 3:51 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

2 attachments

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
42K

Michael Nedd <mnedd@blm.gov> Wed, Jul 12, 2017 at 5:08 PM
To: Peter Mali <pmali@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx
49K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 5:22 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Fwd: Time Sensitive: BLM's EO 13783 report

2 messages

Mali, Peter <pmali@blm.gov> Tue, Jul 18, 2017 at 2:37 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

(b) (5) [redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,

Jill

--

Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

BLM narrative_JM.docx
42K

Cason Memo EO 13783 (1).pdf
154K

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>

Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

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Nedd, Michael <mnedd@blm.gov>

Implications of Sec. Order on O&G Rules

4 messages

Sklar, Ryan <ryan.sklar@sol.doi.gov> Fri, Mar 31, 2017 at 7:57 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

Mike,

[redacted]

Thanks,
Ryan

--

Ryan Sklar
Acting Senior Litigation Specialist
Bureau of Land Management
U.S. Department of the Interior
202-208-4695

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2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:44 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:46 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 8:46 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Re: Implications of Sec. Order on O&G Rules

Mike,

I've shared it with Tim and Lonny. Please let me know if you would like it to go to any additional ADs.

Thanks,

Ryan

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Mon, Apr 3, 2017 at 9:36 AM
To: Jeff Brune <jbrune@blm.gov>, tshannon@blm.gov
Cc: Ryan Sklar <ryan.sklar@sol.doi.gov>

FYI

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Friday, March 31, 2017 8:44 AM
To: Ryan Sklar
Cc: Shannon Stewart
Subject: RE: Implications of Sec. Order on O&G Rules

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

Mike,

[Quoted text hidden]

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.DOCX
26K

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Nedd, Michael <mnedd@blm.gov>

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

2 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 5:48 PM
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

---

2 attachments

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
47K

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
38K

Orr, Kelly <korr@blm.gov> Fri, Jul 21, 2017 at 11:32 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.

I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:

(b) (5)



Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Kelly,
>
> When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.
>
> Rich
>
> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich,
> >
> > I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
> >
> > If you have any questions for me please let me know.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Thanks, Peter.
> > >
> > > Rich
> > >
> > > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> > >
> > > > Rich:

As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.

Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.

If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

3 attachments

BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
42K

BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
54K

BLM Report Under E.O. 13783 (1).xlsx
89K

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Nedd, Michael <mnedd@blm.gov>

Proposed Final Version of BLM Response to E.O. 13783

1 message

Mali, Peter <pmali@blm.gov> Tue, Jul 11, 2017 at 5:10 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Shannon, Timothy" <tshannon@blm.gov>

Mike:

Attached is a revised version of the **WO-200** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

Also attached is a revised version of the **WO-300** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

My goal was to send you a single document showing comments from both Kristin and Tim, but Microsoft Word didn't cooperate. Instead, I'm sending you the WO-200 document and the WO-300 document as separate attachments because I want you to see each file in track changes.

Finally, I've attached the Cason memo pursuant to E.O. 13783.

Please call me if you want to discuss further (my direct line is 202-208-4586).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

3 attachments

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN and KMB.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN_WO300.docx
42K

Cason Memo EO 13783.pdf
154K

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Nedd, Michael <mnedd@blm.gov>

RE: Time Sensitive: BLM's EO 13783 report

1 message

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

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[redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Nedd, Michael <mnedd@blm.gov>

Secretarial Order 3349 and Oil and Gas Rules

2 messages

Karen Hawbecker <karen.hawbecker@sol.doi.gov> Thu, Mar 30, 2017 at 11:33 PM
To: Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <Richard.McNeer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

[redacted]

Sent from my iPad

Begin forwarded message:

>

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:45 AM
To: Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <richard.mcneer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

Thx Karen... We'll take a look at it...

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"
[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Secretarial Orders for discussion at 10:00a

3 messages

Bagley, Lonny <lbagley@blm.gov> Thu, Mar 30, 2017 at 8:45 AM
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Erica Pionke <epionke@blm.gov>

You will be receiving an invite shortly to discuss actions related to yesterday's Secretarial Orders. To be sure everyone has a copy, please find them attached.

Thanks

--
Lonny R Bagley
Deputy Assistant Director (Acting),
Energy, Minerals and Realty Management
Washington Office
1849 C Street, NW Room 5625
Washington, DC 20204
O-202-208-4201
lbagely@blm.gov

Follow BLM Colorado on Social Media!

3 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

Michael Nedd <mnedd@blm.gov> Thu, Mar 30, 2017 at 11:08 AM
To: Shannon Stewart <scstewar@blm.gov>
Cc: Jerome Perez <jperez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Here you are and please distribute as you see fit…

In reading the SOs, there are a number of deliverables due beginning 14 days from the issuance of the order and then there are other deliverables at 21, 30, and 90 days. That being said, it may be helpful to send the SOs to WO-200 (the WO-300 team sent them to me and was scheduled to meet earlier today to review them) and have them collaborate with WO-300, if not already planned/initiated. I'm also aware that the SOL (Karen H) was planning to work with WO-300 to develop a chart of the various aspects.

I'm opened to su8ggestions, but I'm thinking we would want some initial feedback from the two key ADs either Monday or Tuesday as to the game plan for meeting the expectations as outlined in the SOs. This would also allow us to give some guidance if need be… Maybe a 30-minute get together would be in order…

Take care and have a wonderful day! :)

Michael Nedd

202-208-4201 Office

202-208-4800 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

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4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

Stewart, Shannon <scstewar@blm.gov> Thu, Mar 30, 2017 at 1:06 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>, mike nedd <mnedd@blm.gov>, Jerome Perez <jperez@blm.gov>

Mike would like to set-up 30 mins Monday or Tuesday next week to discuss our game plan for meeting the expectations in the newly issued SOs (attached). Linda will follow-up with an invite.

Thanks
Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

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4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

U.S. Department of the Interior

Royalty Policy Committee
Charter

1. **Committee's Official Designation.** Royalty Policy Committee (Committee).

2. **Authority.** The Royalty Policy Committee is a discretionary committee established under the authority of the Secretary of the Interior (Secretary) and regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2. It has been determined that the Committee is in the public interest in connection with the responsibilities of the Department of the Interior (DOI) under the:

   - Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 *et seq.*), including provisions of the Energy Policy Act of 2005 (P.L. 109-058);
   - Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701 *et seq.*), (1996);
   - Federal Oil and Gas Royalty Management Act, as amended (P.L. 114-94), (2015);
   - Federal Oil and Gas Royalty Simplification and Fairness Act of 1996 (P.L. 104-185);
   - Geothermal Steam Act of 1970 (30 U.S.C. 1001 *et seq.*);
   - Mineral Leasing Act (30 U.S.C. 181 *et seq.*);
   - Mineral Leasing Act for Acquired Lands (30 U.S.C. 351 *et seq.*);
   - The Act of March 3, 1909 (25 U.S.C. 396);
   - The Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);
   - Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);
   - The Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); and
   - The U.S. National Action Plan for the Open Government Partnership and other related authorities.

3. **Objectives and Scope of Activities.** The Secretary seeks to ensure the public receives the full value of the natural resources produced from Federal lands. The Committee will provide advice to the Secretary, through the Assistant Secretary - Land and Minerals Management (ASLM), Assistant Secretary - Indian Affairs (ASIA), and the Director of the Office of Natural Resources Revenue (ONRR), on the fair market value of and on the collection of revenues derived from, the development of energy and mineral resources on Federal and Indian lands.

4. **Description of Duties.** The duties of the Committee are solely advisory in nature. The Committee will, at the request of the Designated Federal Officer (DFO), advise on current and emerging issues related to the determination of fair market value, and the collection of revenue from energy and mineral resources on Federal and Indian lands. At the request of the DFO, the Committee also will advise on the potential impacts of proposed policies and regulations related to revenue collection from such development, including whether a need exists for regulatory reform.

5. **Agency or Official to Whom the Committee Reports.** The Committee will report to the Secretary through the ASLM, ASIA, and the Director of ONRR.

6. **Support.** The ONRR will provide administrative and logistical support for the Committee.

7. **Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Committee's functions are estimated to be $350,000, including all direct and indirect expenses and 3 full-time employees.

8. **Designated Federal Officer.** The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO or alternate DFO will approve or call all Committee and subcommittee meetings, prepare and approve all meeting agendas, attend all Committee and subcommittee meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest, and chair Committee meetings when directed to do so by the Secretary.

9. **Estimated Number and Frequency of Meetings.** The Committee will meet at least once each calendar year, and at such other times as determined necessary by the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Committee is subject to biennial review and will terminate 2 years from the date the Charter is filed, unless prior to that date, it is renewed in accordance with Section 14 of the FACA. The Committee will not meet or take any action without a valid current charter.

12. **Membership and Designation.** The Committee will not exceed 28 members and will be composed of non-Federal and Federal members in order to ensure fair and balanced representation. The Secretary will appoint non-Federal members and their alternates to the Committee to serve up to a 3-year term. Non-Federal members and alternates may not serve as a member or alternate for more than 6 consecutive years. However, after a 2-year break in service, any such non-Federal member or alternate will again be eligible for appointment.

The ASLM and the Director of ONRR, or their designee(s), shall serve as co-Chairs of the Committee.

Federal Members: The Secretary will appoint the following officials as nonvoting, ex-officio members of the Committee:

- A representative of the Secretary's Immediate Office
- Assistant Secretary – Indian Affairs
- Director, Bureau of Indian Affairs
- Director, Bureau of Land Management
- Director, Bureau of Ocean Energy Management
- Director, Bureau of Safety and Environmental Enforcement

These officials may designate a senior official to act on their behalf.

Non-Federal Members: The Secretary will appoint members in the following categories:

- Up to 6 members representing the Governors of States that receive more than $10,000,000 annually in royalty revenues from onshore and offshore Federal leases.

- Up to 4 members representing the Indian Tribes that are engaged in activities subject to:

  (i) the Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);

  (ii) Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);

  (iii) the Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); or

  (iv) any other law relating to mineral development that is specific to one or more Indian Tribes.

- Up to 6 members representing various mineral and/or energy stakeholders in Federal and Indian royalty policy.

- Up to 4 members representing academia and public interest groups.

Each non-Federal member may nominate an alternate member to the Committee. Alternate members must be approved and appointed to the Committee by the Secretary before attending meetings in lieu of primary members. Alternate members will have experience and/or expertise similar to that of the associated primary member.

Members of the Committee serve without compensation. However, while away from their homes or regular places of business, Committee and subcommittee members engaged in Committee or subcommittee business approved by the DFO may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by 5 U.S.C. 5703, in the same manner as persons employed intermittently in Federal Government service.

Any vacancy on the Committee will be filled in the same manner in which the original appointment was made. All members serve at the discretion of the Secretary.

13. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purposes of compiling information, conducting research, and/or drafting recommendations. However, such subcommittees must act only under the direction of the Committee and must report their recommendations to the full Committee for consideration. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

14. **Ethics Responsibilities of Members.** No Committee or subcommittee member or alternate member will participate in any specific party matter (including a lease, license, permit, contract, claim, agreement, or related litigation) with the DOI in which the member or alternate member has a direct financial interest. Members and alternate members will endeavor to avoid any actions that would cause the public to question the integrity of the Committee's operations, activities, or advice. The provisions of this paragraph do not affect any statutory or regulatory ethical obligations to which Federal members (and alternate members) are subject.

15. **Recordkeeping.** The records of the Committee, including formally and informally established subcommittees of the Committee, will be handled in accordance with General Records Schedule 6.2 or other approved Agency records disposition schedule. These records will be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

03-29-2017
Date

Date Filed

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3348

Subject: Concerning the Federal Coal Moratorium

Sec. 1 **Purpose**. The Federal coal leasing program is of critical importance to the economy of the United States, supplying approximately 40 percent of the coal produced in the Nation. On January 15, 2016, Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," was signed and placed a moratorium on the coal leasing program with limited exceptions. Given the critical importance of the Federal coal leasing program to energy security, job creation, and proper conservation stewardship, this Order directs efforts to enhance and improve the Federal coal leasing program.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended. Other statutory authorities for this Order include but are not limited to the following statutes:

a. Mineral Leasing Act, 30 U.S.C. §1181 *et seq*.

b. Mineral Leasing Act for Acquired Lands, 30 U.S.C. § 351 *et seq*.

c. Federal Land Policy and Management Act, 43 U.S.C. 1701-1785.

d. Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328.

Sec. 3 **Background**. Secretary's Order 3338 directs the Bureau of Land Management (BLM) to analyze and "consider potential leasing and management reforms to the current Federal coal program." Secretary's Order 3338 ordered the preparation of a discretionary Programmatic Environmental Impact Statement (PEIS) to analyze potential reforms and ordered a "pause on leasing, with limited exceptions" pending completion of the discretionary Federal Coal Program PEIS. The PEIS is estimated to cost many millions of dollars and would be completed no sooner than 2019, even with robust funding.

Sec. 4 **Revocation of Secretary's Order 3338**. Based upon the Department's review of Secretary's Order 3338, the scoping report for the discretionary Federal Coal Program PEIS issued in January 2017, and other information provided by BLM, I find that the public interest is not served by halting the Federal coal program for an extended time, nor is a PEIS required to consider potential improvements to the program. Accordingly, consistent with the principles of responsible public stewardship entrusted to this office, I revoke Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program."

Sec. 5 **Implementation**. With the revocation of Secretary's Order 3338, BLM is directed to process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of Secretary's Order 3338. All activities associated with the preparation of the Federal Coal Program PEIS shall cease. The Deputy Secretary, Assistant Secretaries, and heads of bureaus and offices are hereby directed to make changes in their policy and guidance documents that are consistent with the revocation of Secretary's Order 3338.

Sec. 6 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7 **Expiration Date**. This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3349

Subject: American Energy Independence

Sec. 1 **Purpose**. This Order implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017 and entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (Department) in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and other applicable statutory authorities.

Sec. 3 **Background**. Among other provisions, the March 28, 2017 E.O. directs the Department to review all existing regulations, orders, guidance documents, policies, and any other similar actions that potentially burden the development or utilization of domestically produced energy resources. A plan to carry out the review must be submitted to the Director of the Office of Management and Budget (OMB) and to certain other White House officials within 45 days of the date of the March 28, 2017 E.O. The objective of the review is to identify agency actions that unnecessarily burden the development or utilization of the Nation's energy resources and support action to appropriately and lawfully suspend, revise, or rescind such agency actions as soon as practicable.

The March 28, 2017 E.O. also directs the Department to promptly review certain specific actions recently taken by the Department, in particular Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," and four rules related to onshore oil and gas development.

The March 28, 2017 E.O. also rescinds certain Presidential Actions, reports, and final guidance related to climate change, including:

a. E.O. 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change);

b. Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); and

c. Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

The March 28, 2017 E.O. directs the Department to identify agency actions "related to or arising from" the rescinded Presidential Actions, reports, and guidance, and to initiate a lawful and appropriate process to suspend, revise, or rescind such actions.

The March 28, 2017 E.O. also rescinds the Presidential Memorandum issued on November 3, 2015, entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." That Memorandum directed the Secretary of the Interior, among other Cabinet officials, to undertake a number of actions to implement a landscape-scale mitigation policy, including specific directions to the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) to develop mitigation policies that incorporated compensatory mitigation into planning and permitting processes.

Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 13, 2013, is directly related to the rescinded Presidential Memorandum on mitigation. Secretary's Order 3330 dovetails with the subsequently issued Presidential Memorandum by directing the development and implementation of a landscape-scale mitigation policy for the Department. As directed by the Order, the Secretary received a report in April 2014 entitled, "A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior." The Strategy set forth a number of "deliverables" by nearly every office and bureau within the Department to advance the stated goal of "landscape-scale mitigation." Given the close nexus between the rescinded Presidential Memorandum and Secretary's Order 3330, a thorough reexamination is needed of the policies set out in that Order.

Sec. 4 **Policy**. To begin implementing the March 28, 2017 E.O., I hereby order the following:

a. Revocation of Secretary's Order 3330. I hereby revoke Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 31, 2013. As set forth below, all actions taken pursuant to Secretary's Order 3330 must be reviewed for possible reconsideration, modification, or rescission as appropriate.

b. Review of Department Actions. As set forth in Sec. 5 below, each bureau and office shall review all existing regulations, orders, guidance documents, policies, instructions, notices, implementing actions, and any other similar actions (Department Actions) related to or arising from the Presidential Actions set forth above and, to the extent deemed necessary and permitted by law, initiate an appropriate process to suspend, revise, or rescind any such actions, consistent with the policies set forth in the March 28, 2017 E.O.

Sec. 5 **Implementation**. The following actions shall be taken pursuant to this Order:

a. Mitigation Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action for review.

b. Climate Change Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O., in particular: Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change); Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); Presidential Memorandum of September 21, 2016 (Climate Change and National Security); Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions); and the Council on Environmental Quality's final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 *Fed. Reg.* 51866 (August 5, 2016).

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions identified in the review required by subsection (i) above.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action, for review.

c. Review of Other Department Actions Impacting Energy Development.

(i) As previously announced by the Department, BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015).

(ii) Within 21 days, the Director, BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iii) Within 21 days, the Director, National Park Service shall review the final rule entitled, "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (Nov. 4, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iv) Within 21 days, the Director, FWS shall review the final rule entitled, "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (Nov. 14, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(v) Within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

(vi) Within 35 days, the Deputy Secretary shall provide to me a plan to complete the review of Department Actions contemplated by Section 2 of the March 28, 2017 E.O. The plan must meet all objectives and time lines set forth in the March 28, 2017 E.O.

Sec. 5 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies,

instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 6 **Expiration Date.** This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

- - - - - - -

PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

Conversation Contents

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Attachments:

/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/1.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
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"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 15:48:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as

"pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?
>
> Thanks,
> Jill
>
> --
> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:08:09 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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Folks:

Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.

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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:16:58 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

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Take care,

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Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office (202) 208 4586
Mobile: (202) 503-7460

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Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Sent:	Wed Jul 19 2017 16:26:02 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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Sent:	Thu Jul 20 2017 14:05:23 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report 7.20.2017.docx BLM Report Under E.O. 13783.xlsx

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To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Rich - can you send me the version that had your edits? I used the clean version that Peter sent to you last night at 6:16. I haven't been engaged before this so haven't seen anyone's edits.

I'm heading out the door but can try to connect later as needed.

Thanks,

Kelly Orr
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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks, Kelly. Do you have the narrative in track changes so we can see what has changed from the version we have?

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Peter

Peter Mali
Acting Chief of Staff

Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
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Jill Moran
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Kelly Orr <korr@blm.gov>

From:	Kelly Orr <korr@blm.gov>
Sent:	Thu Jul 20 2017 15:11:13 GMT-0600 (MDT)
To:	"Moran, Jill" <jcmoran@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

I don't because I don't have earlier versions of it. In Peter's 6:16 email last night he attached a clean and track changes version. Perhaps that track changes one is responsive to Rich's edits and for some reason the clean version wasn't?

Sent from my iPhone

On Jul 20, 2017, at 5:08 PM, Moran, Jill <jcmoran@blm.gov> wrote:

> Thanks, Kelly. Do you have the narrative in track changes so we can see what has changed from the version we have?
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> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>> Rich,
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>> I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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Sent:	Thu Jul 20 2017 15:12:08 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx

Kelly,

Our emails crossed over. Attached is the version with ASLM edits.

Thanks,
Jill

On Thu, Jul 20, 2017 at 5:05 PM, Orr, Kelly <korr@blm.gov> wrote:

> Rich - can you send me the version that had your edits? I used the clean version that Peter sent to you last night at 6:16. I haven't been engaged before this so haven't seen anyone's edits.
>
> I'm heading out the door but can try to connect later as needed.
>
> Thanks,
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> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov
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> On Thu, Jul 20, 2017 at 5:00 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
>
> > Kelly,
> >
> > The version you attached does not appear to address any of my questions/comments or incorporate my edits. Just wanted to check to make certain that you attached the correct version.
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> > From: **Mali, Peter** <pmali@blm.gov>
> > Date: Wed, Jul 19, 2017 at 5:48 PM
> > Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 16:56:15 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

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Inline image 1

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Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report

To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)

[redacted]

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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Fri Jul 21 2017 09:32:56 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>

CC:	"Thurn, Linda" <lthurn@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx BLM Report Under E.O. 13783 (1).xlsx

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

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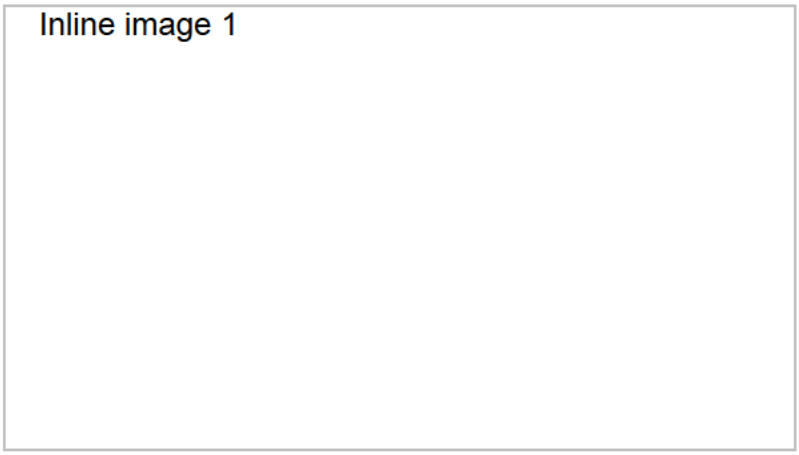

Let me know if there's anything else I can do to help on this item.

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To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

One of the concerns raised by Exec Sec. is the regulatory descriptions look and read as if they were taken from materials previously prepared (during the last

Administration). Hence, they tend to speaking in very positive terms about the what the rules do, rather than focusing on the fact that this administration views many of these rules as creating unnecessary regulatory burdens. I would begin the narratives by explaining exactly that the Administration's concerns are with each of the rules and then explain why the rule is either being rescinded or reviewed.

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
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> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 08:53:21 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Peter/Kelly,

Would it be possible for you to send us the latest version of this that incorporates ASLM comments?

Thanks, Shelley

On Wed, Jul 19, 2017 at 6:08 PM, Mali, Peter <pmali@blm.gov> wrote:

> Folks:
>
> Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):
>
> https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQqRRFtq9v4YhpqwtCDZ3cpAy9OIcq0/edit?usp=sharing
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> As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.
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> Thanks,
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> Peter
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--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010

Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:02 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Here you go! Sorry for the delay.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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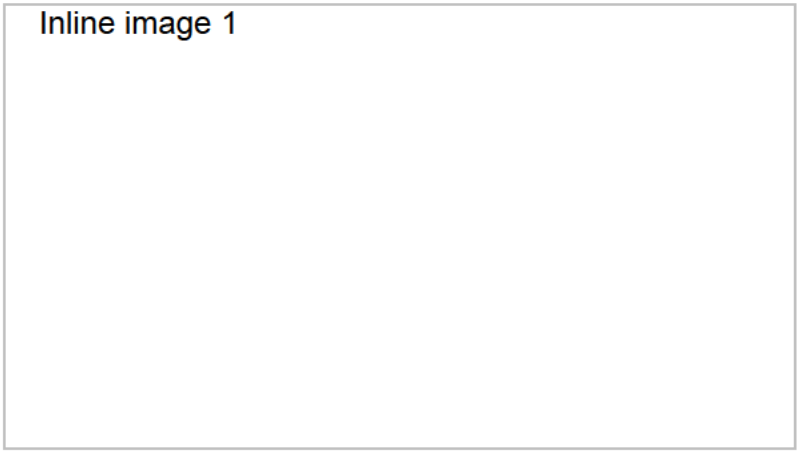

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Attachments:	image.png

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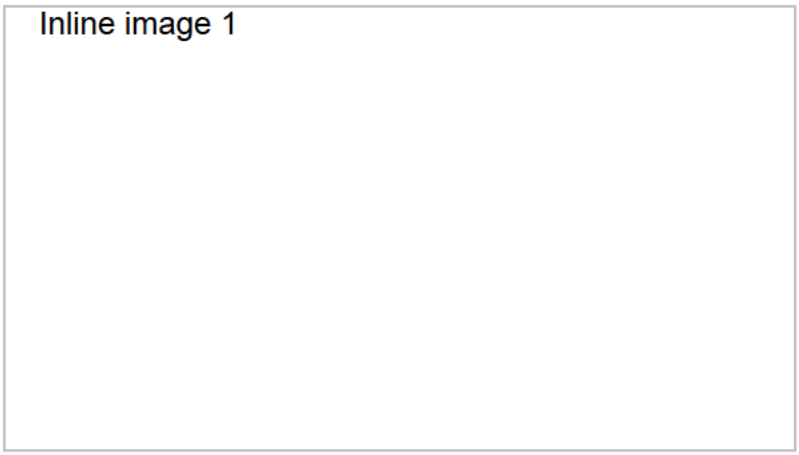
> 
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> > > > Peter Mali
> > > > Acting Chief of Staff
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> > > > Office: (202) 208-4586
> > > > Mobile: (202) 503-7460

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From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

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Office: 202-208-6551
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Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 14:59:17 GMT-0600 (MDT)
To:	Thomas Bartholomew <tbarthol@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Thomas -

I don't think this report has much nexus to stuff in 200 since it's related to an EO on energy, but Peter wanted me to share it with you in case it was helpful in the BLM priorities exercise that's due tomorrow.

Thanks,

Kelly Orr
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Mobile: 202-510-5119
korr@blm.gov

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To: Shelley McGinnis <smcginnis@blm.gov>

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"McGinnis, Shelley" <smcginnis@blm.gov>

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Sent:	Tue Jul 25 2017 07:03:53 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

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Sent:	Tue Jul 25 2017 07:33:49 GMT-0600 (MDT)
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CC:	Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM Report Under E.O. 13783 (2).xlsx BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (1).docx

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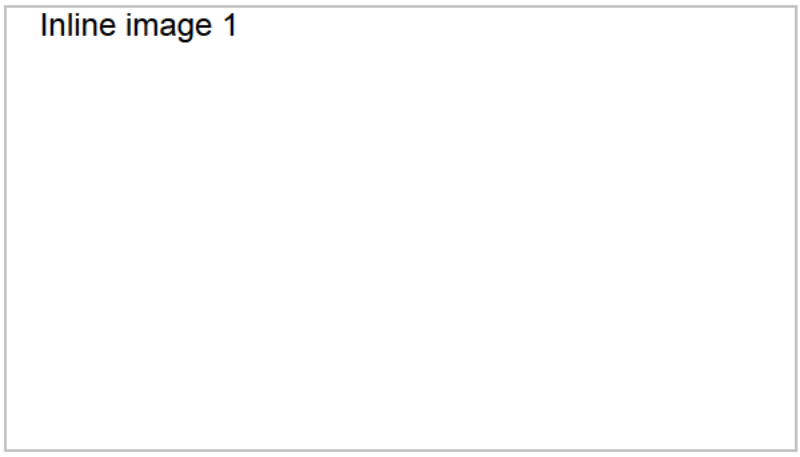

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> Can I also get the final version of the spreadsheet?
>
> On Mon, Jul 24, 2017 at 1:34 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Here you go! Sorry for the delay.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > ---------- Forwarded message ----------
> > From: **Orr, Kelly** <korr@blm.gov>
> > Date: Thu, Jul 20, 2017 at 6:56 PM
> > Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> > To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
> > Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
> >
> > Rich - I reviewed your version and the edits from you and Jill looked good.
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> > I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.
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> > Inline image 1
> >
> > Let me know if there's anything else I can do to help on this item.

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Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
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On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

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If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
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Office: (202) 208-4586
Mobile: (202) 503-7460

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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report

To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)

[redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> Jill
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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Tue Jul 25 2017 12:00:17 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

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korr@blm.gov

On Fri, Jul 21, 2017 at 8:09 AM, Richard Cardinale <richard_cardinale@ios.doi.gov> wrote:

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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Tue Jul 25 2017 12:04:47 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks, Kelly.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Tue, Jul 25, 2017 at 2:00 PM, Orr, Kelly <korr@blm.gov> wrote:

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Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

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<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

Shelley McGinnis <smcginnis@blm.gov>

From:	Shelley McGinnis <smcginnis@blm.gov>
Sent:	Wed Jul 26 2017 12:23:52 GMT-0600 (MDT)
To:	korr@blm.gov
CC:	tspisak@blm.gov, jkalish@blm.gov
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

Kelly, the attached version of the report has the language about the 17 recommendations (actions).

Sent from my iPhone

Begin forwarded message:

From: "Orr, Kelly" <korr@blm.gov>
Date: July 25, 2017 at 2:00:17 PM EDT
To: Richard Cardinale <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)
[redacted]

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From: "Orr, Kelly" <korr@blm.gov>
Sent: Wed Jul 26 2017 12:40:59 GMT-0600 (MDT)
To: Shelley McGinnis <smcginnis@blm.gov>

CC: Timothy Spisak <tspisak@blm.gov>, John Kalish <jkalish@blm.gov>

Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks Shelley.

I've changed that paragraph to read:

. (b) (5) [redacted]

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 26, 2017 at 2:23 PM, Shelley McGinnis <smcginnis@blm.gov> wrote:

> Kelly, the attached version of the report has the language about the 17 recommendations (actions).
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** "Orr, Kelly" <korr@blm.gov>
> **Date:** July 25, 2017 at 2:00:17 PM EDT
> **To:** Richard Cardinale <richard_cardinale@ios.doi.gov>
> **Cc:** "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
> **Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec**
>
> Rich and Jill,
>
> I realized we never updated the spreadsheet with ASLMs edits in the narrative version. So, I've attached a revised spreadsheet that now matches the appropriate text from the word version.
>
> If you have any questions please let me know - sorry for any confusion this causes!

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Fri, Jul 21, 2017 at 8:09 AM, Richard Cardinale <richard_cardinale@ios.doi.gov> wrote:

> Thanks.
>
> Sent from my iPhone
>
> On Jul 20, 2017, at 6:57 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich - I reviewed your version and the edits from you and Jill looked good.
> >
> > I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.
> >
> > I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:
> >
> > <image.png>
> >
> > Let me know if there's anything else I can do to help on this item.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Kelly,
> > >
> > > When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.

Rich

On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:

> Rich,
>
> I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
>
> If you have any questions for me please let me know.
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov
>
> On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
>
> > Thanks, Peter.
> >
> > Rich
> >
> > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> >
> > > Rich:
> > >
> > > As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.
> > >
> > > Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.
> > >
> > > If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.
> > >
> > > Take care,
> > >
> > > Peter
> > >
> > > Peter Mali
> > > Acting Chief of Staff
> > > Bureau of Land Management
> > > Office: (202) 208-4586
> > > Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)
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[redacted]

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

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Conversation Contents

Latest Draft of BLM's E.O. 13783 Report

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 10:10:06 GMT-0600 (MDT)
To:	Jill Moran <jcmoran@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Kelly Orr <korr@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report

Hi Jill,

Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.

Thanks, Shelley

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:30 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Jill Moran <jcmoran@blm.gov>, "Mali, Peter" <pmali@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report

Shelley - just forwarded it to you on a separate chain.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Mon, Jul 24, 2017 at 12:10 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Hi Jill,
>
> Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.
>
> Thanks, Shelley
>
> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
> 1849 C Street NW, Room 5625
> Washington, DC 20240
> Office: 202-208-6551
> Cell: 202-578-3010
> Email: smcginnis@blm.gov

Conversation Contents

FW: Draft Report under E.O. 13783

Attachments:

/3. FW: Draft Report under E.O. 13783/1.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/1.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/2.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/2.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/3.1 Input into July Draft Report on Energy_WO300_06JUL17.docx
/3. FW: Draft Report under E.O. 13783/5.1 EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
/3. FW: Draft Report under E.O. 13783/7.1 AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
/3. FW: Draft Report under E.O. 13783/8.1 BLM_Sec2_EO13783 (3).xlsx
/3. FW: Draft Report under E.O. 13783/9.1 BLM_Sec2_EO13783 (3) (2).xlsx

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 03 2017 09:25:01 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
CC:	John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject:	FW: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]

Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 05 2017 05:11:02 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	"Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

> **From:** Michael Nedd <mnedd@blm.gov>
> **Date:** July 3, 2017 at 11:25:01 AM EDT
> **To:** Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
> **Cc:** John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> **Subject: FW: Draft Report under E.O. 13783**
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> **Take care and have a wonderful day! :)**
>
> Michael D. Nedd
> 202-208-3801 Office
> 202-208-5242 Fax
> mnedd@blm.gov
>
> **A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"**

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

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> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
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> 1849 C Street, NW
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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action

Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

"Pionke, Erica" <epionke@blm.gov>

From:	"Pionke, Erica" <epionke@blm.gov>
Sent:	Thu Jul 06 2017 13:46:57 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783
Attachments:	Input into July Draft Report on Energy_WO300_06JUL17.docx

Peter,

Here is WO-300's input on the Draft Report under E.O. 13783.

Please let me know if you have any questions or need changes.

Thanks!

Erica

On Wed, Jul 5, 2017 at 9:57 AM, Timothy Spisak <tspisak@blm.gov> wrote:

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> Thanks!
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> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
> 'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997
>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
> tspisak@blm.gov
> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** Michael Nedd [mailto:mnedd@blm.gov]
> **Sent:** Wednesday, July 5, 2017 7:11 AM

To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
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MDN 202-208-3801

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Elizabeth K. Appel
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Erica Pionke, JD, PMP

WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
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epionke@blm.gov

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Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Fri Jul 07 2017 15:26:38 GMT-0600 (MDT)
To:	"Pionke, Erica" <epionke@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783

Thanks, all!

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Thu, Jul 6, 2017 at 3:46 PM, Pionke, Erica <epionke@blm.gov> wrote:

> Peter,
>
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Erica Pionke, JD, PMP
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BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 10 2017 10:19:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
CC:	Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Subject:	RE: Draft Report under E.O. 13783
Attachments:	EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
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From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

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Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Subject:	Re: Draft Report under E.O. 13783

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.

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Subject: Draft Report under E.O. 13783
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
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Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 11:38:13 GMT-0600 (MDT)
To:	Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
CC:	"Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx

ADs for 200/300/400:

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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 12:39:33 GMT-0600 (MDT)
To:	"Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3).xlsx

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Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

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Subject: Fwd: Draft Report under E.O. 13783
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>
> --
> Elizabeth K. Appel
> Office of Regulatory Affairs & Collaborative Action
> Office of the Assistant Secretary - Indian Affairs
> (202) 273-4680 - office
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Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 15:11:59 GMT-0600 (MDT)
To:	Christopher McAlear <cmcalear@blm.gov>, Nikki Moore <nmoore@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
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Nikki Moore <nmoore@blm.gov>

From:	Nikki Moore <nmoore@blm.gov>
Sent:	Wed Jul 19 2017 15:15:29 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Shelley,

We didn't. We were asked to add the manuals only recently. This is the first I've seen of the spreadsheet. (b) (5) [redacted]

Nikki Moore
Acting Deputy Assistant Director,
National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington DC
202.219.3180 (office)
202.288.9114 (cell)

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<scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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>> 202-208-3181
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gavaldez@blm.gov

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"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 11:05:47 GMT-0600 (MDT)
To:	Nikki Moore <nmoore@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

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Is this still in progress or are you waiting on anything from WO-100? ASLM is anxiously awaiting this and when I get back in touch with them it would be helpful to have a sense of when we might be able to submit it.

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<BLM_Sec2_EO13783 (3) (2).xlsx>

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Thu Jul 20 2017 11:09:58 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	Nikki Moore <nmoore@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Glenda set up the spreadsheet as a Google doc for the divisions to populate. WO-300 has completed the entries for our divisions. I am not sure of the status of the other divisions. The link to the Google doc is below:

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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"Bartholomew, Thomas" <tbarthol@blm.gov>

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To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

I'm checking with Kristin on whether she's good with what has been added to the table. Will get back with you shortly.

Best,

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Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas"

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> Elizabeth K. Appel
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gavaldez@blm.gov

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--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate

Washington, DC
202-208-5922

"McAlear, Christopher" <cmcalear@blm.gov>

From:	"McAlear, Christopher" <cmcalear@blm.gov>
Sent:	Thu Jul 20 2017 12:09:25 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Assistant Director
National Conservation Lands
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(W) 202-208-4731
(C) 775-722-9539

Kelly Orr <korr@blm.gov>

From:	Kelly Orr <korr@blm.gov>
Sent:	Thu Jul 20 2017 12:17:47 GMT-0600 (MDT)
To:	"McAlear, Christopher" <cmcalear@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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The spreadsheet allegedly does NOT ask for any additional info, above and beyond what you've already provided in the narrative. The task of populating the spreadsheet should be a cut-and-paste exercise, in other words.

As with the report, please add your material as soon as possible. Let me know if you have questions with the assignment. Finally, please recall that I'll be on annual leave tomorrow and Friday (7/21); Kelly Orr will be acting CoS in my absence (I've cc:ed her here).

Thanks,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

On Thu, Jun 29, 2017 at 12:17 PM, Appel, Elizabeth <elizabeth.appel@bia.gov> wrote:

> Hi Everyone-
>
> The attachment to the memo is provided in MS Word here for your convenience.
>
> Thank you!
> Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

<BLM_Sec2_EO13783 (3) (2).xlsx>

--

Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate
Washington, DC
202-208-5922

"Moore, Nikki" <nmoore@blm.gov>

From: "Moore, Nikki" <nmoore@blm.gov>

Sent:	Fri Jul 21 2017 11:12:05 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Can you please copy me on these. Thanks!

Nikki Moore
Acting Deputy Assistant Director, National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington D.C.
202.219.3180 (office)
202.740.0835 (cell)

On Thu, Jul 20, 2017 at 1:05 PM, Orr, Kelly <korr@blm.gov> wrote:

> Shelley et al. -
>
> Wondering if you guys could give me an update on the spreadsheet for EO 13783. In the notes that Peter left for me and sent to Rich he indicated that 200, 300, and 400 were still populating the spreadsheet.
>
> Is this still in progress or are you waiting on anything from WO-100? ASLM is anxiously awaiting this and when I get back in touch with them it would be helpful to have a sense of when we might be able to submit it.
>
> Thanks,
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov
>
> On Wed, Jul 19, 2017 at 5:15 PM, Nikki Moore <nmoore@blm.gov> wrote:
>
> > Hi Shelley,
> >
> > We didn't. We were asked to add the manuals only recently. This is the first I've seen of the spreadsheet. (b) (5) [redacted]
> >
> > Nikki Moore
> > Acting Deputy Assistant Director,
> > National Conservation Lands and Community Partnerships
> > Bureau of Land Management, Washington DC
> > 202.219.3180 (office)

202.288.9114 (cell)

On Jul 19, 2017, at 5:12 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Chris/Nikki - did you previously complete a spreadsheet similar to the attached for BLM Manual 6220, BLM Manual 6400, and BLM Manual 6280? If so, could you please email it?
>
> Thanks, Shelley
>
> On Wed, Jul 19, 2017 at 2:39 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:
>> All,
>>
>> I just spoke to Peter and he asked that we hold off on populating the spreadsheet until he has finalized the document. He is still making changes to the document and we want the spreadsheet to be consistent. Also, please see attached version of the spreadsheet that was previously submitted when Shannon Stewart was here as Chief of Staff.
>>
>> Thanks, Shelley
>>
>> ---------- Forwarded message ----------
>> From: **Valdez, Glenda** <gavaldez@blm.gov>
>> Date: Wed, Jul 19, 2017 at 2:33 PM
>> Subject: Fwd: Draft Report under E.O. 13783
>> To: Shelley McGinnis <smcginnis@blm.gov>
>>
>>
>> ---------- Forwarded message ----------
>> From: **Mali, Peter** <pmali@blm.gov>
>> Date: Wed, Jul 19, 2017 at 1:38 PM
>> Subject: Fwd: Draft Report under E.O. 13783
>> To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
>> Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
>>
>> ADs for 200/300/400:
>>
>> Regarding the spreadsheet I referenced yesterday (i.e., an additional deliverable under BLM's report on E.O. 13783), I'm told that Exec Sec is anxious to get this product. This spreadsheet is apparently intended to be an attachment to the narrative report (i.e., the Google Doc you worked on yesterday).
>>
>> First things first: please task staff with populating this spreadsheet. To that end, you will soon receive (or may have already received) a Google Docs invite from Glenda Valdez (WO-100's summer intern) to provide content to the Google Sheets (i.e., the spreadsheet template for this assignment).
>>
>> The spreadsheet allegedly does NOT ask for any additional info, above and beyond what you've already provided in the narrative. The task of populating

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As with the report, please add your material as soon as possible. Let me know if you have questions with the assignment. Finally, please recall that I'll be on annual leave tomorrow and Friday (7/21); Kelly Orr will be acting CoS in my absence (I've cc:ed her here).

Thanks,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
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From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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Hi Everyone-

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On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

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Robert Howarth
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Glenda Valdez
Administrative Intern
Office of the Director

1849 C St NW Rm 5641
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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

(b) (5)

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Conversation Contents

Fwd: BLM Narrative to Accompany Spreadsheet

Attachments:

/4. Fwd: BLM Narrative to Accompany Spreadsheet/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

"Moran, Jill" <jcmoran@blm.gov>

From:	"Moran, Jill" <jcmoran@blm.gov>
Sent:	Thu Jul 20 2017 10:18:47 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
CC:	Peter Mali <pmali@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet

Hi Kelly,

I am working with Rich on the BLM's narrative, but it looks like Peter did not send the spreadsheet to Rich. Do you know that status of that? I'm available to chat too if that would be helpful.

Thanks,
Jill

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management

"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:08:49 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

(b) (5)

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Conversation Contents

BLM E.O 13783 cleaned up version

Attachments:

/5. BLM E.O 13783 cleaned up version/1.1 BLM Report Under E.O. 13783.xlsx

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:40:46 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	BLM E.O 13783 cleaned up version
Attachments:	BLM Report Under E.O. 13783.xlsx

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

(b) (5)

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(b) (5)

Conversation Contents

EO 13783 Spreadsheet - Update to Text in One of the Cells

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 13:13:53 GMT-0600 (MDT)
To:	Glenda Valdez <gavaldez@blm.gov>
Subject:	EO 13783 Spreadsheet - Update to Text in One of the Cells

Glenda,

Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:

(b) (5)



Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:17:16 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: EO 13783 Spreadsheet - Update to Text in One of the Cells

Ok will do

On Thu, Jul 20, 2017 at 3:13 PM, Orr, Kelly <korr@blm.gov> wrote:

> Glenda,
>
> Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:
>
> (b) (5) [redacted]
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov

--

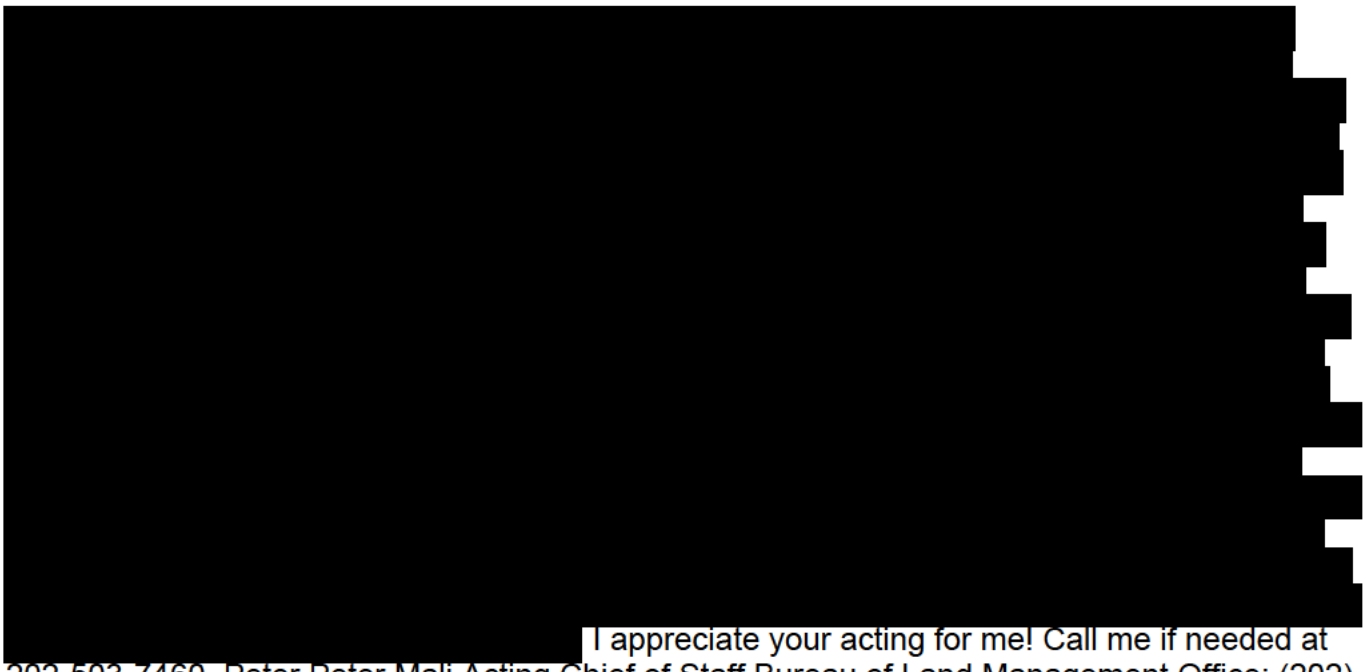
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

Conversation Contents

Bulletized List

Peter Mali <pmali@blm.gov>

From:	Peter Mali <pmali@blm.gov>
Sent:	Thu Jul 20 2017 05:58:50 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
Subject:	Bulletized List



I appreciate your acting for me! Call me if needed at 202-503-7460. Peter Peter Mali Acting Chief of Staff Bureau of Land Management Office: (202) 208-4586 Mobile: (202) 503-7460 Sent from my iPhone

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 12:46:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
Subject:	Re: Bulletized List

Peter - for our discussion this afternoon to help with handing the torch back to you as COS.

Recaps and updates on moving items + new items are in red text below.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 7:58 AM, Peter Mali <pmali@blm.gov> wrote:

[redacted]

[redacted]

- [redacted]
- [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
- [redacted]
  - [redacted]
  - [redacted]

> That's all I have on my list for now. I'll probably have a few other dribs and drabs, which I'll send you later.
>
> I appreciate your acting for me! Call me if needed at 202-503-7460.
>
> Peter
>
> Peter Mali
> Acting Chief of Staff
> Bureau of Land Management
> Office: (202) 208-4586
> Mobile: (202) 503-7460
>
> Sent from my iPhone

Conversation Contents

BLM Report Under E.O. 13783 - Invitation to edit

"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>

From:	"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>
Sent:	Wed Jul 19 2017 11:04:34 GMT-0600 (MDT)
To:	<korr@blm.gov>
CC:	<tspisak@blm.gov>, <jkalish@blm.gov>, <kbail@blm.gov>, <stryon@blm.gov>, <kkelleh@blm.gov>, <pmali@blm.gov>, <rwootton@blm.gov>, <cmcalear@blm.gov>
Subject:	BLM Report Under E.O. 13783 - Invitation to edit

Glenda Valdez has invited you to **edit** the following spreadsheet:

BLM Report Under E.O. 13783



google sheet per Peter Mali's email

Open in Sheets

Google Sheets: Create and edit spreadsheets online.
Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
You have received this email because someone shared a spreadsheet with you from Google Sheets.

Conversation Contents

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Attachments:

/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.2 EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/2.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 13:51:33 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 12 2017 15:08:04 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	RE: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

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For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
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Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 15:22:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Wed, Jul 12, 2017 at 5:08 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Peter,
>
> I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

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I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: jeanett@blm.gov
To: king@westernlaw.org
Subject: FOIA Request 2017-00883
Date: Thursday, September 7, 2017 4:19:44 PM
Attachments: 2017-00883_Signed_Interim Respone_1.pdf
2017-00883_Interim Response_1_Redacted.pdf

Ms. King,

Please see the attached response letter for the first interim release and responsive documents to your FOIA request.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

September 7, 2017

In Reply Refer To:
1278-FOIA (640)
FOIA# 2017-00883

Ms. Laura King
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601

Dear Ms. King:

This letter is in response to your Freedom of Information Act (FOIA) request, dated April 25, 2017 and received in our office on the same day. The tracking number is 2016-00883. In your letter, you asked for the following:

" I. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(ii) of Secretary of the Interior Ryan Zinke's Secretarial Order 3349 ("SO 3349"), ordering the Director of the Bureau of Land Management ("BLM") to "review the final rule entitled, 'Waste Prevention, Production Subject to Royalties, and Resource Conservation,' 81 Fed. Reg. 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O."

"II. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(v) of SO 3349, ordering that "[w]ithin 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources."

"III. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(b)(i) of SO 3349, ordering that "[w]ithin 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O. . . ."

While we continue to review additional records that are responsive to your requests, we are writing to provide you an Interim Response to your request. We have sent via electronic mail a PDF file consisting of 912 pages, which are being released to you in part. Portions of 725 pages are being withheld under FOIA Exemption 5.

Exemption 5 allows an agency to withhold "inter-agency or intra-agency memorandums or letters which would not be available by law to a party... in litigation with the agency." 5 U.S.C. § 552(b)(5); *see Nat'l Labor Relations Bd. v. Sears Roebuck & Co.*, 421 U.S. 132, 149 (1975). Exemption 5 therefore incorporates the privileges that protect materials from discovery in litigation, including the deliberative process, attorney work-product and attorney-client privileges. The deliberative process privilege protects the decision-making process of government agencies and encourages the "frank exchange of ideas on legal or policy matters" by ensuring agencies are not "forced to operate in a fish bowl." *Mead Data Cent., Inc. v. United States Dep't of the Air Force*, 566 F.2d 242, 256 (D.C. Cir. 1977) (internal citations omitted). A number of policy purposes have been attributed to the deliberative process privilege. Among the most important are to: (1) "assure that subordinates . . . will feel free to provide the decision maker with their uninhibited opinions and recommendations;" (2) "protect against premature disclosure of proposed policies;" and (3) "protect against confusing the issues and misleading the public." *Coastal States Gas Corp. v. United States Dep't of Energy*, 617 F.2d 854, 866 (D.C. Cir. 1980). The deliberative process privilege protects materials that are both pre-decisional and deliberative. The privilege covers records that "reflect the give-and-take of the consultative process" and may include "recommendations, draft documents, proposals, suggestions, and other subjective documents which reflect the personal opinions of the writer rather than the policy of the agency." *Id.*

The materials that have been withheld under the deliberative process privilege of Exemption 5 are both pre-decisional and deliberative. They do not contain or represent formal or informal agency policies or decisions. They are the result of frank and open discussions among employees of the Department of the Interior. Their contents have been held confidential by all parties and public dissemination of this information would have a chilling effect on the agency's deliberative processes; expose the agency's decision-making process in such a way as to discourage candid discussion within the agency, and thereby undermine its ability to perform its mandated functions.

As incorporated into Exemption 5, the attorney-client privilege protects "confidential communications between an attorney and his client relating to a legal matter for which the client has sought professional advice" and is not limited to the context of litigation. Mead Data Cent, Inc. v. United States Dep't of the Air Force, 566 F.2d 242, 252-53 (D.C. Cir. 1977). Moreover, although it fundamentally applies to confidential facts divulged by a client to his/her attorney, this privilege also encompasses any opinions given by an attorney to his/her client based upon, and thus reflecting, those facts, as well as communications between attorneys that reflect confidential client-supplied information. See Elec. Privacy Info. Ctr. v. United States Dep't of Homeland Sec., 384 F. Supp. 2d 100, 114-15 (D.D.C. 2005). The information that has been withheld under the attorney-client privilege of Exemption 5 constitutes confidential communications between agency attorneys and agency clients, related to legal matters for which the client sought professional legal assistance and services. Additionally, the Bureau employees who communicated with the attorneys regarding this information were clients of the attorneys at the time the information was generated and the attorneys were acting in their capacities as lawyers at the time they communicated legal advice. Finally, the Bureau has held this information confidential and has not waived the attorney-client privilege.

Ryan Witt, Bureau of Land Management (BLM) FOIA Officer, is responsible for this partial release. Brett Myrick, Attorney Advisor in the Office of the Solicitor, was consulted.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you have any questions regarding this request, please contact Jillian Eanett, BLM WO FOIA Specialist, at (202) 912-7035 or via email at BLM_WO_FOIA@blm.gov.

Sincerely,

FOR:

Jeff Krause, Chief
Division of Intergovernmental and
External Affairs

Nedd, Michael <mnedd@blm.gov>

BLM-Approved Report re: E.O. 13783

5 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 6:20 PM
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Jill:

As discussed, attached is the BLM-approved contribution to the report pursuant to E.O. 13783. Please call my cell (202-503-7460) if you have questions or need to discuss further.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Moran, Jill <jcmoran@blm.gov> Wed, Jul 12, 2017 at 6:21 PM
To: "Mali, Peter" <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Great - thank you, Peter.
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:51 PM
To: Michael Nedd <mnedd@blm.gov>

Mike:

I'm re-sending this to you -- Chris McAlear said you are looking for a clean version.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:57 PM
To: Michael Nedd <mnedd@blm.gov>, Kristin Bail <kbail@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>

Folks:

Thanks for the work of your staff on this product -- here's a clean version of what we sent to ASLM.

Safe travels home.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 12, 2017 at 6:20 PM
Subject: BLM-Approved Report re: E.O. 13783
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

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EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Michael Nedd <mnedd@blm.gov> Thu, Jul 13, 2017 at 11:36 AM
To: Peter Mali <pmali@blm.gov>

I am? Thx anyway…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 11:51 PM
To: Michael Nedd <mnedd@blm.gov>
Subject: Fwd: BLM-Approved Report re: E.O. 13783

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Nedd, Michael <mnedd@blm.gov>

Draft Mitigation Policy for Awareness and Review

3 messages

Bail, Kristin <kbail@blm.gov> Fri, Jun 23, 2017 at 2:35 PM
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

DraftMitigationIM.docx
31K

Michael Nedd <mnedd@blm.gov> Tue, Jun 27, 2017 at 9:36 AM
To: Kristin Bail <kbail@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Kristin,

Thx for the information and I do have a few things/suggestions, but it can wait until you have gotten feedback from the states. I'll have some time schedule for us to meet after the ELT, given the holiday next week.

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Bail, Kristin [mailto:kbail@blm.gov]
Sent: Monday, June 26, 2017 5:34 PM
To: Michael Nedd
Cc: John Ruhs; Kathleen Benedetto
Subject: Re: Draft Mitigation Policy for Awareness and Review - No action required before Monday

Mike - as promised, here is a copy of the side-by-side that was included in your briefing packet. [redacted] A list of the needs that States have identified is also attached and was included in the packet. –Kristin

On Sun, Jun 25, 2017 at 5:54 PM, Michael Nedd <mnedd@blm.gov> wrote:

Kristin,

[redacted]

[redacted]

[redacted]

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

On Jun 23, 2017, at 2:36 PM, Bail, Kristin <kbail@blm.gov> wrote:

[redacted]

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- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director

Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

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Kristin Bail <kbail@blm.gov> Wed, Jul 12, 2017 at 11:58 AM
To: BLM_ELT@blm.gov, gshoop@blm.gov, aseidlitz@blm.gov, Marci Todd <m1todd@blm.gov>, jraby@blm.gov

As discussed at the ELT this morning, here is a re-send. Comments would be most helpful by COB on the 18th.
-Kristin

Sent from my iPhone

Begin forwarded message:

From: "Bail, Kristin" <kbail@blm.gov>
Date: June 23, 2017 at 12:35:40 PM MDT
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>
Subject: Draft Mitigation Policy for Awareness and Review

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- [redacted]
- [redacted]
- [redacted]

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[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

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4 attachments



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Nedd, Michael <mnedd@blm.gov>

Draft Report under E.O. 13783

11 messages

Howarth, Robert <robert_howarth@ios.doi.gov> Thu, Jun 29, 2017 at 11:22 AM
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

Cason Memo EO 13783.pdf
154K

Appel, Elizabeth <elizabeth.appel@bia.gov> Thu, Jun 29, 2017 at 12:17 PM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

[Quoted text hidden]
--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Template for Input into July Draft Report on Energy FINAL.docx
23K

Michael Nedd <mnedd@blm.gov> Mon, Jul 3, 2017 at 11:25 AM
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM

To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

[Quoted text hidden]

2 attachments

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

Michael Nedd <mnedd@blm.gov> Wed, Jul 5, 2017 at 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: "Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

From: Michael Nedd <mnedd@blm.gov>
Date: July 3, 2017 at 11:25:01 AM EDT
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: FW: Draft Report under E.O. 13783

[Quoted text hidden]

4 attachments

noname.html
1K

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

noname.html
1K

Appel, Elizabeth <elizabeth.appel@bia.gov> Fri, Jul 7, 2017 at 9:18 AM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

[Quoted text hidden]

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Moran, Jill <jcmoran@blm.gov> Fri, Jul 7, 2017 at 12:49 PM
To: Peter Mali <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter,

Following is the report I was speaking about earlier. Kate has asked that the BLM's report be delivered to ASLM no later than COB Tuesday, July 11.

Please send it to me as she has asked me to consolidate the reports from ASLM's four bureaus.

Thanks,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Mali, Peter <pmali@blm.gov> Fri, Jul 7, 2017 at 5:43 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460
[Quoted text hidden]

2 attachments

Cason Memo EO 13783.pdf
154K

EO13783 Energy Report_DRAFT as of 5.30pm_07072017.docx
36K

Michael Nedd <mnedd@blm.gov> Mon, Jul 10, 2017 at 12:19 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
41K

Shannon, Timothy <tshannon@blm.gov> Mon, Jul 10, 2017 at 12:45 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.
[Quoted text hidden]

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

Moran, Jill <jcmoran@blm.gov> Mon, Jul 10, 2017 at 1:58 PM
To: Peter Mali <pmali@blm.gov>, Thomas Lillie <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, "Cruickshank, Walter" <walter.cruickshank@boem.gov>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, gowens@osmre.gov

Good afternoon,

With Rich Cardinale out of the office this week, I've been asked to gather your submissions for this report for Kate's review by **COB tomorrow**. Once Kate has reviewed and approved, I will send the submissions for all 4 agencies

together to Exec Sec. Please let me know if you anticipate any issues with meeting this deadline.

Thank you,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Moran, Jill <jcmoran@blm.gov> Mon, Jul 17, 2017 at 11:28 AM
To: Peter Mali <pmali@blm.gov>, Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter-

Attached is the narrative template the BLM submitted to Exec Sec in response to Jim Cason's memo on EO 13783. Exec Sec has asked that you add two or so paragraphs under the Executive Summary and return through ASLM by COB today.

Also, they have inquired about the status of the spreadsheet template which also needs to be filled out.

Do you think you could get the revised narrative to me today and the spreadsheet tomorrow?

Thanks,
Jill
[Quoted text hidden]

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
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Cason Memo EO 13783.pdf
154K

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

Nedd, Michael <mnedd@blm.gov>

Draft Tribal Consultation Letter re: Hydraulic Fracturing Rule and Venting & Flaring Rule

1 message

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 7:49 PM
To: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>, "Moran, Jill" <jcmoran@blm.gov>, Kelly Orr <korr@blm.gov>

Rich and Rob:

Attached is the draft tribal consultation letter for BLM's Hydraulic Fracturing Rule and Venting & Flaring Rule. The attached serves as a template to be sent to our SOs to send to their Tribal partners, and it deliberately covers both rules under one letter. Acting Director Nedd asked that I send this to ExecSec and ASLM simultaneously for clearance so that BLM can initiate the tribal consultation process as soon as practical.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Draft.Tribal.Consult.Ltr.Combined.HF_VF_Rules_7.12.12.docx
30K

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Nedd, Michael <mnedd@blm.gov>

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

3 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 3:51 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

2 attachments

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
42K

Michael Nedd <mnedd@blm.gov> Wed, Jul 12, 2017 at 5:08 PM
To: Peter Mali <pmali@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx
49K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 5:22 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Nedd, Michael <mnedd@blm.gov>

Fwd: Time Sensitive: BLM's EO 13783 report

2 messages

Mali, Peter <pmali@blm.gov> Tue, Jul 18, 2017 at 2:37 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

(b) (5) [redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,

Jill

--

Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

BLM narrative_JM.docx
42K

Cason Memo EO 13783 (1).pdf
154K

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>

Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

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Nedd, Michael <mnedd@blm.gov>

Implications of Sec. Order on O&G Rules

4 messages

Sklar, Ryan <ryan.sklar@sol.doi.gov> Fri, Mar 31, 2017 at 7:57 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

Mike,

[redacted]

Thanks,
Ryan

--

Ryan Sklar
Acting Senior Litigation Specialist
Bureau of Land Management
U.S. Department of the Interior
202-208-4695

NOTICE: This e-mail (including attachments) is intended for the use of the individual or entity to which it is addressed. It may contain information that is privileged, confidential, or otherwise protected by applicable law. If you are not the intended recipient, you are hereby notified that any dissemination, distribution, copying, or use of this e-mail or its contents is strictly prohibited. If you receive this e-mail in error, please notify the sender immediately and destroy all copies.

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:44 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:46 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 8:46 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Re: Implications of Sec. Order on O&G Rules

Mike,

I've shared it with Tim and Lonny. Please let me know if you would like it to go to any additional ADs.

Thanks,

Ryan

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Mon, Apr 3, 2017 at 9:36 AM
To: Jeff Brune <jbrune@blm.gov>, tshannon@blm.gov
Cc: Ryan Sklar <ryan.sklar@sol.doi.gov>

FYI

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Friday, March 31, 2017 8:44 AM
To: Ryan Sklar
Cc: Shannon Stewart
Subject: RE: Implications of Sec. Order on O&G Rules

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

Mike,

[Quoted text hidden]

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.DOCX
26K

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Nedd, Michael <mnedd@blm.gov>

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

2 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 5:48 PM
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

---

2 attachments

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
47K

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
38K

Orr, Kelly <korr@blm.gov> Fri, Jul 21, 2017 at 11:32 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.

I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:

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Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Kelly,
>
> When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.
>
> Rich
>
> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich,
> >
> > I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
> >
> > If you have any questions for me please let me know.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Thanks, Peter.
> > >
> > > Rich
> > >
> > > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> > >
> > > > Rich:

As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.

Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.

If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

3 attachments

BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
42K

BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
54K

BLM Report Under E.O. 13783 (1).xlsx
89K

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Nedd, Michael <mnedd@blm.gov>

Proposed Final Version of BLM Response to E.O. 13783

1 message

Mali, Peter <pmali@blm.gov> Tue, Jul 11, 2017 at 5:10 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Shannon, Timothy" <tshannon@blm.gov>

Mike:

Attached is a revised version of the **WO-200** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

Also attached is a revised version of the **WO-300** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

My goal was to send you a single document showing comments from both Kristin and Tim, but Microsoft Word didn't cooperate. Instead, I'm sending you the WO-200 document and the WO-300 document as separate attachments because I want you to see each file in track changes.

Finally, I've attached the Cason memo pursuant to E.O. 13783.

Please call me if you want to discuss further (my direct line is 202-208-4586).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

3 attachments

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN and KMB.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN_WO300.docx
42K

Cason Memo EO 13783.pdf
154K

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Nedd, Michael <mnedd@blm.gov>

RE: Time Sensitive: BLM's EO 13783 report

1 message

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

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[redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Nedd, Michael <mnedd@blm.gov>

Secretarial Order 3349 and Oil and Gas Rules

2 messages

Karen Hawbecker <karen.hawbecker@sol.doi.gov> Thu, Mar 30, 2017 at 11:33 PM
To: Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <Richard.McNeer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

[redacted]

Sent from my iPad

Begin forwarded message:

>

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:45 AM
To: Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <richard.mcneer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

Thx Karen... We'll take a look at it...

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"
[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Secretarial Orders for discussion at 10:00a

3 messages

Bagley, Lonny <lbagley@blm.gov> Thu, Mar 30, 2017 at 8:45 AM
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Erica Pionke <epionke@blm.gov>

You will be receiving an invite shortly to discuss actions related to yesterday's Secretarial Orders. To be sure everyone has a copy, please find them attached.

Thanks

--
Lonny R Bagley
Deputy Assistant Director (Acting),
Energy, Minerals and Realty Management
Washington Office
1849 C Street, NW Room 5625
Washington, DC 20204
O-202-208-4201
lbagely@blm.gov

Follow BLM Colorado on Social Media!

3 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

Michael Nedd <mnedd@blm.gov> Thu, Mar 30, 2017 at 11:08 AM
To: Shannon Stewart <scstewar@blm.gov>
Cc: Jerome Perez <jperez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Here you are and please distribute as you see fit…

In reading the SOs, there are a number of deliverables due beginning 14 days from the issuance of the order and then there are other deliverables at 21, 30, and 90 days. That being said, it may be helpful to send the SOs to WO-200 (the WO-300 team sent them to me and was scheduled to meet earlier today to review them) and have them collaborate with WO-300, if not already planned/initiated. I'm also aware that the SOL (Karen H) was planning to work with WO-300 to develop a chart of the various aspects.

I'm opened to su8ggestions, but I'm thinking we would want some initial feedback from the two key ADs either Monday or Tuesday as to the game plan for meeting the expectations as outlined in the SOs. This would also allow us to give some guidance if need be… Maybe a 30-minute get together would be in order…

Take care and have a wonderful day! :)

Michael Nedd

202-208-4201 Office

202-208-4800 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

---

4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

Stewart, Shannon <scstewar@blm.gov> Thu, Mar 30, 2017 at 1:06 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>, mike nedd <mnedd@blm.gov>, Jerome Perez <jperez@blm.gov>

Mike would like to set-up 30 mins Monday or Tuesday next week to discuss our game plan for meeting the expectations in the newly issued SOs (attached). Linda will follow-up with an invite.

Thanks
Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

---

4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

U.S. Department of the Interior

Royalty Policy Committee
Charter

1. **Committee's Official Designation.** Royalty Policy Committee (Committee).

2. **Authority.** The Royalty Policy Committee is a discretionary committee established under the authority of the Secretary of the Interior (Secretary) and regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2. It has been determined that the Committee is in the public interest in connection with the responsibilities of the Department of the Interior (DOI) under the:

   - Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 *et seq.*), including provisions of the Energy Policy Act of 2005 (P.L. 109-058);
   - Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701 *et seq.*), (1996);
   - Federal Oil and Gas Royalty Management Act, as amended (P.L. 114-94), (2015);
   - Federal Oil and Gas Royalty Simplification and Fairness Act of 1996 (P.L. 104-185);
   - Geothermal Steam Act of 1970 (30 U.S.C. 1001 *et seq.*);
   - Mineral Leasing Act (30 U.S.C. 181 *et seq.*);
   - Mineral Leasing Act for Acquired Lands (30 U.S.C. 351 *et seq.*);
   - The Act of March 3, 1909 (25 U.S.C. 396);
   - The Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);
   - Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);
   - The Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); and
   - The U.S. National Action Plan for the Open Government Partnership and other related authorities.

3. **Objectives and Scope of Activities.** The Secretary seeks to ensure the public receives the full value of the natural resources produced from Federal lands. The Committee will provide advice to the Secretary, through the Assistant Secretary - Land and Minerals Management (ASLM), Assistant Secretary - Indian Affairs (ASIA), and the Director of the Office of Natural Resources Revenue (ONRR), on the fair market value of and on the collection of revenues derived from, the development of energy and mineral resources on Federal and Indian lands.

4. **Description of Duties.** The duties of the Committee are solely advisory in nature. The Committee will, at the request of the Designated Federal Officer (DFO), advise on current and emerging issues related to the determination of fair market value, and the collection of revenue from energy and mineral resources on Federal and Indian lands. At the request of the DFO, the Committee also will advise on the potential impacts of proposed policies and regulations related to revenue collection from such development, including whether a need exists for regulatory reform.

5. **Agency or Official to Whom the Committee Reports.** The Committee will report to the Secretary through the ASLM, ASIA, and the Director of ONRR.

6. **Support.** The ONRR will provide administrative and logistical support for the Committee.

7. **Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Committee's functions are estimated to be $350,000, including all direct and indirect expenses and 3 full-time employees.

8. **Designated Federal Officer.** The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO or alternate DFO will approve or call all Committee and subcommittee meetings, prepare and approve all meeting agendas, attend all Committee and subcommittee meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest, and chair Committee meetings when directed to do so by the Secretary.

9. **Estimated Number and Frequency of Meetings.** The Committee will meet at least once each calendar year, and at such other times as determined necessary by the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Committee is subject to biennial review and will terminate 2 years from the date the Charter is filed, unless prior to that date, it is renewed in accordance with Section 14 of the FACA. The Committee will not meet or take any action without a valid current charter.

12. **Membership and Designation.** The Committee will not exceed 28 members and will be composed of non-Federal and Federal members in order to ensure fair and balanced representation. The Secretary will appoint non-Federal members and their alternates to the Committee to serve up to a 3-year term. Non-Federal members and alternates may not serve as a member or alternate for more than 6 consecutive years. However, after a 2-year break in service, any such non-Federal member or alternate will again be eligible for appointment.

The ASLM and the Director of ONRR, or their designee(s), shall serve as co-Chairs of the Committee.

Federal Members: The Secretary will appoint the following officials as nonvoting, ex-officio members of the Committee:

- A representative of the Secretary's Immediate Office
- Assistant Secretary – Indian Affairs
- Director, Bureau of Indian Affairs
- Director, Bureau of Land Management
- Director, Bureau of Ocean Energy Management
- Director, Bureau of Safety and Environmental Enforcement

These officials may designate a senior official to act on their behalf.

Non-Federal Members: The Secretary will appoint members in the following categories:

- Up to 6 members representing the Governors of States that receive more than $10,000,000 annually in royalty revenues from onshore and offshore Federal leases.

- Up to 4 members representing the Indian Tribes that are engaged in activities subject to:

  (i) the Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);

  (ii) Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);

  (iii) the Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); or

  (iv) any other law relating to mineral development that is specific to one or more Indian Tribes.

- Up to 6 members representing various mineral and/or energy stakeholders in Federal and Indian royalty policy.

- Up to 4 members representing academia and public interest groups.

Each non-Federal member may nominate an alternate member to the Committee. Alternate members must be approved and appointed to the Committee by the Secretary before attending meetings in lieu of primary members. Alternate members will have experience and/or expertise similar to that of the associated primary member.

Members of the Committee serve without compensation. However, while away from their homes or regular places of business, Committee and subcommittee members engaged in Committee or subcommittee business approved by the DFO may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by 5 U.S.C. 5703, in the same manner as persons employed intermittently in Federal Government service.

Any vacancy on the Committee will be filled in the same manner in which the original appointment was made. All members serve at the discretion of the Secretary.

13. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purposes of compiling information, conducting research, and/or drafting recommendations. However, such subcommittees must act only under the direction of the Committee and must report their recommendations to the full Committee for consideration. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

14. **Ethics Responsibilities of Members.** No Committee or subcommittee member or alternate member will participate in any specific party matter (including a lease, license, permit, contract, claim, agreement, or related litigation) with the DOI in which the member or alternate member has a direct financial interest. Members and alternate members will endeavor to avoid any actions that would cause the public to question the integrity of the Committee's operations, activities, or advice. The provisions of this paragraph do not affect any statutory or regulatory ethical obligations to which Federal members (and alternate members) are subject.

15. **Recordkeeping.** The records of the Committee, including formally and informally established subcommittees of the Committee, will be handled in accordance with General Records Schedule 6.2 or other approved Agency records disposition schedule. These records will be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

03-29-2017
Date

Date Filed

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3348

Subject: Concerning the Federal Coal Moratorium

Sec. 1 **Purpose**. The Federal coal leasing program is of critical importance to the economy of the United States, supplying approximately 40 percent of the coal produced in the Nation. On January 15, 2016, Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," was signed and placed a moratorium on the coal leasing program with limited exceptions. Given the critical importance of the Federal coal leasing program to energy security, job creation, and proper conservation stewardship, this Order directs efforts to enhance and improve the Federal coal leasing program.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended. Other statutory authorities for this Order include but are not limited to the following statutes:

a. Mineral Leasing Act, 30 U.S.C. §1181 *et seq*.

b. Mineral Leasing Act for Acquired Lands, 30 U.S.C. § 351 *et seq*.

c. Federal Land Policy and Management Act, 43 U.S.C. 1701-1785.

d. Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328.

Sec. 3 **Background**. Secretary's Order 3338 directs the Bureau of Land Management (BLM) to analyze and "consider potential leasing and management reforms to the current Federal coal program." Secretary's Order 3338 ordered the preparation of a discretionary Programmatic Environmental Impact Statement (PEIS) to analyze potential reforms and ordered a "pause on leasing, with limited exceptions" pending completion of the discretionary Federal Coal Program PEIS. The PEIS is estimated to cost many millions of dollars and would be completed no sooner than 2019, even with robust funding.

Sec. 4 **Revocation of Secretary's Order 3338**. Based upon the Department's review of Secretary's Order 3338, the scoping report for the discretionary Federal Coal Program PEIS issued in January 2017, and other information provided by BLM, I find that the public interest is not served by halting the Federal coal program for an extended time, nor is a PEIS required to consider potential improvements to the program. Accordingly, consistent with the principles of responsible public stewardship entrusted to this office, I revoke Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program."

Sec. 5 **Implementation**. With the revocation of Secretary's Order 3338, BLM is directed to process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of Secretary's Order 3338. All activities associated with the preparation of the Federal Coal Program PEIS shall cease. The Deputy Secretary, Assistant Secretaries, and heads of bureaus and offices are hereby directed to make changes in their policy and guidance documents that are consistent with the revocation of Secretary's Order 3338.

Sec. 6 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7 **Expiration Date**. This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3349

Subject: American Energy Independence

Sec. 1 **Purpose**. This Order implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017 and entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (Department) in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and other applicable statutory authorities.

Sec. 3 **Background**. Among other provisions, the March 28, 2017 E.O. directs the Department to review all existing regulations, orders, guidance documents, policies, and any other similar actions that potentially burden the development or utilization of domestically produced energy resources. A plan to carry out the review must be submitted to the Director of the Office of Management and Budget (OMB) and to certain other White House officials within 45 days of the date of the March 28, 2017 E.O. The objective of the review is to identify agency actions that unnecessarily burden the development or utilization of the Nation's energy resources and support action to appropriately and lawfully suspend, revise, or rescind such agency actions as soon as practicable.

The March 28, 2017 E.O. also directs the Department to promptly review certain specific actions recently taken by the Department, in particular Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," and four rules related to onshore oil and gas development.

The March 28, 2017 E.O. also rescinds certain Presidential Actions, reports, and final guidance related to climate change, including:

a. E.O. 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change);

b. Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); and

c. Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

The March 28, 2017 E.O. directs the Department to identify agency actions "related to or arising from" the rescinded Presidential Actions, reports, and guidance, and to initiate a lawful and appropriate process to suspend, revise, or rescind such actions.

The March 28, 2017 E.O. also rescinds the Presidential Memorandum issued on November 3, 2015, entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." That Memorandum directed the Secretary of the Interior, among other Cabinet officials, to undertake a number of actions to implement a landscape-scale mitigation policy, including specific directions to the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) to develop mitigation policies that incorporated compensatory mitigation into planning and permitting processes.

Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 13, 2013, is directly related to the rescinded Presidential Memorandum on mitigation. Secretary's Order 3330 dovetails with the subsequently issued Presidential Memorandum by directing the development and implementation of a landscape-scale mitigation policy for the Department. As directed by the Order, the Secretary received a report in April 2014 entitled, "A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior." The Strategy set forth a number of "deliverables" by nearly every office and bureau within the Department to advance the stated goal of "landscape-scale mitigation." Given the close nexus between the rescinded Presidential Memorandum and Secretary's Order 3330, a thorough reexamination is needed of the policies set out in that Order.

Sec. 4 **Policy**. To begin implementing the March 28, 2017 E.O., I hereby order the following:

a. Revocation of Secretary's Order 3330. I hereby revoke Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 31, 2013. As set forth below, all actions taken pursuant to Secretary's Order 3330 must be reviewed for possible reconsideration, modification, or rescission as appropriate.

b. Review of Department Actions. As set forth in Sec. 5 below, each bureau and office shall review all existing regulations, orders, guidance documents, policies, instructions, notices, implementing actions, and any other similar actions (Department Actions) related to or arising from the Presidential Actions set forth above and, to the extent deemed necessary and permitted by law, initiate an appropriate process to suspend, revise, or rescind any such actions, consistent with the policies set forth in the March 28, 2017 E.O.

Sec. 5 **Implementation**. The following actions shall be taken pursuant to this Order:

a. Mitigation Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action for review.

b. Climate Change Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O., in particular: Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change); Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); Presidential Memorandum of September 21, 2016 (Climate Change and National Security); Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions); and the Council on Environmental Quality's final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 *Fed. Reg.* 51866 (August 5, 2016).

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions identified in the review required by subsection (i) above.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action, for review.

c. Review of Other Department Actions Impacting Energy Development.

(i) As previously announced by the Department, BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015).

(ii) Within 21 days, the Director, BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iii) Within 21 days, the Director, National Park Service shall review the final rule entitled, "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (Nov. 4, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iv) Within 21 days, the Director, FWS shall review the final rule entitled, "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (Nov. 14, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(v) Within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

(vi) Within 35 days, the Deputy Secretary shall provide to me a plan to complete the review of Department Actions contemplated by Section 2 of the March 28, 2017 E.O. The plan must meet all objectives and time lines set forth in the March 28, 2017 E.O.

Sec. 5 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies,

instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 6 **Expiration Date.** This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

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PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

Conversation Contents

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Attachments:

/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/1.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/1.2 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/2.2 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/3.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
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/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/5.1 BLM EO 13783 Energy Report 7.20.2017.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/5.2 BLM Report Under E.O. 13783.xlsx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/10.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/12.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/12.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/12.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.4 BLM Report Under E.O. 13783 (1).xlsx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/16.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/16.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/16.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/17.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/18.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec

Sec/18.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/18.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/19.1 image.png
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/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/21.1 image.png
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/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/22.2 BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/24.1 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/24.2 BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 15:48:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

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If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
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> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:08:09 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

Folks:

Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.

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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
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From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:16:58 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

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"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Wed Jul 19 2017 16:26:02 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks, Peter.

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"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 14:05:23 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report 7.20.2017.docx BLM Report Under E.O. 13783.xlsx

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If you have any questions for me please let me know.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Kelly,

The version you attached does not appear to address any of my questions/comments or incorporate my edits. Just wanted to check to make certain that you attached the correct version.

Thanks
Rich

On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
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> > Cc: Kelly Orr <korr@blm.gov>
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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 15:05:38 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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Office of the Assistant Secretary - Land and Minerals Management
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Sent:	Thu Jul 20 2017 15:11:13 GMT-0600 (MDT)
To:	"Moran, Jill" <jcmoran@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

I don't because I don't have earlier versions of it. In Peter's 6:16 email last night he attached a clean and track changes version. Perhaps that track changes one is responsive to Rich's edits and for some reason the clean version wasn't?

Sent from my iPhone

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Sent:	Thu Jul 20 2017 15:12:08 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx

Kelly,

Our emails crossed over. Attached is the version with ASLM edits.

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To:	"Orr, Kelly" <korr@blm.gov>
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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Kelly,

When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.

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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> Thanks,
> Jill
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> --
> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 16:56:15 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

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Inline image 1

Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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> > > Peter
> > >
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> > > Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec

Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Richard Cardinale <richard_cardinale@ios.doi.gov>

From:	Richard Cardinale <richard_cardinale@ios.doi.gov>
Sent:	Fri Jul 21 2017 06:09:24 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks.

Sent from my iPhone

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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Fri Jul 21 2017 09:32:56 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>

CC:	"Thurn, Linda" <lthurn@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx BLM Report Under E.O. 13783 (1).xlsx

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
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Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
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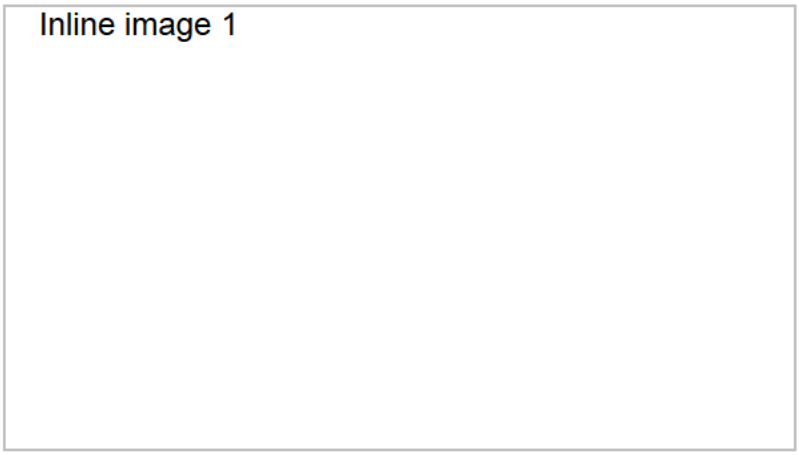

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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

One of the concerns raised by Exec Sec. is the regulatory descriptions look and read as if they were taken from materials previously prepared (during the last

Administration). Hence, they tend to speaking in very positive terms about the what the rules do, rather than focusing on the fact that this administration views many of these rules as creating unnecessary regulatory burdens. I would begin the narratives by explaining exactly that the Administration's concerns are with each of the rules and then explain why the rule is either being rescinded or reviewed.

Rich

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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 08:53:21 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Peter/Kelly,

Would it be possible for you to send us the latest version of this that incorporates ASLM comments?

Thanks, Shelley

On Wed, Jul 19, 2017 at 6:08 PM, Mali, Peter <pmali@blm.gov> wrote:

> Folks:
>
> Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):
>
> https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQqRRFtq9v4YhpqwtCDZ3cpAy9OIcq0/edit?usp=sharing
>
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--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010

Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:02 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Here you go! Sorry for the delay.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

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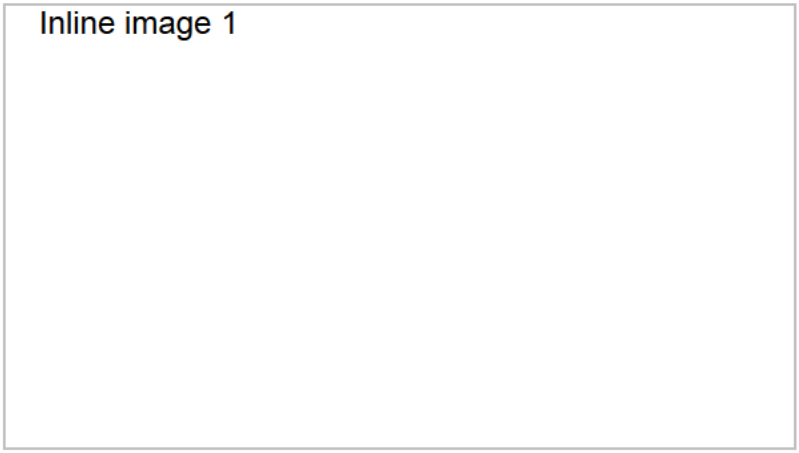

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Peter Mali
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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 13:16:52 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

Thanks!

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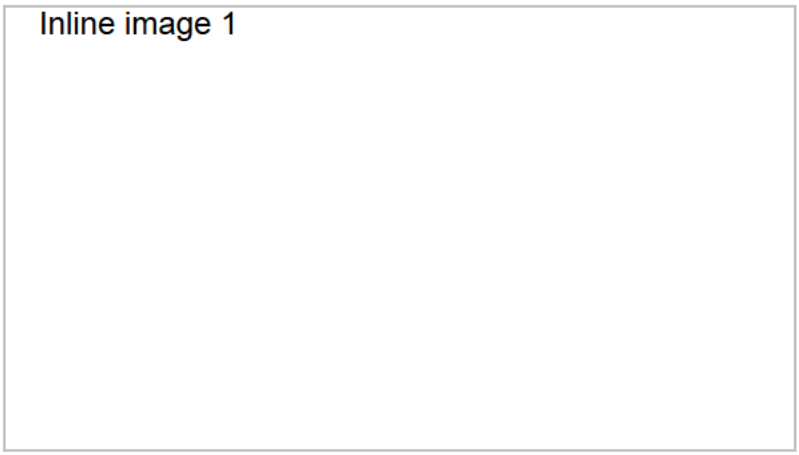
> 
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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 14:59:17 GMT-0600 (MDT)
To:	Thomas Bartholomew <tbarthol@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Thomas -

I don't think this report has much nexus to stuff in 200 since it's related to an EO on energy, but Peter wanted me to share it with you in case it was helpful in the BLM priorities exercise that's due tomorrow.

Thanks,

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To: Shelley McGinnis <smcginnis@blm.gov>

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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Jul 25 2017 07:03:53 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Tue Jul 25 2017 07:33:49 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM Report Under E.O. 13783 (2).xlsx BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (1).docx

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Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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> > From: **Orr, Kelly** <korr@blm.gov>
> > Date: Thu, Jul 20, 2017 at 6:56 PM
> > Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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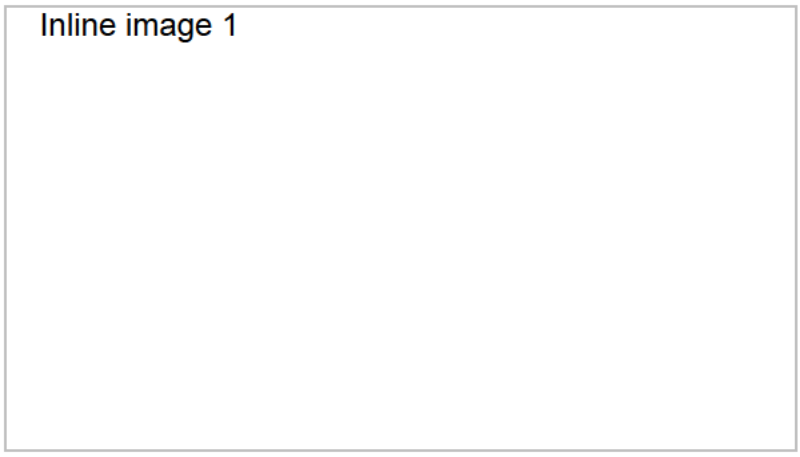

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"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Tue Jul 25 2017 10:03:24 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

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Glenda Valdez
Administrative Intern
Office of the Director
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gavaldez@blm.gov

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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

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>>> korr@blm.gov

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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

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Office of the Assistant Secretary - Land and Minerals Management
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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

Shelley McGinnis <smcginnis@blm.gov>

From:	Shelley McGinnis <smcginnis@blm.gov>
Sent:	Wed Jul 26 2017 12:23:52 GMT-0600 (MDT)
To:	korr@blm.gov
CC:	tspisak@blm.gov, jkalish@blm.gov
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

Kelly, the attached version of the report has the language about the 17 recommendations (actions).

Sent from my iPhone

Begin forwarded message:

From: "Orr, Kelly" <korr@blm.gov>
Date: July 25, 2017 at 2:00:17 PM EDT
To: Richard Cardinale <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
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Sent: Wed Jul 26 2017 12:40:59 GMT-0600 (MDT)
To: Shelley McGinnis <smcginnis@blm.gov>

CC: Timothy Spisak <tspisak@blm.gov>, John Kalish <jkalish@blm.gov>

Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks Shelley.

I've changed that paragraph to read:

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Conversation Contents

Latest Draft of BLM's E.O. 13783 Report

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 10:10:06 GMT-0600 (MDT)
To:	Jill Moran <jcmoran@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Kelly Orr <korr@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report

Hi Jill,

Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.

Thanks, Shelley

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:30 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Jill Moran <jcmoran@blm.gov>, "Mali, Peter" <pmali@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report

Shelley - just forwarded it to you on a separate chain.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Mon, Jul 24, 2017 at 12:10 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Hi Jill,
>
> Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.
>
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>
> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
> 1849 C Street NW, Room 5625
> Washington, DC 20240
> Office: 202-208-6551
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> Email: smcginnis@blm.gov

Conversation Contents

FW: Draft Report under E.O. 13783

Attachments:

/3. FW: Draft Report under E.O. 13783/1.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/1.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/2.1 Template for Input into July Draft Report on Energy FINAL.docx
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/3. FW: Draft Report under E.O. 13783/3.1 Input into July Draft Report on Energy_WO300_06JUL17.docx
/3. FW: Draft Report under E.O. 13783/5.1 EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
/3. FW: Draft Report under E.O. 13783/7.1 AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
/3. FW: Draft Report under E.O. 13783/8.1 BLM_Sec2_EO13783 (3).xlsx
/3. FW: Draft Report under E.O. 13783/9.1 BLM_Sec2_EO13783 (3) (2).xlsx

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 03 2017 09:25:01 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
CC:	John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

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To: Howarth, Robert <robert_howarth@ios.doi.gov>
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Thank you!
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> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
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> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Michael Nedd <mnedd@blm.gov>

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Sent:	Wed Jul 05 2017 05:11:02 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	"Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
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Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

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(202) 738-6065 - cell

"Pionke, Erica" <epionke@blm.gov>

From:	"Pionke, Erica" <epionke@blm.gov>
Sent:	Thu Jul 06 2017 13:46:57 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783
Attachments:	Input into July Draft Report on Energy_WO300_06JUL17.docx

Peter,

Here is WO-300's input on the Draft Report under E.O. 13783.

Please let me know if you have any questions or need changes.

Thanks!

Erica

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> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
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>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
> tspisak@blm.gov
> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** Michael Nedd [mailto:mnedd@blm.gov]
> **Sent:** Wednesday, July 5, 2017 7:11 AM

To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

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--

Erica Pionke, JD, PMP

WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
Direct: (202) 912-7219
Cell: (202) 570-2624
epionke@blm.gov

Find the BLM on social media!
BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Fri Jul 07 2017 15:26:38 GMT-0600 (MDT)
To:	"Pionke, Erica" <epionke@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783

Thanks, all!

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Thu, Jul 6, 2017 at 3:46 PM, Pionke, Erica <epionke@blm.gov> wrote:

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>
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Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

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Thank you!
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> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
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> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--

Erica Pionke, JD, PMP
WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
Direct: (202) 912-7219
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epionke@blm.gov

Find the BLM on social media!
BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 10 2017 10:19:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
CC:	Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Subject:	RE: Draft Report under E.O. 13783
Attachments:	EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Mike:

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I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

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Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Regards, Rob

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Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

"Shannon, Timothy" <tshannon@blm.gov>

From:	"Shannon, Timothy" <tshannon@blm.gov>
Sent:	Mon Jul 10 2017 10:45:04 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.

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> Hi all,
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1849 C Street, NW
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202-549-8961 (cell)

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 11:38:13 GMT-0600 (MDT)
To:	Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
CC:	"Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx

ADs for 200/300/400:

Regarding the spreadsheet I referenced yesterday (i.e., an additional deliverable under BLM's report on E.O. 13783), I'm told that Exec Sec is anxious to get this product. This spreadsheet is apparently intended to be an attachment to the narrative report (i.e., the Google Doc you worked on yesterday).

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Thanks,

Peter

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Bureau of Land Management
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Mobile: (202) 503-7460

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From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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Liz

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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 12:39:33 GMT-0600 (MDT)
To:	"Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3).xlsx

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Thanks, Shelley

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From: **Valdez, Glenda** <gavaldez@blm.gov>
Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

---------- Forwarded message ----------

From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
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Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 15:11:59 GMT-0600 (MDT)
To:	Christopher McAlear <cmcalear@blm.gov>, Nikki Moore <nmoore@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3) (2).xlsx

Chris/Nikki - did you previously complete a spreadsheet similar to the attached for BLM Manual 6220, BLM Manual 6400, and BLM Manual 6280? If so, could you please email it?

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Acting Chief of Staff
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Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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Nikki Moore <nmoore@blm.gov>

From:	Nikki Moore <nmoore@blm.gov>
Sent:	Wed Jul 19 2017 15:15:29 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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<BLM_Sec2_EO13783 (3) (2).xlsx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 11:05:47 GMT-0600 (MDT)
To:	Nikki Moore <nmoore@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Hi Kelly,

Glenda set up the spreadsheet as a Google doc for the divisions to populate. WO-300 has completed the entries for our divisions. I am not sure of the status of the other divisions. The link to the Google doc is below:

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan

<gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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>> Washington, DC 20240
>> 202-208-3181
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Glenda Valdez
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Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

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"Bartholomew, Thomas" <tbarthol@blm.gov>

From:	"Bartholomew, Thomas" <tbarthol@blm.gov>
Sent:	Thu Jul 20 2017 11:31:18 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

I'm checking with Kristin on whether she's good with what has been added to the table. Will get back with you shortly.

Best,

T

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To: Shelley McGinnis <smcginnis@blm.gov>

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Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

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<BLM_Sec2_EO13783 (3) (2).xlsx>

--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate

Washington, DC
202-208-5922

"McAlear, Christopher" <cmcalear@blm.gov>

From:	"McAlear, Christopher" <cmcalear@blm.gov>
Sent:	Thu Jul 20 2017 12:09:25 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

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Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

Kelly Orr <korr@blm.gov>

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Shelley - (b) (5) [redacted]

Thomas - please let Glenda and I know as soon as you have Kristin's OK so we can send this upstairs.

Thanks,
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Sent from my iPhone

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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason

<james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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> > Robert Howarth
> > Deputy Director for Correspondence and FOIA Management
> > Office of the Executive Secretariat and Regulatory Affairs
> > Department of the Interior
> > 1849 C Street, NW
> > Washington, DC 20240
> > 202-208-3181
> > 202-208-4451 (direct)
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>
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Elizabeth K. Appel
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Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
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Glenda Valdez
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gavaldez@blm.gov

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Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

"Bartholomew, Thomas" <tbarthol@blm.gov>

From: "Bartholomew, Thomas" <tbarthol@blm.gov>
Sent: Thu Jul 20 2017 12:58:23 GMT-0600 (MDT)
To: Kelly Orr <korr@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject: Re: Draft Report under E.O. 13783

WO200 is good.

Best,

T

On Thu, Jul 20, 2017 at 2:17 PM, Kelly Orr <korr@blm.gov> wrote:

> Thanks Chris.
>
> Shelley - (b) (5) [redacted]
>
> Thomas - please let Glenda and I know as soon as you have Kristin's OK so we can send this upstairs.
>
> Thanks,
> Kelly
>
> Sent from my iPhone
>
> On Jul 20, 2017, at 2:09 PM, McAlear, Christopher <cmcalear@blm.gov> wrote:
>
> > WO 400 has updated spreadsheet. We may need to add something later when we see WO 200 info on mitigation but for now we are done.
> >
> > Chris m
> >
> > On Thu, Jul 20, 2017 at 1:05 PM, Orr, Kelly <korr@blm.gov> wrote:
> > Shelley et al. -

Wondering if you guys could give me an update on the spreadsheet for EO 13783. In the notes that Peter left for me and sent to Rich he indicated that 200, 300, and 400 were still populating the spreadsheet.

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Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 19, 2017 at 5:15 PM, Nikki Moore <nmoore@blm.gov> wrote:

Hi Shelley,

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Nikki Moore
Acting Deputy Assistant Director,
National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington DC
202.219.3180 (office)
202.288.9114 (cell)

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Stewart was here as Chief of Staff.

Thanks, Shelley

---------- Forwarded message ----------
From: **Valdez, Glenda** <gavaldez@blm.gov>
Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

ADs for 200/300/400:

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(W) 202-208-4731
(C) 775-722-9539

--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate
Washington, DC
202-208-5922

"Moore, Nikki" <nmoore@blm.gov>

From: "Moore, Nikki" <nmoore@blm.gov>

Sent:	Fri Jul 21 2017 11:12:05 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Can you please copy me on these. Thanks!

Nikki Moore
Acting Deputy Assistant Director, National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington D.C.
202.219.3180 (office)
202.740.0835 (cell)

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>> Date: Wed, Jul 19, 2017 at 2:33 PM
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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

(b) (5)

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(b) (5)

(b) (5)

Conversation Contents

Fwd: BLM Narrative to Accompany Spreadsheet

Attachments:

/4. Fwd: BLM Narrative to Accompany Spreadsheet/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

"Moran, Jill" <jcmoran@blm.gov>

From:	"Moran, Jill" <jcmoran@blm.gov>
Sent:	Thu Jul 20 2017 10:18:47 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
CC:	Peter Mali <pmali@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet

Hi Kelly,

I am working with Rich on the BLM's narrative, but it looks like Peter did not send the spreadsheet to Rich. Do you know that status of that? I'm available to chat too if that would be helpful.

Thanks,
Jill

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management

"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:08:49 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

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Conversation Contents

BLM E.O 13783 cleaned up version

Attachments:

/5. BLM E.O 13783 cleaned up version/1.1 BLM Report Under E.O. 13783.xlsx

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:40:46 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	BLM E.O 13783 cleaned up version
Attachments:	BLM Report Under E.O. 13783.xlsx

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

(b) (5)

(b) (5)

(b) (5)

Conversation Contents

EO 13783 Spreadsheet - Update to Text in One of the Cells

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 13:13:53 GMT-0600 (MDT)
To:	Glenda Valdez <gavaldez@blm.gov>
Subject:	EO 13783 Spreadsheet - Update to Text in One of the Cells

Glenda,

Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:

(b) (5)



Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:17:16 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: EO 13783 Spreadsheet - Update to Text in One of the Cells

Ok will do

On Thu, Jul 20, 2017 at 3:13 PM, Orr, Kelly <korr@blm.gov> wrote:

> Glenda,
>
> Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:
>
> (b) (5) [redacted]
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov

--

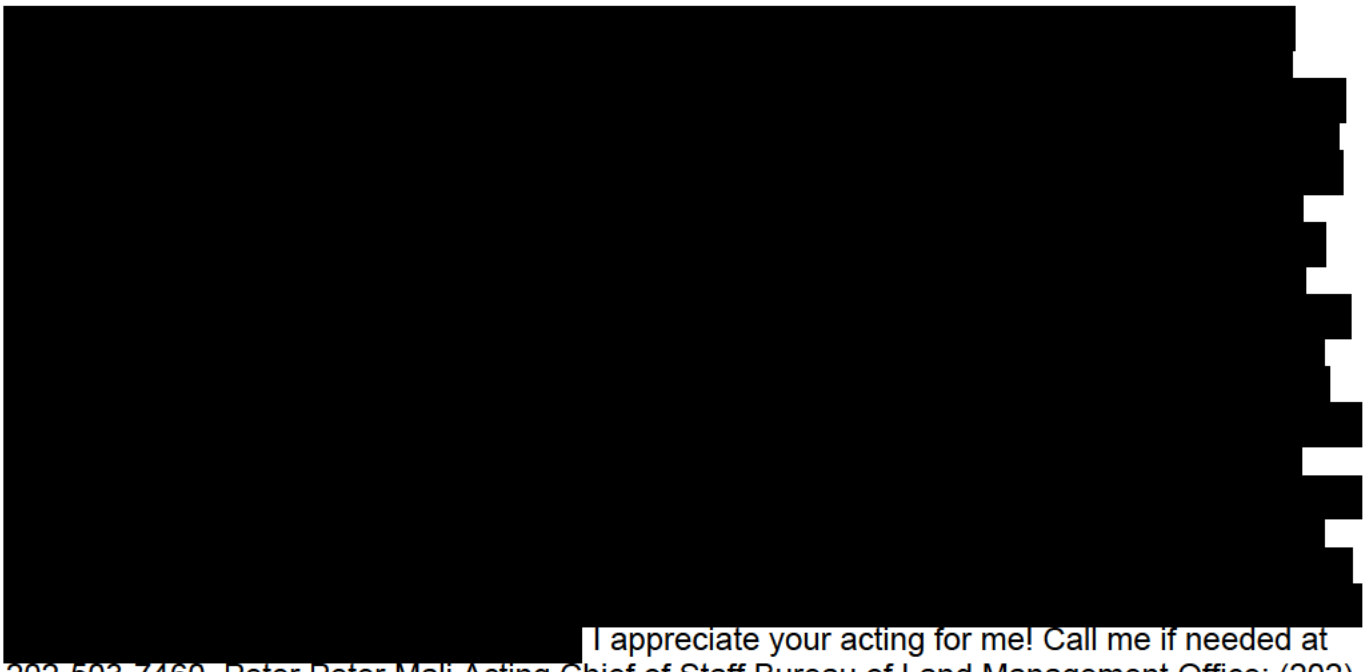
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

Conversation Contents

Bulletized List

Peter Mali <pmali@blm.gov>

From:	Peter Mali <pmali@blm.gov>
Sent:	Thu Jul 20 2017 05:58:50 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
Subject:	Bulletized List



I appreciate your acting for me! Call me if needed at 202-503-7460. Peter Peter Mali Acting Chief of Staff Bureau of Land Management Office: (202) 208-4586 Mobile: (202) 503-7460 Sent from my iPhone

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 12:46:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
Subject:	Re: Bulletized List

Peter - for our discussion this afternoon to help with handing the torch back to you as COS.

Recaps and updates on moving items + new items are in red text below.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 7:58 AM, Peter Mali <pmali@blm.gov> wrote:

[redacted]

[redacted]

- [redacted]
- [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
- [redacted]
  - [redacted]
  - [redacted]

> That's all I have on my list for now. I'll probably have a few other dribs and drabs, which I'll send you later.
>
> I appreciate your acting for me! Call me if needed at 202-503-7460.
>
> Peter
>
> Peter Mali
> Acting Chief of Staff
> Bureau of Land Management
> Office: (202) 208-4586
> Mobile: (202) 503-7460
>
> Sent from my iPhone

Conversation Contents

BLM Report Under E.O. 13783 - Invitation to edit

"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>

From:	"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>
Sent:	Wed Jul 19 2017 11:04:34 GMT-0600 (MDT)
To:	<korr@blm.gov>
CC:	<tspisak@blm.gov>, <jkalish@blm.gov>, <kbail@blm.gov>, <stryon@blm.gov>, <kkelleh@blm.gov>, <pmali@blm.gov>, <rwootton@blm.gov>, <cmcalear@blm.gov>
Subject:	BLM Report Under E.O. 13783 - Invitation to edit

Glenda Valdez has invited you to **edit** the following spreadsheet:

BLM Report Under E.O. 13783



google sheet per Peter Mali's email

Open in Sheets

Google Sheets: Create and edit spreadsheets online.
Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
You have received this email because someone shared a spreadsheet with you from Google Sheets.

Conversation Contents

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Attachments:

/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.2 EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/2.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 13:51:33 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 12 2017 15:08:04 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	RE: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

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I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 15:22:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Wed, Jul 12, 2017 at 5:08 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Peter,
>
> I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: jeanett@blm.gov
To: king@westernlaw.org
Subject: FOIA Request 2017-00883 Release 1
Date: Monday, September 11, 2017 7:12:00 AM
Attachments: 2017-00883_Interim Response_1_Redacted.pdf

Ms. King,

Please see the attached PDF file of responsive documents to your FOIA request. This release is the first in a series of rolling releases. The BLM's response letter was sent in a separate email.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

Nedd, Michael <mnedd@blm.gov>

BLM-Approved Report re: E.O. 13783

5 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 6:20 PM
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Jill:

As discussed, attached is the BLM-approved contribution to the report pursuant to E.O. 13783. Please call my cell (202-503-7460) if you have questions or need to discuss further.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Moran, Jill <jcmoran@blm.gov> Wed, Jul 12, 2017 at 6:21 PM
To: "Mali, Peter" <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Great - thank you, Peter.
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:51 PM
To: Michael Nedd <mnedd@blm.gov>

Mike:

I'm re-sending this to you -- Chris McAlear said you are looking for a clean version.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:57 PM
To: Michael Nedd <mnedd@blm.gov>, Kristin Bail <kbail@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>

Folks:

Thanks for the work of your staff on this product -- here's a clean version of what we sent to ASLM.

Safe travels home.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 12, 2017 at 6:20 PM
Subject: BLM-Approved Report re: E.O. 13783
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Michael Nedd <mnedd@blm.gov> Thu, Jul 13, 2017 at 11:36 AM
To: Peter Mali <pmali@blm.gov>

I am? Thx anyway…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 11:51 PM
To: Michael Nedd <mnedd@blm.gov>
Subject: Fwd: BLM-Approved Report re: E.O. 13783

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Nedd, Michael <mnedd@blm.gov>

Draft Mitigation Policy for Awareness and Review

3 messages

Bail, Kristin <kbail@blm.gov> Fri, Jun 23, 2017 at 2:35 PM
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

DraftMitigationIM.docx
31K

Michael Nedd <mnedd@blm.gov> Tue, Jun 27, 2017 at 9:36 AM
To: Kristin Bail <kbail@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Kristin,

Thx for the information and I do have a few things/suggestions, but it can wait until you have gotten feedback from the states. I'll have some time schedule for us to meet after the ELT, given the holiday next week.

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Bail, Kristin [mailto:kbail@blm.gov]
Sent: Monday, June 26, 2017 5:34 PM
To: Michael Nedd
Cc: John Ruhs; Kathleen Benedetto
Subject: Re: Draft Mitigation Policy for Awareness and Review - No action required before Monday

Mike - as promised, here is a copy of the side-by-side that was included in your briefing packet. [redacted] A list of the needs that States have identified is also attached and was included in the packet. –Kristin

On Sun, Jun 25, 2017 at 5:54 PM, Michael Nedd <mnedd@blm.gov> wrote:

Kristin,

[redacted]

[redacted]

[redacted]

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

On Jun 23, 2017, at 2:36 PM, Bail, Kristin <kbail@blm.gov> wrote:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director

Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

<image001.png>

<DraftMitigationIM.docx>

Kristin Bail <kbail@blm.gov> Wed, Jul 12, 2017 at 11:58 AM
To: BLM_ELT@blm.gov, gshoop@blm.gov, aseidlitz@blm.gov, Marci Todd <m1todd@blm.gov>, jraby@blm.gov

As discussed at the ELT this morning, here is a re-send. Comments would be most helpful by COB on the 18th.
-Kristin

Sent from my iPhone

Begin forwarded message:

From: "Bail, Kristin" <kbail@blm.gov>
Date: June 23, 2017 at 12:35:40 PM MDT
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>
Subject: Draft Mitigation Policy for Awareness and Review

[redacted]

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- [redacted]
- [redacted]
- [redacted]
- [redacted]

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[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

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Nedd, Michael <mnedd@blm.gov>

Draft Report under E.O. 13783

11 messages

Howarth, Robert <robert_howarth@ios.doi.gov> Thu, Jun 29, 2017 at 11:22 AM
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

Cason Memo EO 13783.pdf
154K

Appel, Elizabeth <elizabeth.appel@bia.gov> Thu, Jun 29, 2017 at 12:17 PM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

[Quoted text hidden]
--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Template for Input into July Draft Report on Energy FINAL.docx
23K

Michael Nedd <mnedd@blm.gov> Mon, Jul 3, 2017 at 11:25 AM
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM

To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

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2 attachments

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

Michael Nedd <mnedd@blm.gov> Wed, Jul 5, 2017 at 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: "Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

From: Michael Nedd <mnedd@blm.gov>
Date: July 3, 2017 at 11:25:01 AM EDT
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: FW: Draft Report under E.O. 13783

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Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

noname.html
1K

Appel, Elizabeth <elizabeth.appel@bia.gov> Fri, Jul 7, 2017 at 9:18 AM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

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AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Moran, Jill <jcmoran@blm.gov> Fri, Jul 7, 2017 at 12:49 PM
To: Peter Mali <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter,

Following is the report I was speaking about earlier. Kate has asked that the BLM's report be delivered to ASLM no later than COB Tuesday, July 11.

Please send it to me as she has asked me to consolidate the reports from ASLM's four bureaus.

Thanks,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Mali, Peter <pmali@blm.gov> Fri, Jul 7, 2017 at 5:43 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460
[Quoted text hidden]

2 attachments

Cason Memo EO 13783.pdf
154K

EO13783 Energy Report_DRAFT as of 5.30pm_07072017.docx
36K

Michael Nedd <mnedd@blm.gov> Mon, Jul 10, 2017 at 12:19 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

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EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
41K

Shannon, Timothy <tshannon@blm.gov> Mon, Jul 10, 2017 at 12:45 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.
[Quoted text hidden]

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

Moran, Jill <jcmoran@blm.gov> Mon, Jul 10, 2017 at 1:58 PM
To: Peter Mali <pmali@blm.gov>, Thomas Lillie <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, "Cruickshank, Walter" <walter.cruickshank@boem.gov>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, gowens@osmre.gov

Good afternoon,

With Rich Cardinale out of the office this week, I've been asked to gather your submissions for this report for Kate's review by **COB tomorrow**. Once Kate has reviewed and approved, I will send the submissions for all 4 agencies

together to Exec Sec. Please let me know if you anticipate any issues with meeting this deadline.

Thank you,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Moran, Jill <jcmoran@blm.gov> Mon, Jul 17, 2017 at 11:28 AM
To: Peter Mali <pmali@blm.gov>, Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter-

Attached is the narrative template the BLM submitted to Exec Sec in response to Jim Cason's memo on EO 13783. Exec Sec has asked that you add two or so paragraphs under the Executive Summary and return through ASLM by COB today.

Also, they have inquired about the status of the spreadsheet template which also needs to be filled out.

Do you think you could get the revised narrative to me today and the spreadsheet tomorrow?

Thanks,
Jill
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2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
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Cason Memo EO 13783.pdf
154K

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

Nedd, Michael <mnedd@blm.gov>

Draft Tribal Consultation Letter re: Hydraulic Fracturing Rule and Venting & Flaring Rule

1 message

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 7:49 PM
To: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>, "Moran, Jill" <jcmoran@blm.gov>, Kelly Orr <korr@blm.gov>

Rich and Rob:

Attached is the draft tribal consultation letter for BLM's Hydraulic Fracturing Rule and Venting & Flaring Rule. The attached serves as a template to be sent to our SOs to send to their Tribal partners, and it deliberately covers both rules under one letter. Acting Director Nedd asked that I send this to ExecSec and ASLM simultaneously for clearance so that BLM can initiate the tribal consultation process as soon as practical.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Draft.Tribal.Consult.Ltr.Combined.HF_VF_Rules_7.12.12.docx
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Nedd, Michael <mnedd@blm.gov>

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

3 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 3:51 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

2 attachments

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
42K

Michael Nedd <mnedd@blm.gov> Wed, Jul 12, 2017 at 5:08 PM
To: Peter Mali <pmali@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx
49K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 5:22 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Nedd, Michael <mnedd@blm.gov>

Fwd: Time Sensitive: BLM's EO 13783 report

2 messages

Mali, Peter <pmali@blm.gov> Tue, Jul 18, 2017 at 2:37 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

(b) (5) [redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,

Jill

--

Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

BLM narrative_JM.docx
42K

Cason Memo EO 13783 (1).pdf
154K

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>

Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Implications of Sec. Order on O&G Rules

4 messages

Sklar, Ryan <ryan.sklar@sol.doi.gov> Fri, Mar 31, 2017 at 7:57 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

Mike,

[redacted]

Thanks,
Ryan

--

Ryan Sklar
Acting Senior Litigation Specialist
Bureau of Land Management
U.S. Department of the Interior
202-208-4695

NOTICE: This e-mail (including attachments) is intended for the use of the individual or entity to which it is addressed. It may contain information that is privileged, confidential, or otherwise protected by applicable law. If you are not the intended recipient, you are hereby notified that any dissemination, distribution, copying, or use of this e-mail or its contents is strictly prohibited. If you receive this e-mail in error, please notify the sender immediately and destroy all copies.

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:44 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:46 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 8:46 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Re: Implications of Sec. Order on O&G Rules

Mike,

I've shared it with Tim and Lonny. Please let me know if you would like it to go to any additional ADs.

Thanks,

Ryan

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Mon, Apr 3, 2017 at 9:36 AM
To: Jeff Brune <jbrune@blm.gov>, tshannon@blm.gov
Cc: Ryan Sklar <ryan.sklar@sol.doi.gov>

FYI

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Friday, March 31, 2017 8:44 AM
To: Ryan Sklar
Cc: Shannon Stewart
Subject: RE: Implications of Sec. Order on O&G Rules

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

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From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

Mike,

[Quoted text hidden]

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.DOCX
26K

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(b) (5)

Nedd, Michael <mnedd@blm.gov>

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

2 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 5:48 PM
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

---

2 attachments

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
47K

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
38K

Orr, Kelly <korr@blm.gov> Fri, Jul 21, 2017 at 11:32 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.

I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:

(b) (5)



Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Kelly,
>
> When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.
>
> Rich
>
> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich,
> >
> > I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
> >
> > If you have any questions for me please let me know.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Thanks, Peter.
> > >
> > > Rich
> > >
> > > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> > >
> > > > Rich:

As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.

Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.

If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

3 attachments

BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
42K

BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
54K

BLM Report Under E.O. 13783 (1).xlsx
89K

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Nedd, Michael <mnedd@blm.gov>

Proposed Final Version of BLM Response to E.O. 13783

1 message

Mali, Peter <pmali@blm.gov> Tue, Jul 11, 2017 at 5:10 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Shannon, Timothy" <tshannon@blm.gov>

Mike:

Attached is a revised version of the **WO-200** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

Also attached is a revised version of the **WO-300** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

My goal was to send you a single document showing comments from both Kristin and Tim, but Microsoft Word didn't cooperate. Instead, I'm sending you the WO-200 document and the WO-300 document as separate attachments because I want you to see each file in track changes.

Finally, I've attached the Cason memo pursuant to E.O. 13783.

Please call me if you want to discuss further (my direct line is 202-208-4586).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

3 attachments

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN and KMB.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN_WO300.docx
42K

Cason Memo EO 13783.pdf
154K

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Nedd, Michael <mnedd@blm.gov>

RE: Time Sensitive: BLM's EO 13783 report

1 message

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

[redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Nedd, Michael <mnedd@blm.gov>

Secretarial Order 3349 and Oil and Gas Rules

2 messages

Karen Hawbecker <karen.hawbecker@sol.doi.gov> Thu, Mar 30, 2017 at 11:33 PM
To: Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <Richard.McNeer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

[redacted]

Sent from my iPad

Begin forwarded message:

>

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:45 AM
To: Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <richard.mcneer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

Thx Karen... We'll take a look at it...

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"
[Quoted text hidden]

(b) (5)

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(b) (5)

Nedd, Michael <mnedd@blm.gov>

Secretarial Orders for discussion at 10:00a

3 messages

Bagley, Lonny <lbagley@blm.gov> Thu, Mar 30, 2017 at 8:45 AM
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Erica Pionke <epionke@blm.gov>

You will be receiving an invite shortly to discuss actions related to yesterday's Secretarial Orders. To be sure everyone has a copy, please find them attached.

Thanks

--
Lonny R Bagley
Deputy Assistant Director (Acting),
Energy, Minerals and Realty Management
Washington Office
1849 C Street, NW Room 5625
Washington, DC 20204
O-202-208-4201
lbagely@blm.gov

Follow BLM Colorado on Social Media!

3 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

Michael Nedd <mnedd@blm.gov> Thu, Mar 30, 2017 at 11:08 AM
To: Shannon Stewart <scstewar@blm.gov>
Cc: Jerome Perez <jperez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Here you are and please distribute as you see fit…

In reading the SOs, there are a number of deliverables due beginning 14 days from the issuance of the order and then there are other deliverables at 21, 30, and 90 days. That being said, it may be helpful to send the SOs to WO-200 (the WO-300 team sent them to me and was scheduled to meet earlier today to review them) and have them collaborate with WO-300, if not already planned/initiated. I'm also aware that the SOL (Karen H) was planning to work with WO-300 to develop a chart of the various aspects.

I'm opened to su8ggestions, but I'm thinking we would want some initial feedback from the two key ADs either Monday or Tuesday as to the game plan for meeting the expectations as outlined in the SOs. This would also allow us to give some guidance if need be… Maybe a 30-minute get together would be in order…

Take care and have a wonderful day! :)

Michael Nedd

202-208-4201 Office

202-208-4800 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

---

4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

Stewart, Shannon <scstewar@blm.gov> Thu, Mar 30, 2017 at 1:06 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>, mike nedd <mnedd@blm.gov>, Jerome Perez <jperez@blm.gov>

Mike would like to set-up 30 mins Monday or Tuesday next week to discuss our game plan for meeting the expectations in the newly issued SOs (attached). Linda will follow-up with an invite.

Thanks
Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

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4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
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U.S. Department of the Interior

Royalty Policy Committee
Charter

1. **Committee's Official Designation.** Royalty Policy Committee (Committee).

2. **Authority.** The Royalty Policy Committee is a discretionary committee established under the authority of the Secretary of the Interior (Secretary) and regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2. It has been determined that the Committee is in the public interest in connection with the responsibilities of the Department of the Interior (DOI) under the:

   - Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 *et seq.*), including provisions of the Energy Policy Act of 2005 (P.L. 109-058);
   - Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701 *et seq.*), (1996);
   - Federal Oil and Gas Royalty Management Act, as amended (P.L. 114-94), (2015);
   - Federal Oil and Gas Royalty Simplification and Fairness Act of 1996 (P.L. 104-185);
   - Geothermal Steam Act of 1970 (30 U.S.C. 1001 *et seq.*);
   - Mineral Leasing Act (30 U.S.C. 181 *et seq.*);
   - Mineral Leasing Act for Acquired Lands (30 U.S.C. 351 *et seq.*);
   - The Act of March 3, 1909 (25 U.S.C. 396);
   - The Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);
   - Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);
   - The Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); and
   - The U.S. National Action Plan for the Open Government Partnership and other related authorities.

3. **Objectives and Scope of Activities.** The Secretary seeks to ensure the public receives the full value of the natural resources produced from Federal lands. The Committee will provide advice to the Secretary, through the Assistant Secretary - Land and Minerals Management (ASLM), Assistant Secretary - Indian Affairs (ASIA), and the Director of the Office of Natural Resources Revenue (ONRR), on the fair market value of and on the collection of revenues derived from, the development of energy and mineral resources on Federal and Indian lands.

4. **Description of Duties.** The duties of the Committee are solely advisory in nature. The Committee will, at the request of the Designated Federal Officer (DFO), advise on current and emerging issues related to the determination of fair market value, and the collection of revenue from energy and mineral resources on Federal and Indian lands. At the request of the DFO, the Committee also will advise on the potential impacts of proposed policies and regulations related to revenue collection from such development, including whether a need exists for regulatory reform.

5. **Agency or Official to Whom the Committee Reports.** The Committee will report to the Secretary through the ASLM, ASIA, and the Director of ONRR.

6. **Support.** The ONRR will provide administrative and logistical support for the Committee.

7. **Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Committee's functions are estimated to be $350,000, including all direct and indirect expenses and 3 full-time employees.

8. **Designated Federal Officer.** The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO or alternate DFO will approve or call all Committee and subcommittee meetings, prepare and approve all meeting agendas, attend all Committee and subcommittee meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest, and chair Committee meetings when directed to do so by the Secretary.

9. **Estimated Number and Frequency of Meetings.** The Committee will meet at least once each calendar year, and at such other times as determined necessary by the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Committee is subject to biennial review and will terminate 2 years from the date the Charter is filed, unless prior to that date, it is renewed in accordance with Section 14 of the FACA. The Committee will not meet or take any action without a valid current charter.

12. **Membership and Designation.** The Committee will not exceed 28 members and will be composed of non-Federal and Federal members in order to ensure fair and balanced representation. The Secretary will appoint non-Federal members and their alternates to the Committee to serve up to a 3-year term. Non-Federal members and alternates may not serve as a member or alternate for more than 6 consecutive years. However, after a 2-year break in service, any such non-Federal member or alternate will again be eligible for appointment.

The ASLM and the Director of ONRR, or their designee(s), shall serve as co-Chairs of the Committee.

Federal Members: The Secretary will appoint the following officials as nonvoting, ex-officio members of the Committee:

- A representative of the Secretary's Immediate Office
- Assistant Secretary – Indian Affairs
- Director, Bureau of Indian Affairs
- Director, Bureau of Land Management
- Director, Bureau of Ocean Energy Management
- Director, Bureau of Safety and Environmental Enforcement

These officials may designate a senior official to act on their behalf.

Non-Federal Members: The Secretary will appoint members in the following categories:

- Up to 6 members representing the Governors of States that receive more than $10,000,000 annually in royalty revenues from onshore and offshore Federal leases.

- Up to 4 members representing the Indian Tribes that are engaged in activities subject to:

  (i) the Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);

  (ii) Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);

  (iii) the Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); or

  (iv) any other law relating to mineral development that is specific to one or more Indian Tribes.

- Up to 6 members representing various mineral and/or energy stakeholders in Federal and Indian royalty policy.

- Up to 4 members representing academia and public interest groups.

Each non-Federal member may nominate an alternate member to the Committee. Alternate members must be approved and appointed to the Committee by the Secretary before attending meetings in lieu of primary members. Alternate members will have experience and/or expertise similar to that of the associated primary member.

Members of the Committee serve without compensation. However, while away from their homes or regular places of business, Committee and subcommittee members engaged in Committee or subcommittee business approved by the DFO may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by 5 U.S.C. 5703, in the same manner as persons employed intermittently in Federal Government service.

Any vacancy on the Committee will be filled in the same manner in which the original appointment was made. All members serve at the discretion of the Secretary.

13. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purposes of compiling information, conducting research, and/or drafting recommendations. However, such subcommittees must act only under the direction of the Committee and must report their recommendations to the full Committee for consideration. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

14. **Ethics Responsibilities of Members.** No Committee or subcommittee member or alternate member will participate in any specific party matter (including a lease, license, permit, contract, claim, agreement, or related litigation) with the DOI in which the member or alternate member has a direct financial interest. Members and alternate members will endeavor to avoid any actions that would cause the public to question the integrity of the Committee's operations, activities, or advice. The provisions of this paragraph do not affect any statutory or regulatory ethical obligations to which Federal members (and alternate members) are subject.

15. **Recordkeeping.** The records of the Committee, including formally and informally established subcommittees of the Committee, will be handled in accordance with General Records Schedule 6.2 or other approved Agency records disposition schedule. These records will be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

03-29-2017
Date

Date Filed

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3348

Subject: Concerning the Federal Coal Moratorium

Sec. 1 **Purpose**. The Federal coal leasing program is of critical importance to the economy of the United States, supplying approximately 40 percent of the coal produced in the Nation. On January 15, 2016, Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," was signed and placed a moratorium on the coal leasing program with limited exceptions. Given the critical importance of the Federal coal leasing program to energy security, job creation, and proper conservation stewardship, this Order directs efforts to enhance and improve the Federal coal leasing program.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended. Other statutory authorities for this Order include but are not limited to the following statutes:

a. Mineral Leasing Act, 30 U.S.C. §1181 *et seq*.

b. Mineral Leasing Act for Acquired Lands, 30 U.S.C. § 351 *et seq*.

c. Federal Land Policy and Management Act, 43 U.S.C. 1701-1785.

d. Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328.

Sec. 3 **Background**. Secretary's Order 3338 directs the Bureau of Land Management (BLM) to analyze and "consider potential leasing and management reforms to the current Federal coal program." Secretary's Order 3338 ordered the preparation of a discretionary Programmatic Environmental Impact Statement (PEIS) to analyze potential reforms and ordered a "pause on leasing, with limited exceptions" pending completion of the discretionary Federal Coal Program PEIS. The PEIS is estimated to cost many millions of dollars and would be completed no sooner than 2019, even with robust funding.

Sec. 4 **Revocation of Secretary's Order 3338**. Based upon the Department's review of Secretary's Order 3338, the scoping report for the discretionary Federal Coal Program PEIS issued in January 2017, and other information provided by BLM, I find that the public interest is not served by halting the Federal coal program for an extended time, nor is a PEIS required to consider potential improvements to the program. Accordingly, consistent with the principles of responsible public stewardship entrusted to this office, I revoke Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program."

Sec. 5 **Implementation**. With the revocation of Secretary's Order 3338, BLM is directed to process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of Secretary's Order 3338. All activities associated with the preparation of the Federal Coal Program PEIS shall cease. The Deputy Secretary, Assistant Secretaries, and heads of bureaus and offices are hereby directed to make changes in their policy and guidance documents that are consistent with the revocation of Secretary's Order 3338.

Sec. 6 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7 **Expiration Date**. This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3349

Subject: American Energy Independence

Sec. 1 **Purpose**. This Order implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017 and entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (Department) in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and other applicable statutory authorities.

Sec. 3 **Background**. Among other provisions, the March 28, 2017 E.O. directs the Department to review all existing regulations, orders, guidance documents, policies, and any other similar actions that potentially burden the development or utilization of domestically produced energy resources. A plan to carry out the review must be submitted to the Director of the Office of Management and Budget (OMB) and to certain other White House officials within 45 days of the date of the March 28, 2017 E.O. The objective of the review is to identify agency actions that unnecessarily burden the development or utilization of the Nation's energy resources and support action to appropriately and lawfully suspend, revise, or rescind such agency actions as soon as practicable.

The March 28, 2017 E.O. also directs the Department to promptly review certain specific actions recently taken by the Department, in particular Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," and four rules related to onshore oil and gas development.

The March 28, 2017 E.O. also rescinds certain Presidential Actions, reports, and final guidance related to climate change, including:

a. E.O. 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change);

b. Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); and

c. Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

The March 28, 2017 E.O. directs the Department to identify agency actions "related to or arising from" the rescinded Presidential Actions, reports, and guidance, and to initiate a lawful and appropriate process to suspend, revise, or rescind such actions.

The March 28, 2017 E.O. also rescinds the Presidential Memorandum issued on November 3, 2015, entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." That Memorandum directed the Secretary of the Interior, among other Cabinet officials, to undertake a number of actions to implement a landscape-scale mitigation policy, including specific directions to the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) to develop mitigation policies that incorporated compensatory mitigation into planning and permitting processes.

Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 13, 2013, is directly related to the rescinded Presidential Memorandum on mitigation. Secretary's Order 3330 dovetails with the subsequently issued Presidential Memorandum by directing the development and implementation of a landscape-scale mitigation policy for the Department. As directed by the Order, the Secretary received a report in April 2014 entitled, "A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior." The Strategy set forth a number of "deliverables" by nearly every office and bureau within the Department to advance the stated goal of "landscape-scale mitigation." Given the close nexus between the rescinded Presidential Memorandum and Secretary's Order 3330, a thorough reexamination is needed of the policies set out in that Order.

Sec. 4 **Policy**. To begin implementing the March 28, 2017 E.O., I hereby order the following:

a. Revocation of Secretary's Order 3330. I hereby revoke Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 31, 2013. As set forth below, all actions taken pursuant to Secretary's Order 3330 must be reviewed for possible reconsideration, modification, or rescission as appropriate.

b. Review of Department Actions. As set forth in Sec. 5 below, each bureau and office shall review all existing regulations, orders, guidance documents, policies, instructions, notices, implementing actions, and any other similar actions (Department Actions) related to or arising from the Presidential Actions set forth above and, to the extent deemed necessary and permitted by law, initiate an appropriate process to suspend, revise, or rescind any such actions, consistent with the policies set forth in the March 28, 2017 E.O.

Sec. 5 **Implementation**. The following actions shall be taken pursuant to this Order:

a. Mitigation Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action for review.

b. Climate Change Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O., in particular: Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change); Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); Presidential Memorandum of September 21, 2016 (Climate Change and National Security); Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions); and the Council on Environmental Quality's final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 *Fed. Reg.* 51866 (August 5, 2016).

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions identified in the review required by subsection (i) above.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action, for review.

c. Review of Other Department Actions Impacting Energy Development.

(i) As previously announced by the Department, BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015).

(ii) Within 21 days, the Director, BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iii) Within 21 days, the Director, National Park Service shall review the final rule entitled, "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (Nov. 4, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iv) Within 21 days, the Director, FWS shall review the final rule entitled, "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (Nov. 14, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(v) Within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

(vi) Within 35 days, the Deputy Secretary shall provide to me a plan to complete the review of Department Actions contemplated by Section 2 of the March 28, 2017 E.O. The plan must meet all objectives and time lines set forth in the March 28, 2017 E.O.

Sec. 5 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies,

instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 6 **Expiration Date.** This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

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PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

Conversation Contents

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Attachments:

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"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 15:48:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
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> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:08:09 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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Folks:

Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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Cc: Kelly Orr <korr@blm.gov>

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"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:16:58 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
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From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Wed Jul 19 2017 16:26:02 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 14:05:23 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report 7.20.2017.docx BLM Report Under E.O. 13783.xlsx

Rich,

I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.

If you have any questions for me please let me know.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

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> > **Jill Moran**
> > ***Energy Program Analyst - BLM Liaison***
> > Office of the Assistant Secretary - Land and Minerals Management
> > **(202) 208-4114**

"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:00:54 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Kelly,

The version you attached does not appear to address any of my questions/comments or incorporate my edits. Just wanted to check to make certain that you attached the correct version.

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If you have any questions for me please let me know.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

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> > Date: Wed, Jul 19, 2017 at 5:48 PM
> > Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> > To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
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To:	"Moran, Jill" <jcmoran@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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Sent from my iPhone

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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx

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Our emails crossed over. Attached is the version with ASLM edits.

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"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:48:37 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Kelly,

When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.

Rich

On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:

> Rich,
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> I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
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> If you have any questions for me please let me know.
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240

Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Thanks, Peter.
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> Rich
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> On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
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> > Peter
> >
> > Peter Mali
> > Acting Chief of Staff
> > Bureau of Land Management
> > Office: (202) 208-4586
> > Mobile: (202) 503-7460
> >
> > ---------- Forwarded message ----------
> > From: **Mali, Peter** <pmali@blm.gov>
> > Date: Wed, Jul 19, 2017 at 5:48 PM
> > Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> > To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> > Cc: Kelly Orr <korr@blm.gov>
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> > Mike, John, and Kathy:
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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 16:56:15 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

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Inline image 1

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Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Richard Cardinale <richard_cardinale@ios.doi.gov>

From:	Richard Cardinale <richard_cardinale@ios.doi.gov>
Sent:	Fri Jul 21 2017 06:09:24 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks.

Sent from my iPhone

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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Fri Jul 21 2017 09:32:56 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>

CC:	"Thurn, Linda" <lthurn@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx BLM Report Under E.O. 13783 (1).xlsx

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

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To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
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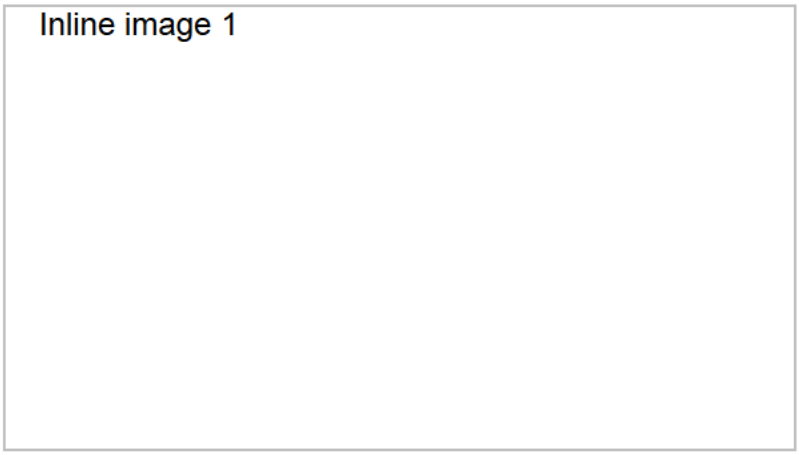

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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

One of the concerns raised by Exec Sec. is the regulatory descriptions look and read as if they were taken from materials previously prepared (during the last

Administration). Hence, they tend to speaking in very positive terms about the what the rules do, rather than focusing on the fact that this administration views many of these rules as creating unnecessary regulatory burdens. I would begin the narratives by explaining exactly that the Administration's concerns are with each of the rules and then explain why the rule is either being rescinded or reviewed.

Rich

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> Office of the Assistant Secretary - Land and Minerals Management
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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 08:53:21 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Peter/Kelly,

Would it be possible for you to send us the latest version of this that incorporates ASLM comments?

Thanks, Shelley

On Wed, Jul 19, 2017 at 6:08 PM, Mali, Peter <pmali@blm.gov> wrote:

> Folks:
>
> Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):
>
> https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQqRRFtq9v4YhpqwtCDZ3cpAy9OIcq0/edit?usp=sharing
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> Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Shelley McGinnis, Ph.D.
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Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010

Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:02 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Here you go! Sorry for the delay.

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Mobile: 202-510-5119
korr@blm.gov

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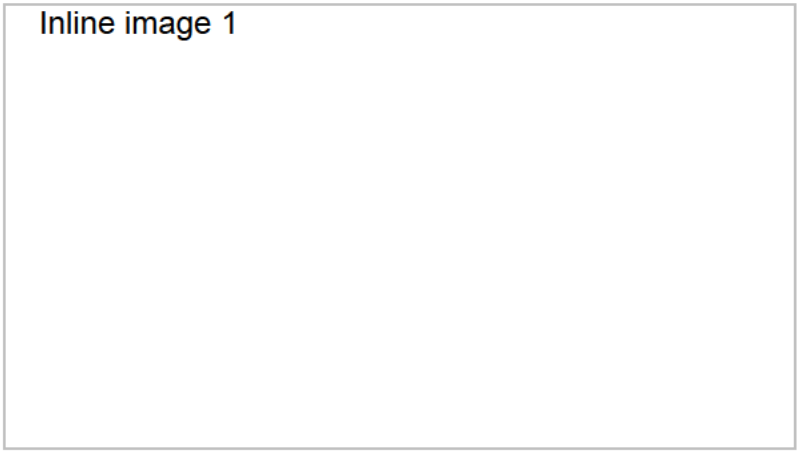

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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 13:16:52 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

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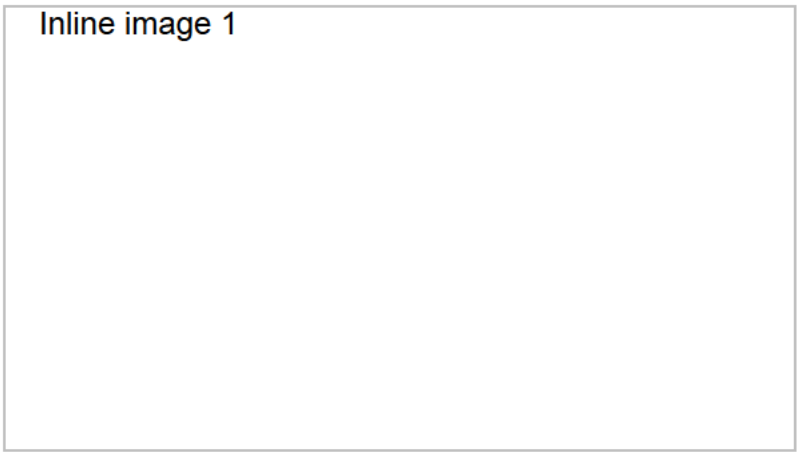
> 
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Office: 202-208-6551
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Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 14:59:17 GMT-0600 (MDT)
To:	Thomas Bartholomew <tbarthol@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Thomas -

I don't think this report has much nexus to stuff in 200 since it's related to an EO on energy, but Peter wanted me to share it with you in case it was helpful in the BLM priorities exercise that's due tomorrow.

Thanks,

Kelly Orr
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Bureau of Land Management
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Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
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Date: Mon, Jul 24, 2017 at 1:34 PM
Subject: Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Shelley McGinnis <smcginnis@blm.gov>

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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Jul 25 2017 07:03:53 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

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Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Shelley McGinnis, Ph.D.
Resource Advisor
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Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Tue Jul 25 2017 07:33:49 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM Report Under E.O. 13783 (2).xlsx BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (1).docx

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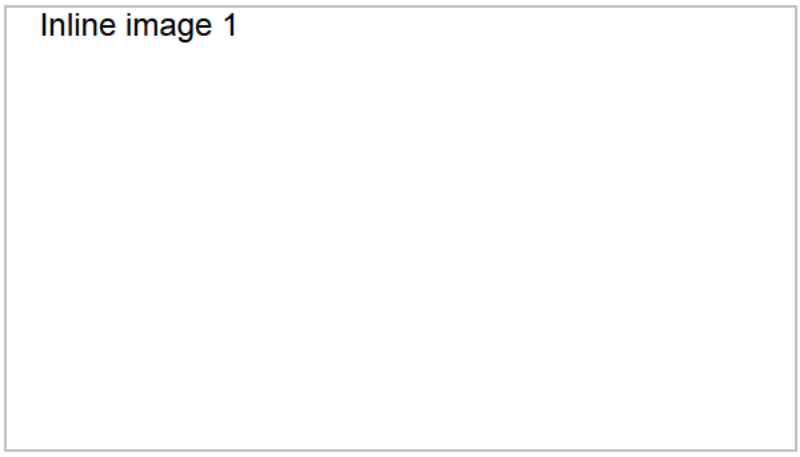

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"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Tue Jul 25 2017 10:03:24 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

I updated the google sheet with the text from the word document. Here is the link encase you can't find it. Let me know if you need anything else

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Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

"Orr, Kelly" <korr@blm.gov>

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Sent:	Tue Jul 25 2017 12:00:17 GMT-0600 (MDT)
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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

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From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Tue Jul 25 2017 12:04:47 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks, Kelly.

Peter Mali
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Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Shelley McGinnis <smcginnis@blm.gov>

From:	Shelley McGinnis <smcginnis@blm.gov>
Sent:	Wed Jul 26 2017 12:23:52 GMT-0600 (MDT)
To:	korr@blm.gov
CC:	tspisak@blm.gov, jkalish@blm.gov
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

Kelly, the attached version of the report has the language about the 17 recommendations (actions).

Sent from my iPhone

Begin forwarded message:

From: "Orr, Kelly" <korr@blm.gov>
Date: July 25, 2017 at 2:00:17 PM EDT
To: Richard Cardinale <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
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Sent: Wed Jul 26 2017 12:40:59 GMT-0600 (MDT)
To: Shelley McGinnis <smcginnis@blm.gov>

CC: Timothy Spisak <tspisak@blm.gov>, John Kalish <jkalish@blm.gov>

Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks Shelley.

I've changed that paragraph to read:

. (b) (5) [redacted]

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Conversation Contents

Latest Draft of BLM's E.O. 13783 Report

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 10:10:06 GMT-0600 (MDT)
To:	Jill Moran <jcmoran@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Kelly Orr <korr@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report

Hi Jill,

Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.

Thanks, Shelley

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:30 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Jill Moran <jcmoran@blm.gov>, "Mali, Peter" <pmali@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report

Shelley - just forwarded it to you on a separate chain.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Mon, Jul 24, 2017 at 12:10 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Hi Jill,
>
> Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.
>
> Thanks, Shelley
>
> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
> 1849 C Street NW, Room 5625
> Washington, DC 20240
> Office: 202-208-6551
> Cell: 202-578-3010
> Email: smcginnis@blm.gov

Conversation Contents

FW: Draft Report under E.O. 13783

Attachments:

/3. FW: Draft Report under E.O. 13783/1.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/1.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/2.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/2.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/3.1 Input into July Draft Report on Energy_WO300_06JUL17.docx
/3. FW: Draft Report under E.O. 13783/5.1 EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
/3. FW: Draft Report under E.O. 13783/7.1 AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
/3. FW: Draft Report under E.O. 13783/8.1 BLM_Sec2_EO13783 (3).xlsx
/3. FW: Draft Report under E.O. 13783/9.1 BLM_Sec2_EO13783 (3) (2).xlsx

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 03 2017 09:25:01 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
CC:	John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject:	FW: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]

Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 05 2017 05:11:02 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	"Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

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Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

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> **Date:** July 3, 2017 at 11:25:01 AM EDT
> **To:** Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
> **Cc:** John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> **Subject: FW: Draft Report under E.O. 13783**
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>
> Michael D. Nedd
> 202-208-3801 Office
> 202-208-5242 Fax
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Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
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> Deputy Director for Correspondence and FOIA Management
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> 1849 C Street, NW
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--
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Office of Regulatory Affairs & Collaborative Action

Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

"Pionke, Erica" <epionke@blm.gov>

From:	"Pionke, Erica" <epionke@blm.gov>
Sent:	Thu Jul 06 2017 13:46:57 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783
Attachments:	Input into July Draft Report on Energy_WO300_06JUL17.docx

Peter,

Here is WO-300's input on the Draft Report under E.O. 13783.

Please let me know if you have any questions or need changes.

Thanks!

Erica

On Wed, Jul 5, 2017 at 9:57 AM, Timothy Spisak <tspisak@blm.gov> wrote:

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>
> Thanks!
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>
> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
> 'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997
>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
> tspisak@blm.gov
> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** Michael Nedd [mailto:mnedd@blm.gov]
> **Sent:** Wednesday, July 5, 2017 7:11 AM

To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

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> **Cc:** Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen

<stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

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> 1849 C Street, NW
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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--

Erica Pionke, JD, PMP

WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
Direct: (202) 912-7219
Cell: (202) 570-2624
epionke@blm.gov

Find the BLM on social media!
BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Fri Jul 07 2017 15:26:38 GMT-0600 (MDT)
To:	"Pionke, Erica" <epionke@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783

Thanks, all!

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Thu, Jul 6, 2017 at 3:46 PM, Pionke, Erica <epionke@blm.gov> wrote:

> Peter,
>
> Here is WO-300's input on the Draft Report under E.O. 13783.
>
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'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Wednesday, July 5, 2017 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

> **From:** Michael Nedd <mnedd@blm.gov>
> **Date:** July 3, 2017 at 11:25:01 AM EDT
> **To:** Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
> **Cc:** John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> **Subject: FW: Draft Report under E.O. 13783**
>
> Hi team,
>
> Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…
>
> Peter, I leave it to you and the Advisors to help steer us through this effort…
>
> **Take care and have a wonderful day! :)**
>
> Michael D. Nedd
> 202-208-3801 Office
> 202-208-5242 Fax
> mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

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>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--

Erica Pionke, JD, PMP
WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
Direct: (202) 912-7219
Cell: (202) 570-2624
epionke@blm.gov

Find the BLM on social media!
BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 10 2017 10:19:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
CC:	Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Subject:	RE: Draft Report under E.O. 13783
Attachments:	EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Thu, Jun 29, 2017 at 11:22 AM
Subject: Draft Report under E.O. 13783
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
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Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

"Shannon, Timothy" <tshannon@blm.gov>

From:	"Shannon, Timothy" <tshannon@blm.gov>
Sent:	Mon Jul 10 2017 10:45:04 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.

On Mon, Jul 10, 2017 at 12:19 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Hi all,
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> Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.
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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Howarth, Robert** <robert_howarth@ios.doi.gov>
Date: Thu, Jun 29, 2017 at 11:22 AM
Subject: Draft Report under E.O. 13783
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
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Regards, Rob

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Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 11:38:13 GMT-0600 (MDT)
To:	Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
CC:	"Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx

ADs for 200/300/400:

Regarding the spreadsheet I referenced yesterday (i.e., an additional deliverable under BLM's report on E.O. 13783), I'm told that Exec Sec is anxious to get this product. This spreadsheet is apparently intended to be an attachment to the narrative report (i.e., the Google Doc you worked on yesterday).

First things first: please task staff with populating this spreadsheet. To that end, you will soon receive (or may have already received) a Google Docs invite from Glenda Valdez (WO-100's summer intern) to provide content to the Google Sheets (i.e., the spreadsheet template for this assignment).

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As with the report, please add your material as soon as possible. Let me know if you have questions with the assignment. Finally, please recall that I'll be on annual leave tomorrow and Friday (7/21); Kelly Orr will be acting CoS in my absence (I've cc:ed her here).

Thanks,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------

From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

On Thu, Jun 29, 2017 at 12:17 PM, Appel, Elizabeth <elizabeth.appel@bia.gov> wrote:

> Hi Everyone-
>
> The attachment to the memo is provided in MS Word here for your convenience.
>
> Thank you!
> Liz
>
> On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:
>
>> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
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>> Robert Howarth
>> Deputy Director for Correspondence and FOIA Management
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>> Department of the Interior
>> 1849 C Street, NW
>> Washington, DC 20240
>> 202-208-3181
>> 202-208-4451 (direct)

202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 12:39:33 GMT-0600 (MDT)
To:	"Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3).xlsx

All,

I just spoke to Peter and he asked that we hold off on populating the spreadsheet until he has finalized the document. He is still making changes to the document and we want the spreadsheet to be consistent. Also, please see attached version of the spreadsheet that was previously submitted when Shannon Stewart was here as Chief of Staff.

Thanks, Shelley

---------- Forwarded message ----------
From: **Valdez, Glenda** <gavaldez@blm.gov>
Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

---------- Forwarded message ----------

From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

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> --
> Elizabeth K. Appel
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--
Elizabeth K. Appel

Office of Regulatory Affairs & Collaborative Action
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--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 15:11:59 GMT-0600 (MDT)
To:	Christopher McAlear <cmcalear@blm.gov>, Nikki Moore <nmoore@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3) (2).xlsx

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CC:	Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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202.288.9114 (cell)

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Glenda set up the spreadsheet as a Google doc for the divisions to populate. WO-300 has completed the entries for our divisions. I am not sure of the status of the other divisions. The link to the Google doc is below:

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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Date: Wed, Jul 19, 2017 at 2:33 PM

Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

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Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

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Elizabeth K. Appel
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Glenda Valdez
Administrative Intern
Office of the Director
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Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

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Shelley McGinnis, Ph.D.
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Cell: 202-578-3010
Email: smcginnis@blm.gov

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> <BLM_Sec2_EO13783 (3) (2).xlsx>

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"Bartholomew, Thomas" <tbarthol@blm.gov>

From:	"Bartholomew, Thomas" <tbarthol@blm.gov>
Sent:	Thu Jul 20 2017 11:31:18 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

I'm checking with Kristin on whether she's good with what has been added to the table. Will get back with you shortly.

Best,

T

On Thu, Jul 20, 2017 at 1:05 PM, Orr, Kelly <korr@blm.gov> wrote:

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>
> Wondering if you guys could give me an update on the spreadsheet for EO 13783. In the notes that Peter left for me and sent to Rich he indicated that 200, 300, and 400 were still populating the spreadsheet.
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202.288.9114 (cell)

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Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate

Washington, DC
202-208-5922

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Christopher McAlear
Assistant Director
National Conservation Lands
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(W) 202-208-4731
(C) 775-722-9539

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Thomas - please let Glenda and I know as soon as you have Kristin's OK so we can send this upstairs.

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Sent from my iPhone

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> Date: Wed, Jul 19, 2017 at 2:33 PM
> Subject: Fwd: Draft Report under E.O. 13783
> To: Shelley McGinnis <smcginnis@blm.gov>
>
> ---------- Forwarded message ----------
> From: **Mali, Peter** <pmali@blm.gov>
> Date: Wed, Jul 19, 2017 at 1:38 PM
> Subject: Fwd: Draft Report under E.O. 13783
> To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
> Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

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Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason

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> > Department of the Interior
> > 1849 C Street, NW
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>
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Glenda Valdez
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Office: 202 208 4019
gavaldez@blm.gov

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Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

"Bartholomew, Thomas" <tbarthol@blm.gov>

From: "Bartholomew, Thomas" <tbarthol@blm.gov>
Sent: Thu Jul 20 2017 12:58:23 GMT-0600 (MDT)
To: Kelly Orr <korr@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject: Re: Draft Report under E.O. 13783

WO200 is good.

Best,

T

On Thu, Jul 20, 2017 at 2:17 PM, Kelly Orr <korr@blm.gov> wrote:

> Thanks Chris.
>
> Shelley - (b) (5) [redacted]
>
> Thomas - please let Glenda and I know as soon as you have Kristin's OK so we can send this upstairs.
>
> Thanks,
> Kelly
>
> Sent from my iPhone
>
> On Jul 20, 2017, at 2:09 PM, McAlear, Christopher <cmcalear@blm.gov> wrote:
>
> > WO 400 has updated spreadsheet. We may need to add something later when we see WO 200 info on mitigation but for now we are done.
> >
> > Chris m
> >
> > On Thu, Jul 20, 2017 at 1:05 PM, Orr, Kelly <korr@blm.gov> wrote:
> > Shelley et al. -

Wondering if you guys could give me an update on the spreadsheet for EO 13783. In the notes that Peter left for me and sent to Rich he indicated that 200, 300, and 400 were still populating the spreadsheet.

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Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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Nikki Moore
Acting Deputy Assistant Director,
National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington DC
202.219.3180 (office)
202.288.9114 (cell)

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Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate
Washington, DC
202-208-5922

"Moore, Nikki" <nmoore@blm.gov>

From: "Moore, Nikki" <nmoore@blm.gov>

Sent:	Fri Jul 21 2017 11:12:05 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Can you please copy me on these. Thanks!

Nikki Moore
Acting Deputy Assistant Director, National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington D.C.
202.219.3180 (office)
202.740.0835 (cell)

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

(b) (5)

(b) (5)

(b) (5)

(b) (5)

Conversation Contents

Fwd: BLM Narrative to Accompany Spreadsheet

Attachments:

/4. Fwd: BLM Narrative to Accompany Spreadsheet/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

"Moran, Jill" <jcmoran@blm.gov>

From:	"Moran, Jill" <jcmoran@blm.gov>
Sent:	Thu Jul 20 2017 10:18:47 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
CC:	Peter Mali <pmali@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet

Hi Kelly,

I am working with Rich on the BLM's narrative, but it looks like Peter did not send the spreadsheet to Rich. Do you know that status of that? I'm available to chat too if that would be helpful.

Thanks,
Jill

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management

"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:08:49 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

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Conversation Contents

BLM E.O 13783 cleaned up version

Attachments:

/5. BLM E.O 13783 cleaned up version/1.1 BLM Report Under E.O. 13783.xlsx

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:40:46 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	BLM E.O 13783 cleaned up version
Attachments:	BLM Report Under E.O. 13783.xlsx

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

(b) (5)

(b) (5)

(b) (5)

Conversation Contents

EO 13783 Spreadsheet - Update to Text in One of the Cells

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 13:13:53 GMT-0600 (MDT)
To:	Glenda Valdez <gavaldez@blm.gov>
Subject:	EO 13783 Spreadsheet - Update to Text in One of the Cells

Glenda,

Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:

(b) (5)



Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:17:16 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: EO 13783 Spreadsheet - Update to Text in One of the Cells

Ok will do

On Thu, Jul 20, 2017 at 3:13 PM, Orr, Kelly <korr@blm.gov> wrote:

> Glenda,
>
> Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:
>
> (b) (5) [redacted]
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov

--

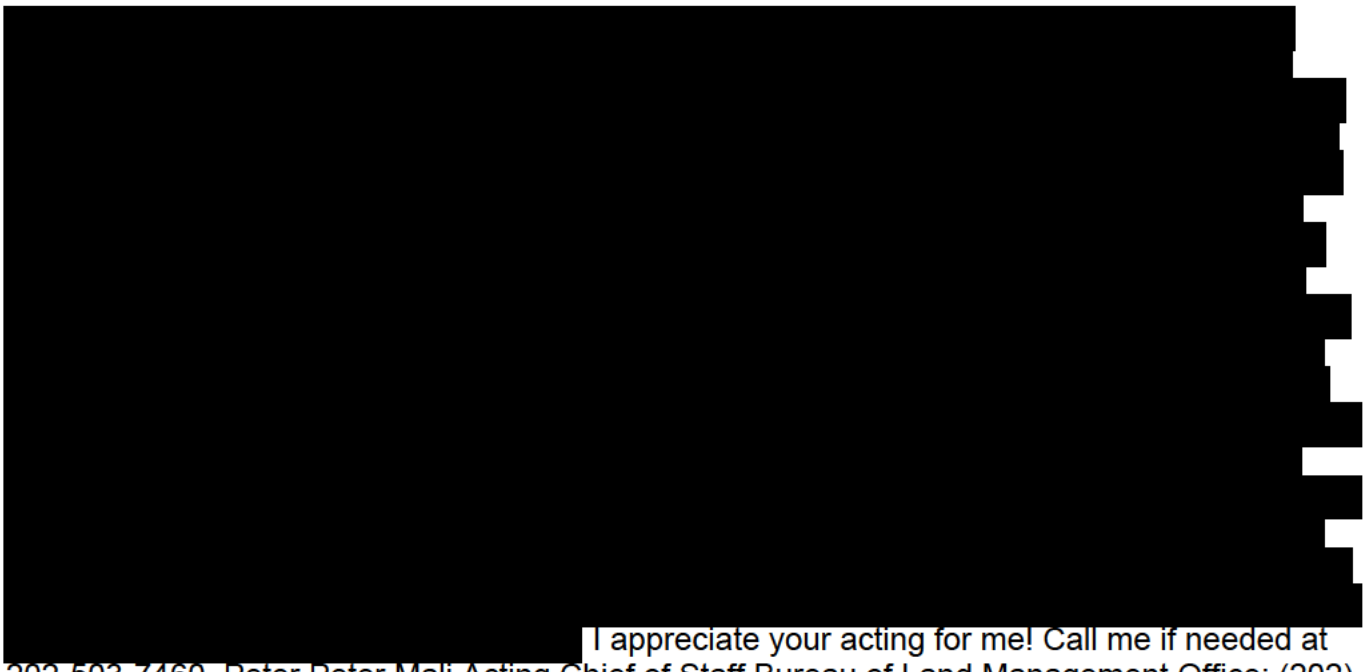
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

Conversation Contents

Bulletized List

Peter Mali <pmali@blm.gov>

From:	Peter Mali <pmali@blm.gov>
Sent:	Thu Jul 20 2017 05:58:50 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
Subject:	Bulletized List



I appreciate your acting for me! Call me if needed at 202-503-7460. Peter Peter Mali Acting Chief of Staff Bureau of Land Management Office: (202) 208-4586 Mobile: (202) 503-7460 Sent from my iPhone

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 12:46:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
Subject:	Re: Bulletized List

Peter - for our discussion this afternoon to help with handing the torch back to you as COS.

Recaps and updates on moving items + new items are in red text below.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 7:58 AM, Peter Mali <pmali@blm.gov> wrote:

[redacted]

[redacted]

- [redacted]
- [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
- [redacted]
  - [redacted]
  - [redacted]

> That's all I have on my list for now. I'll probably have a few other dribs and drabs, which I'll send you later.
>
> I appreciate your acting for me! Call me if needed at 202-503-7460.
>
> Peter
>
> Peter Mali
> Acting Chief of Staff
> Bureau of Land Management
> Office: (202) 208-4586
> Mobile: (202) 503-7460
>
> Sent from my iPhone

Conversation Contents

BLM Report Under E.O. 13783 - Invitation to edit

"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>

From:	"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>
Sent:	Wed Jul 19 2017 11:04:34 GMT-0600 (MDT)
To:	<korr@blm.gov>
CC:	<tspisak@blm.gov>, <jkalish@blm.gov>, <kbail@blm.gov>, <stryon@blm.gov>, <kkelleh@blm.gov>, <pmali@blm.gov>, <rwootton@blm.gov>, <cmcalear@blm.gov>
Subject:	BLM Report Under E.O. 13783 - Invitation to edit

Glenda Valdez has invited you to **edit** the following spreadsheet:

BLM Report Under E.O. 13783



google sheet per Peter Mali's email

Open in Sheets

Google Sheets: Create and edit spreadsheets online.
Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
You have received this email because someone shared a spreadsheet with you from Google Sheets.

Conversation Contents

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Attachments:

/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.2 EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/2.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 13:51:33 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 12 2017 15:08:04 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	RE: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

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I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 15:22:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Wed, Jul 12, 2017 at 5:08 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Peter,
>
> I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: jeanett@blm.gov
To: king@westernlaw.org
Subject: FOIA Request 2017-00883
Date: Monday, September 11, 2017 7:24:45 AM
Attachments: 2017-00883_Release 1.zip

Ms. King,

Please see the attached response letter for the first interim release and responsive documents to your FOIA request.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

Nedd, Michael <mnedd@blm.gov>

BLM-Approved Report re: E.O. 13783

5 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 6:20 PM
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Jill:

As discussed, attached is the BLM-approved contribution to the report pursuant to E.O. 13783. Please call my cell (202-503-7460) if you have questions or need to discuss further.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Moran, Jill <jcmoran@blm.gov> Wed, Jul 12, 2017 at 6:21 PM
To: "Mali, Peter" <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Great - thank you, Peter.
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:51 PM
To: Michael Nedd <mnedd@blm.gov>

Mike:

I'm re-sending this to you -- Chris McAlear said you are looking for a clean version.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:57 PM
To: Michael Nedd <mnedd@blm.gov>, Kristin Bail <kbail@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>

Folks:

Thanks for the work of your staff on this product -- here's a clean version of what we sent to ASLM.

Safe travels home.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 12, 2017 at 6:20 PM
Subject: BLM-Approved Report re: E.O. 13783
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Michael Nedd <mnedd@blm.gov> Thu, Jul 13, 2017 at 11:36 AM
To: Peter Mali <pmali@blm.gov>

I am? Thx anyway…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 11:51 PM
To: Michael Nedd <mnedd@blm.gov>
Subject: Fwd: BLM-Approved Report re: E.O. 13783

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Nedd, Michael <mnedd@blm.gov>

Draft Mitigation Policy for Awareness and Review

3 messages

Bail, Kristin <kbail@blm.gov> Fri, Jun 23, 2017 at 2:35 PM
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

DraftMitigationIM.docx
31K

Michael Nedd <mnedd@blm.gov> Tue, Jun 27, 2017 at 9:36 AM
To: Kristin Bail <kbail@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Kristin,

Thx for the information and I do have a few things/suggestions, but it can wait until you have gotten feedback from the states. I'll have some time schedule for us to meet after the ELT, given the holiday next week.

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Bail, Kristin [mailto:kbail@blm.gov]
Sent: Monday, June 26, 2017 5:34 PM
To: Michael Nedd
Cc: John Ruhs; Kathleen Benedetto
Subject: Re: Draft Mitigation Policy for Awareness and Review - No action required before Monday

Mike - as promised, here is a copy of the side-by-side that was included in your briefing packet. [redacted] A list of the needs that States have identified is also attached and was included in the packet. –Kristin

On Sun, Jun 25, 2017 at 5:54 PM, Michael Nedd <mnedd@blm.gov> wrote:

Kristin,

[redacted]

[redacted]

[redacted]

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

On Jun 23, 2017, at 2:36 PM, Bail, Kristin <kbail@blm.gov> wrote:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director

Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

<image001.png>

<DraftMitigationIM.docx>

Kristin Bail <kbail@blm.gov> Wed, Jul 12, 2017 at 11:58 AM
To: BLM_ELT@blm.gov, gshoop@blm.gov, aseidlitz@blm.gov, Marci Todd <m1todd@blm.gov>, jraby@blm.gov

As discussed at the ELT this morning, here is a re-send. Comments would be most helpful by COB on the 18th.
-Kristin

Sent from my iPhone

Begin forwarded message:

From: "Bail, Kristin" <kbail@blm.gov>
Date: June 23, 2017 at 12:35:40 PM MDT
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>
Subject: Draft Mitigation Policy for Awareness and Review

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

---

4 attachments



image001.png
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noname.html
1K

DraftMitigationIM.docx
31K

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(b) (5)

Nedd, Michael <mnedd@blm.gov>

Draft Report under E.O. 13783

11 messages

Howarth, Robert <robert_howarth@ios.doi.gov> Thu, Jun 29, 2017 at 11:22 AM
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

Cason Memo EO 13783.pdf
154K

Appel, Elizabeth <elizabeth.appel@bia.gov> Thu, Jun 29, 2017 at 12:17 PM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

[Quoted text hidden]
--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Template for Input into July Draft Report on Energy FINAL.docx
23K

Michael Nedd <mnedd@blm.gov> Mon, Jul 3, 2017 at 11:25 AM
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM

To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

[Quoted text hidden]

2 attachments

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

Michael Nedd <mnedd@blm.gov> Wed, Jul 5, 2017 at 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: "Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

From: Michael Nedd <mnedd@blm.gov>
Date: July 3, 2017 at 11:25:01 AM EDT
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: FW: Draft Report under E.O. 13783

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4 attachments

noname.html
1K

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

noname.html
1K

Appel, Elizabeth <elizabeth.appel@bia.gov> Fri, Jul 7, 2017 at 9:18 AM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

[Quoted text hidden]

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Moran, Jill <jcmoran@blm.gov> Fri, Jul 7, 2017 at 12:49 PM
To: Peter Mali <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter,

Following is the report I was speaking about earlier. Kate has asked that the BLM's report be delivered to ASLM no later than COB Tuesday, July 11.

Please send it to me as she has asked me to consolidate the reports from ASLM's four bureaus.

Thanks,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Mali, Peter <pmali@blm.gov> Fri, Jul 7, 2017 at 5:43 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460
[Quoted text hidden]

2 attachments

Cason Memo EO 13783.pdf
154K

EO13783 Energy Report_DRAFT as of 5.30pm_07072017.docx
36K

Michael Nedd <mnedd@blm.gov> Mon, Jul 10, 2017 at 12:19 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
41K

Shannon, Timothy <tshannon@blm.gov> Mon, Jul 10, 2017 at 12:45 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.
[Quoted text hidden]

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

Moran, Jill <jcmoran@blm.gov> Mon, Jul 10, 2017 at 1:58 PM
To: Peter Mali <pmali@blm.gov>, Thomas Lillie <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, "Cruickshank, Walter" <walter.cruickshank@boem.gov>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, gowens@osmre.gov

Good afternoon,

With Rich Cardinale out of the office this week, I've been asked to gather your submissions for this report for Kate's review by **COB tomorrow**. Once Kate has reviewed and approved, I will send the submissions for all 4 agencies

together to Exec Sec. Please let me know if you anticipate any issues with meeting this deadline.

Thank you,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Moran, Jill <jcmoran@blm.gov> Mon, Jul 17, 2017 at 11:28 AM
To: Peter Mali <pmali@blm.gov>, Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter-

Attached is the narrative template the BLM submitted to Exec Sec in response to Jim Cason's memo on EO 13783. Exec Sec has asked that you add two or so paragraphs under the Executive Summary and return through ASLM by COB today.

Also, they have inquired about the status of the spreadsheet template which also needs to be filled out.

Do you think you could get the revised narrative to me today and the spreadsheet tomorrow?

Thanks,
Jill
[Quoted text hidden]

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
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Cason Memo EO 13783.pdf
154K

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

Nedd, Michael <mnedd@blm.gov>

Draft Tribal Consultation Letter re: Hydraulic Fracturing Rule and Venting & Flaring Rule

1 message

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 7:49 PM
To: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>, "Moran, Jill" <jcmoran@blm.gov>, Kelly Orr <korr@blm.gov>

Rich and Rob:

Attached is the draft tribal consultation letter for BLM's Hydraulic Fracturing Rule and Venting & Flaring Rule. The attached serves as a template to be sent to our SOs to send to their Tribal partners, and it deliberately covers both rules under one letter. Acting Director Nedd asked that I send this to ExecSec and ASLM simultaneously for clearance so that BLM can initiate the tribal consultation process as soon as practical.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Draft.Tribal.Consult.Ltr.Combined.HF_VF_Rules_7.12.12.docx
30K

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Nedd, Michael <mnedd@blm.gov>

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

3 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 3:51 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

2 attachments

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
42K

Michael Nedd <mnedd@blm.gov> Wed, Jul 12, 2017 at 5:08 PM
To: Peter Mali <pmali@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx
49K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 5:22 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Nedd, Michael <mnedd@blm.gov>

Fwd: Time Sensitive: BLM's EO 13783 report

2 messages

Mali, Peter <pmali@blm.gov> Tue, Jul 18, 2017 at 2:37 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

(b) (5) [redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,

Jill

--

Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

BLM narrative_JM.docx
42K

Cason Memo EO 13783 (1).pdf
154K

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>

Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

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Nedd, Michael <mnedd@blm.gov>

Implications of Sec. Order on O&G Rules

4 messages

Sklar, Ryan <ryan.sklar@sol.doi.gov> Fri, Mar 31, 2017 at 7:57 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

Mike,

[redacted]

Thanks,
Ryan

--

Ryan Sklar
Acting Senior Litigation Specialist
Bureau of Land Management
U.S. Department of the Interior
202-208-4695

NOTICE: This e-mail (including attachments) is intended for the use of the individual or entity to which it is addressed. It may contain information that is privileged, confidential, or otherwise protected by applicable law. If you are not the intended recipient, you are hereby notified that any dissemination, distribution, copying, or use of this e-mail or its contents is strictly prohibited. If you receive this e-mail in error, please notify the sender immediately and destroy all copies.

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:44 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:46 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 8:46 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Re: Implications of Sec. Order on O&G Rules

Mike,

I've shared it with Tim and Lonny. Please let me know if you would like it to go to any additional ADs.

Thanks,

Ryan

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Mon, Apr 3, 2017 at 9:36 AM
To: Jeff Brune <jbrune@blm.gov>, tshannon@blm.gov
Cc: Ryan Sklar <ryan.sklar@sol.doi.gov>

FYI

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Friday, March 31, 2017 8:44 AM
To: Ryan Sklar
Cc: Shannon Stewart
Subject: RE: Implications of Sec. Order on O&G Rules

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

Mike,

[Quoted text hidden]

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.DOCX
26K

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Nedd, Michael <mnedd@blm.gov>

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

2 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 5:48 PM
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

---

2 attachments

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
47K

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
38K

Orr, Kelly <korr@blm.gov> Fri, Jul 21, 2017 at 11:32 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.

I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:

(b) (5)



Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Kelly,
>
> When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.
>
> Rich
>
> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich,
> >
> > I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
> >
> > If you have any questions for me please let me know.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Thanks, Peter.
> > >
> > > Rich
> > >
> > > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> > >
> > > > Rich:

As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.

Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.

If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

3 attachments

BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
42K

BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
54K

BLM Report Under E.O. 13783 (1).xlsx
89K

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Nedd, Michael <mnedd@blm.gov>

Proposed Final Version of BLM Response to E.O. 13783

1 message

Mali, Peter <pmali@blm.gov> Tue, Jul 11, 2017 at 5:10 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Shannon, Timothy" <tshannon@blm.gov>

Mike:

Attached is a revised version of the **WO-200** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

Also attached is a revised version of the **WO-300** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

My goal was to send you a single document showing comments from both Kristin and Tim, but Microsoft Word didn't cooperate. Instead, I'm sending you the WO-200 document and the WO-300 document as separate attachments because I want you to see each file in track changes.

Finally, I've attached the Cason memo pursuant to E.O. 13783.

Please call me if you want to discuss further (my direct line is 202-208-4586).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

3 attachments

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN and KMB.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN_WO300.docx
42K

Cason Memo EO 13783.pdf
154K

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Nedd, Michael <mnedd@blm.gov>

RE: Time Sensitive: BLM's EO 13783 report

1 message

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

[redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Nedd, Michael <mnedd@blm.gov>

Secretarial Order 3349 and Oil and Gas Rules

2 messages

Karen Hawbecker <karen.hawbecker@sol.doi.gov> Thu, Mar 30, 2017 at 11:33 PM
To: Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <Richard.McNeer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

[redacted]

Sent from my iPad

Begin forwarded message:

>

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:45 AM
To: Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <richard.mcneer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

Thx Karen... We'll take a look at it...

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"
[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Secretarial Orders for discussion at 10:00a

3 messages

Bagley, Lonny <lbagley@blm.gov> Thu, Mar 30, 2017 at 8:45 AM
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Erica Pionke <epionke@blm.gov>

You will be receiving an invite shortly to discuss actions related to yesterday's Secretarial Orders. To be sure everyone has a copy, please find them attached.

Thanks

--
Lonny R Bagley
Deputy Assistant Director (Acting),
Energy, Minerals and Realty Management
Washington Office
1849 C Street, NW Room 5625
Washington, DC 20204
O-202-208-4201
lbagely@blm.gov

Follow BLM Colorado on Social Media!

3 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

Michael Nedd <mnedd@blm.gov> Thu, Mar 30, 2017 at 11:08 AM
To: Shannon Stewart <scstewar@blm.gov>
Cc: Jerome Perez <jperez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Here you are and please distribute as you see fit…

In reading the SOs, there are a number of deliverables due beginning 14 days from the issuance of the order and then there are other deliverables at 21, 30, and 90 days. That being said, it may be helpful to send the SOs to WO-200 (the WO-300 team sent them to me and was scheduled to meet earlier today to review them) and have them collaborate with WO-300, if not already planned/initiated. I'm also aware that the SOL (Karen H) was planning to work with WO-300 to develop a chart of the various aspects.

I'm opened to su8ggestions, but I'm thinking we would want some initial feedback from the two key ADs either Monday or Tuesday as to the game plan for meeting the expectations as outlined in the SOs. This would also allow us to give some guidance if need be… Maybe a 30-minute get together would be in order…

Take care and have a wonderful day! :)

Michael Nedd

202-208-4201 Office

202-208-4800 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

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4 attachments

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910K

SO 3349 -American Energy Independence.pdf
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EO_promoting energy independence.pdf
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Stewart, Shannon <scstewar@blm.gov> Thu, Mar 30, 2017 at 1:06 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>, mike nedd <mnedd@blm.gov>, Jerome Perez <jperez@blm.gov>

Mike would like to set-up 30 mins Monday or Tuesday next week to discuss our game plan for meeting the expectations in the newly issued SOs (attached). Linda will follow-up with an invite.

Thanks
Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

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4 attachments

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U.S. Department of the Interior

Royalty Policy Committee
Charter

1. **Committee's Official Designation.** Royalty Policy Committee (Committee).

2. **Authority.** The Royalty Policy Committee is a discretionary committee established under the authority of the Secretary of the Interior (Secretary) and regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2. It has been determined that the Committee is in the public interest in connection with the responsibilities of the Department of the Interior (DOI) under the:

   - Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 *et seq.*), including provisions of the Energy Policy Act of 2005 (P.L. 109-058);
   - Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701 *et seq.*), (1996);
   - Federal Oil and Gas Royalty Management Act, as amended (P.L. 114-94), (2015);
   - Federal Oil and Gas Royalty Simplification and Fairness Act of 1996 (P.L. 104-185);
   - Geothermal Steam Act of 1970 (30 U.S.C. 1001 *et seq.*);
   - Mineral Leasing Act (30 U.S.C. 181 *et seq.*);
   - Mineral Leasing Act for Acquired Lands (30 U.S.C. 351 *et seq.*);
   - The Act of March 3, 1909 (25 U.S.C. 396);
   - The Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);
   - Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);
   - The Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); and
   - The U.S. National Action Plan for the Open Government Partnership and other related authorities.

3. **Objectives and Scope of Activities.** The Secretary seeks to ensure the public receives the full value of the natural resources produced from Federal lands. The Committee will provide advice to the Secretary, through the Assistant Secretary - Land and Minerals Management (ASLM), Assistant Secretary - Indian Affairs (ASIA), and the Director of the Office of Natural Resources Revenue (ONRR), on the fair market value of and on the collection of revenues derived from, the development of energy and mineral resources on Federal and Indian lands.

4. **Description of Duties.** The duties of the Committee are solely advisory in nature. The Committee will, at the request of the Designated Federal Officer (DFO), advise on current and emerging issues related to the determination of fair market value, and the collection of revenue from energy and mineral resources on Federal and Indian lands. At the request of the DFO, the Committee also will advise on the potential impacts of proposed policies and regulations related to revenue collection from such development, including whether a need exists for regulatory reform.

5. **Agency or Official to Whom the Committee Reports.** The Committee will report to the Secretary through the ASLM, ASIA, and the Director of ONRR.

6. **Support.** The ONRR will provide administrative and logistical support for the Committee.

7. **Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Committee's functions are estimated to be $350,000, including all direct and indirect expenses and 3 full-time employees.

8. **Designated Federal Officer.** The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO or alternate DFO will approve or call all Committee and subcommittee meetings, prepare and approve all meeting agendas, attend all Committee and subcommittee meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest, and chair Committee meetings when directed to do so by the Secretary.

9. **Estimated Number and Frequency of Meetings.** The Committee will meet at least once each calendar year, and at such other times as determined necessary by the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Committee is subject to biennial review and will terminate 2 years from the date the Charter is filed, unless prior to that date, it is renewed in accordance with Section 14 of the FACA. The Committee will not meet or take any action without a valid current charter.

12. **Membership and Designation.** The Committee will not exceed 28 members and will be composed of non-Federal and Federal members in order to ensure fair and balanced representation. The Secretary will appoint non-Federal members and their alternates to the Committee to serve up to a 3-year term. Non-Federal members and alternates may not serve as a member or alternate for more than 6 consecutive years. However, after a 2-year break in service, any such non-Federal member or alternate will again be eligible for appointment.

The ASLM and the Director of ONRR, or their designee(s), shall serve as co-Chairs of the Committee.

Federal Members: The Secretary will appoint the following officials as nonvoting, ex-officio members of the Committee:

- A representative of the Secretary's Immediate Office
- Assistant Secretary – Indian Affairs
- Director, Bureau of Indian Affairs
- Director, Bureau of Land Management
- Director, Bureau of Ocean Energy Management
- Director, Bureau of Safety and Environmental Enforcement

These officials may designate a senior official to act on their behalf.

Non-Federal Members: The Secretary will appoint members in the following categories:

- Up to 6 members representing the Governors of States that receive more than $10,000,000 annually in royalty revenues from onshore and offshore Federal leases.

- Up to 4 members representing the Indian Tribes that are engaged in activities subject to:

  (i) the Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);

  (ii) Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);

  (iii) the Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); or

  (iv) any other law relating to mineral development that is specific to one or more Indian Tribes.

- Up to 6 members representing various mineral and/or energy stakeholders in Federal and Indian royalty policy.

- Up to 4 members representing academia and public interest groups.

Each non-Federal member may nominate an alternate member to the Committee. Alternate members must be approved and appointed to the Committee by the Secretary before attending meetings in lieu of primary members. Alternate members will have experience and/or expertise similar to that of the associated primary member.

Members of the Committee serve without compensation. However, while away from their homes or regular places of business, Committee and subcommittee members engaged in Committee or subcommittee business approved by the DFO may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by 5 U.S.C. 5703, in the same manner as persons employed intermittently in Federal Government service.

Any vacancy on the Committee will be filled in the same manner in which the original appointment was made. All members serve at the discretion of the Secretary.

13. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purposes of compiling information, conducting research, and/or drafting recommendations. However, such subcommittees must act only under the direction of the Committee and must report their recommendations to the full Committee for consideration. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

14. **Ethics Responsibilities of Members.** No Committee or subcommittee member or alternate member will participate in any specific party matter (including a lease, license, permit, contract, claim, agreement, or related litigation) with the DOI in which the member or alternate member has a direct financial interest. Members and alternate members will endeavor to avoid any actions that would cause the public to question the integrity of the Committee's operations, activities, or advice. The provisions of this paragraph do not affect any statutory or regulatory ethical obligations to which Federal members (and alternate members) are subject.

15. **Recordkeeping.** The records of the Committee, including formally and informally established subcommittees of the Committee, will be handled in accordance with General Records Schedule 6.2 or other approved Agency records disposition schedule. These records will be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

03-29-2017
Date

Date Filed

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3348

Subject: Concerning the Federal Coal Moratorium

Sec. 1 **Purpose**. The Federal coal leasing program is of critical importance to the economy of the United States, supplying approximately 40 percent of the coal produced in the Nation. On January 15, 2016, Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," was signed and placed a moratorium on the coal leasing program with limited exceptions. Given the critical importance of the Federal coal leasing program to energy security, job creation, and proper conservation stewardship, this Order directs efforts to enhance and improve the Federal coal leasing program.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended. Other statutory authorities for this Order include but are not limited to the following statutes:

a. Mineral Leasing Act, 30 U.S.C. §1181 *et seq*.

b. Mineral Leasing Act for Acquired Lands, 30 U.S.C. § 351 *et seq*.

c. Federal Land Policy and Management Act, 43 U.S.C. 1701-1785.

d. Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328.

Sec. 3 **Background**. Secretary's Order 3338 directs the Bureau of Land Management (BLM) to analyze and "consider potential leasing and management reforms to the current Federal coal program." Secretary's Order 3338 ordered the preparation of a discretionary Programmatic Environmental Impact Statement (PEIS) to analyze potential reforms and ordered a "pause on leasing, with limited exceptions" pending completion of the discretionary Federal Coal Program PEIS. The PEIS is estimated to cost many millions of dollars and would be completed no sooner than 2019, even with robust funding.

Sec. 4 **Revocation of Secretary's Order 3338**. Based upon the Department's review of Secretary's Order 3338, the scoping report for the discretionary Federal Coal Program PEIS issued in January 2017, and other information provided by BLM, I find that the public interest is not served by halting the Federal coal program for an extended time, nor is a PEIS required to consider potential improvements to the program. Accordingly, consistent with the principles of responsible public stewardship entrusted to this office, I revoke Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program."

Sec. 5 **Implementation**. With the revocation of Secretary's Order 3338, BLM is directed to process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of Secretary's Order 3338. All activities associated with the preparation of the Federal Coal Program PEIS shall cease. The Deputy Secretary, Assistant Secretaries, and heads of bureaus and offices are hereby directed to make changes in their policy and guidance documents that are consistent with the revocation of Secretary's Order 3338.

Sec. 6 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7 **Expiration Date**. This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3349

Subject: American Energy Independence

Sec. 1 **Purpose**. This Order implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017 and entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (Department) in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and other applicable statutory authorities.

Sec. 3 **Background**. Among other provisions, the March 28, 2017 E.O. directs the Department to review all existing regulations, orders, guidance documents, policies, and any other similar actions that potentially burden the development or utilization of domestically produced energy resources. A plan to carry out the review must be submitted to the Director of the Office of Management and Budget (OMB) and to certain other White House officials within 45 days of the date of the March 28, 2017 E.O. The objective of the review is to identify agency actions that unnecessarily burden the development or utilization of the Nation's energy resources and support action to appropriately and lawfully suspend, revise, or rescind such agency actions as soon as practicable.

The March 28, 2017 E.O. also directs the Department to promptly review certain specific actions recently taken by the Department, in particular Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," and four rules related to onshore oil and gas development.

The March 28, 2017 E.O. also rescinds certain Presidential Actions, reports, and final guidance related to climate change, including:

a. E.O. 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change);

b. Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); and

c. Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

The March 28, 2017 E.O. directs the Department to identify agency actions "related to or arising from" the rescinded Presidential Actions, reports, and guidance, and to initiate a lawful and appropriate process to suspend, revise, or rescind such actions.

The March 28, 2017 E.O. also rescinds the Presidential Memorandum issued on November 3, 2015, entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." That Memorandum directed the Secretary of the Interior, among other Cabinet officials, to undertake a number of actions to implement a landscape-scale mitigation policy, including specific directions to the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) to develop mitigation policies that incorporated compensatory mitigation into planning and permitting processes.

Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 13, 2013, is directly related to the rescinded Presidential Memorandum on mitigation. Secretary's Order 3330 dovetails with the subsequently issued Presidential Memorandum by directing the development and implementation of a landscape-scale mitigation policy for the Department. As directed by the Order, the Secretary received a report in April 2014 entitled, "A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior." The Strategy set forth a number of "deliverables" by nearly every office and bureau within the Department to advance the stated goal of "landscape-scale mitigation." Given the close nexus between the rescinded Presidential Memorandum and Secretary's Order 3330, a thorough reexamination is needed of the policies set out in that Order.

Sec. 4 **Policy**. To begin implementing the March 28, 2017 E.O., I hereby order the following:

a. Revocation of Secretary's Order 3330. I hereby revoke Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 31, 2013. As set forth below, all actions taken pursuant to Secretary's Order 3330 must be reviewed for possible reconsideration, modification, or rescission as appropriate.

b. Review of Department Actions. As set forth in Sec. 5 below, each bureau and office shall review all existing regulations, orders, guidance documents, policies, instructions, notices, implementing actions, and any other similar actions (Department Actions) related to or arising from the Presidential Actions set forth above and, to the extent deemed necessary and permitted by law, initiate an appropriate process to suspend, revise, or rescind any such actions, consistent with the policies set forth in the March 28, 2017 E.O.

Sec. 5 **Implementation**. The following actions shall be taken pursuant to this Order:

a. Mitigation Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action for review.

b. Climate Change Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O., in particular: Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change); Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); Presidential Memorandum of September 21, 2016 (Climate Change and National Security); Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions); and the Council on Environmental Quality's final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 *Fed. Reg.* 51866 (August 5, 2016).

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions identified in the review required by subsection (i) above.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action, for review.

c. Review of Other Department Actions Impacting Energy Development.

(i) As previously announced by the Department, BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015).

(ii) Within 21 days, the Director, BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iii) Within 21 days, the Director, National Park Service shall review the final rule entitled, "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (Nov. 4, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iv) Within 21 days, the Director, FWS shall review the final rule entitled, "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (Nov. 14, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(v) Within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

(vi) Within 35 days, the Deputy Secretary shall provide to me a plan to complete the review of Department Actions contemplated by Section 2 of the March 28, 2017 E.O. The plan must meet all objectives and time lines set forth in the March 28, 2017 E.O.

Sec. 5 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies,

instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 6 **Expiration Date.** This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

- - - - - - -

PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

Conversation Contents

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Attachments:

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"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 15:48:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as

"pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
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> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?
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> Thanks,
> Jill
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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:08:09 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
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Folks:

Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.

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Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:16:58 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Wed Jul 19 2017 16:26:02 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 14:05:23 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report 7.20.2017.docx BLM Report Under E.O. 13783.xlsx

Rich,

I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.

If you have any questions for me please let me know.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Thanks, Peter.
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> Rich
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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)



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> > Office of the Assistant Secretary - Land and Minerals Management
> > **(202) 208-4114**

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From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:00:54 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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Washington DC 20240
Office: 202-208-6262
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> > To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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Sent from my iPhone

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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx

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Our emails crossed over. Attached is the version with ASLM edits.

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If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
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Thanks,
Jill

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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

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"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:48:37 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Kelly,

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> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240

Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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> > From: **Mali, Peter** <pmali@blm.gov>
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> > Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> > To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 16:56:15 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

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Inline image 1

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Kelly Orr
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Washington DC 20240
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Richard Cardinale <richard_cardinale@ios.doi.gov>

From:	Richard Cardinale <richard_cardinale@ios.doi.gov>
Sent:	Fri Jul 21 2017 06:09:24 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks.

Sent from my iPhone

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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Fri Jul 21 2017 09:32:56 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>

CC:	"Thurn, Linda" <lthurn@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx BLM Report Under E.O. 13783 (1).xlsx

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
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To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
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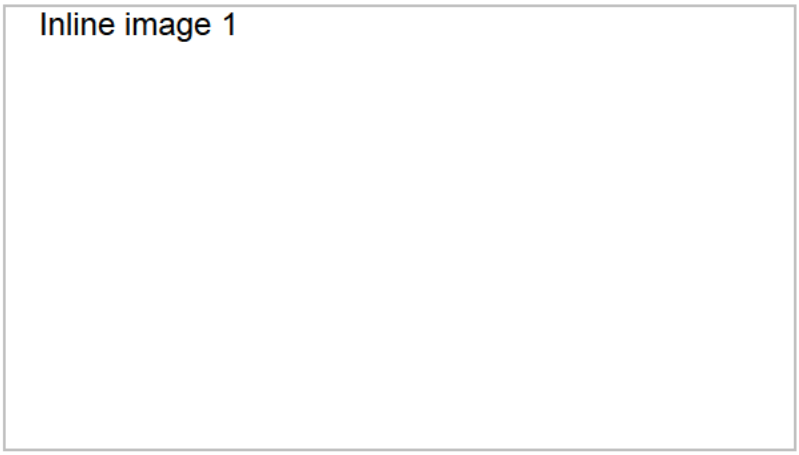

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One of the concerns raised by Exec Sec. is the regulatory descriptions look and read as if they were taken from materials previously prepared (during the last

Administration). Hence, they tend to speaking in very positive terms about the what the rules do, rather than focusing on the fact that this administration views many of these rules as creating unnecessary regulatory burdens. I would begin the narratives by explaining exactly that the Administration's concerns are with each of the rules and then explain why the rule is either being rescinded or reviewed.

Rich

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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 08:53:21 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Peter/Kelly,

Would it be possible for you to send us the latest version of this that incorporates ASLM comments?

Thanks, Shelley

On Wed, Jul 19, 2017 at 6:08 PM, Mali, Peter <pmali@blm.gov> wrote:

> Folks:
>
> Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):
>
> https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQqRRFtq9v4YhpqwtCDZ3cpAy9OIcq0/edit?usp=sharing
>
> As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.
>
> Thanks,
>
> Peter
>
> Peter Mali
> Acting Chief of Staff
> Bureau of Land Management
> Office: (202) 208-4586
> Mobile: (202) 503-7460
>
> ---------- Forwarded message ----------
> From: **Mali, Peter** <pmali@blm.gov>
> Date: Wed, Jul 19, 2017 at 5:48 PM
> Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> Cc: Kelly Orr <korr@blm.gov>
>
> Mike, John, and Kathy:
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> Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.
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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010

Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:02 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Here you go! Sorry for the delay.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
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Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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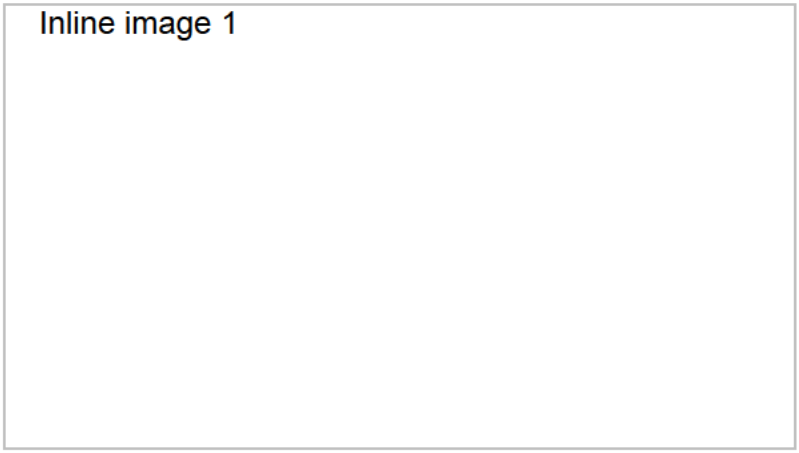

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Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 13:16:52 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

Thanks!

On Mon, Jul 24, 2017 at 1:34 PM, Orr, Kelly <korr@blm.gov> wrote:

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> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
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> Mobile: 202-510-5119
> korr@blm.gov
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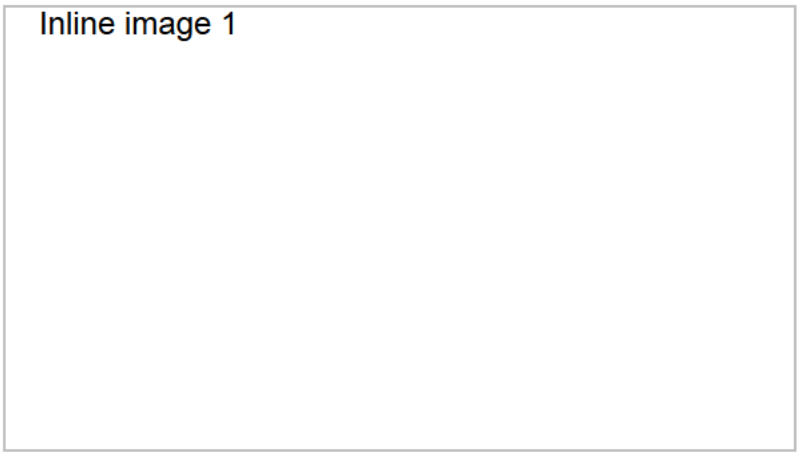
> 
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Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 14:59:17 GMT-0600 (MDT)
To:	Thomas Bartholomew <tbarthol@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Thomas -

I don't think this report has much nexus to stuff in 200 since it's related to an EO on energy, but Peter wanted me to share it with you in case it was helpful in the BLM priorities exercise that's due tomorrow.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
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Inline image 1

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> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov
>
> ---------- Forwarded message ----------
> From: **Orr, Kelly** <korr@blm.gov>
> Date: Thu, Jul 20, 2017 at 6:56 PM
> Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
> Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
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Let me know if there's anything else I can do to help on this item.

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Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Tue Jul 25 2017 07:33:49 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM Report Under E.O. 13783 (2).xlsx BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (1).docx

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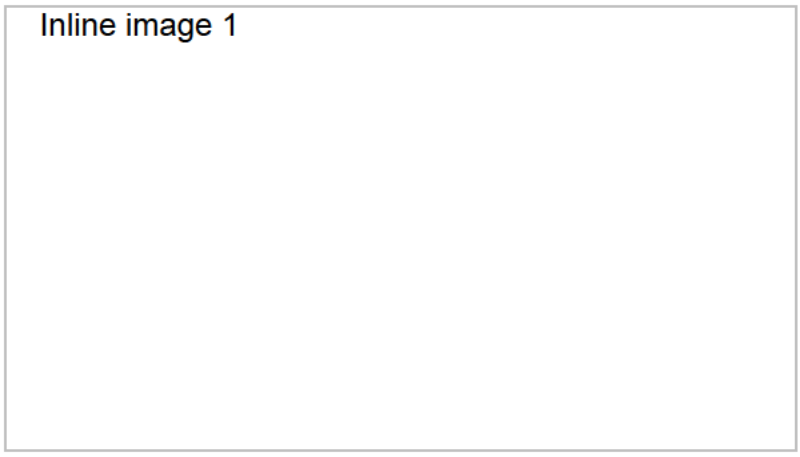

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"Valdez, Glenda" <gavaldez@blm.gov>

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Bureau of Land Management
Office: (202) 208-4586
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Sent:	Tue Jul 25 2017 12:04:47 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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Shelley McGinnis <smcginnis@blm.gov>

From:	Shelley McGinnis <smcginnis@blm.gov>
Sent:	Wed Jul 26 2017 12:23:52 GMT-0600 (MDT)
To:	korr@blm.gov
CC:	tspisak@blm.gov, jkalish@blm.gov
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

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Sent from my iPhone

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Date: July 25, 2017 at 2:00:17 PM EDT
To: Richard Cardinale <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
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To: Shelley McGinnis <smcginnis@blm.gov>

CC: Timothy Spisak <tspisak@blm.gov>, John Kalish <jkalish@blm.gov>

Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks Shelley.

I've changed that paragraph to read:

. (b) (5) [redacted]

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Conversation Contents

Latest Draft of BLM's E.O. 13783 Report

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 10:10:06 GMT-0600 (MDT)
To:	Jill Moran <jcmoran@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Kelly Orr <korr@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report

Hi Jill,

Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.

Thanks, Shelley

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:30 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Jill Moran <jcmoran@blm.gov>, "Mali, Peter" <pmali@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report

Shelley - just forwarded it to you on a separate chain.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Mon, Jul 24, 2017 at 12:10 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Hi Jill,
>
> Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.
>
> Thanks, Shelley
>
> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
> 1849 C Street NW, Room 5625
> Washington, DC 20240
> Office: 202-208-6551
> Cell: 202-578-3010
> Email: smcginnis@blm.gov

Conversation Contents

FW: Draft Report under E.O. 13783

Attachments:

/3. FW: Draft Report under E.O. 13783/1.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/1.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/2.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/2.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/3.1 Input into July Draft Report on Energy_WO300_06JUL17.docx
/3. FW: Draft Report under E.O. 13783/5.1 EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
/3. FW: Draft Report under E.O. 13783/7.1 AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
/3. FW: Draft Report under E.O. 13783/8.1 BLM_Sec2_EO13783 (3).xlsx
/3. FW: Draft Report under E.O. 13783/9.1 BLM_Sec2_EO13783 (3) (2).xlsx

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 03 2017 09:25:01 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
CC:	John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject:	FW: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]

Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 05 2017 05:11:02 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	"Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

> **From:** Michael Nedd <mnedd@blm.gov>
> **Date:** July 3, 2017 at 11:25:01 AM EDT
> **To:** Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
> **Cc:** John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> **Subject: FW: Draft Report under E.O. 13783**
>
> Hi team,
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>
> **Take care and have a wonderful day! :)**
>
> Michael D. Nedd
> 202-208-3801 Office
> 202-208-5242 Fax
> mnedd@blm.gov
>
> **A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"**

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action

Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

"Pionke, Erica" <epionke@blm.gov>

From:	"Pionke, Erica" <epionke@blm.gov>
Sent:	Thu Jul 06 2017 13:46:57 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783
Attachments:	Input into July Draft Report on Energy_WO300_06JUL17.docx

Peter,

Here is WO-300's input on the Draft Report under E.O. 13783.

Please let me know if you have any questions or need changes.

Thanks!

Erica

On Wed, Jul 5, 2017 at 9:57 AM, Timothy Spisak <tspisak@blm.gov> wrote:

> Erica/Jim: would you take the lead on pulling this info together? I just got it this morning and it looks to be a Department report on the various activities we all have been working on. There is a helpful template to insert the various components (coal, O&G, etc). We will feeding this into a BLM component, presumable with Jeff Brune.
>
> Thanks!
> Tim
>
> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
> 'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997
>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
> tspisak@blm.gov
> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** Michael Nedd [mailto:mnedd@blm.gov]
> **Sent:** Wednesday, July 5, 2017 7:11 AM

To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

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<stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--

Erica Pionke, JD, PMP

WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
Direct: (202) 912-7219
Cell: (202) 570-2624
epionke@blm.gov

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BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Fri Jul 07 2017 15:26:38 GMT-0600 (MDT)
To:	"Pionke, Erica" <epionke@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783

Thanks, all!

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Thu, Jul 6, 2017 at 3:46 PM, Pionke, Erica <epionke@blm.gov> wrote:

> Peter,
>
> Here is WO-300's input on the Draft Report under E.O. 13783.
>
> Please let me know if you have any questions or need changes.
>
> Thanks!
>
> Erica
>
> On Wed, Jul 5, 2017 at 9:57 AM, Timothy Spisak <tspisak@blm.gov> wrote:
>
> > Erica/Jim: would you take the lead on pulling this info together? I just got it this morning and it looks to be a Department report on the various activities we all have been working on. There is a helpful template to insert the various components (coal, O&G, etc). We will feeding this into a BLM component, presumable with Jeff Brune.
> >
> > Thanks!
> > Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Wednesday, July 5, 2017 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

> **From:** Michael Nedd <mnedd@blm.gov>
> **Date:** July 3, 2017 at 11:25:01 AM EDT
> **To:** Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
> **Cc:** John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> **Subject: FW: Draft Report under E.O. 13783**
>
> Hi team,
>
> Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…
>
> Peter, I leave it to you and the Advisors to help steer us through this effort…
>
> **Take care and have a wonderful day! :)**
>
> Michael D. Nedd
> 202-208-3801 Office
> 202-208-5242 Fax
> mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--

Erica Pionke, JD, PMP
WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
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Cell: (202) 570-2624
epionke@blm.gov

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BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 10 2017 10:19:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
CC:	Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Subject:	RE: Draft Report under E.O. 13783
Attachments:	EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Howarth, Robert** <robert_howarth@ios.doi.gov>
Date: Thu, Jun 29, 2017 at 11:22 AM
Subject: Draft Report under E.O. 13783
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

"Shannon, Timothy" <tshannon@blm.gov>

From:	"Shannon, Timothy" <tshannon@blm.gov>
Sent:	Mon Jul 10 2017 10:45:04 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.

On Mon, Jul 10, 2017 at 12:19 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Hi all,
>
> Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.
>
> **Take care and have a wonderful day! :)**
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> Michael D. Nedd
> 202-208-3801 Office
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> **From:** Mali, Peter [mailto:pmali@blm.gov]
> **Sent:** Friday, July 7, 2017 5:44 PM
> **To:** Michael Nedd <mnedd@blm.gov>
> **Cc:** Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
> **Subject:** Fwd: Draft Report under E.O. 13783
>
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Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Howarth, Robert** <robert_howarth@ios.doi.gov>
Date: Thu, Jun 29, 2017 at 11:22 AM
Subject: Draft Report under E.O. 13783
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 11:38:13 GMT-0600 (MDT)
To:	Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
CC:	"Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx

ADs for 200/300/400:

Regarding the spreadsheet I referenced yesterday (i.e., an additional deliverable under BLM's report on E.O. 13783), I'm told that Exec Sec is anxious to get this product. This spreadsheet is apparently intended to be an attachment to the narrative report (i.e., the Google Doc you worked on yesterday).

First things first: please task staff with populating this spreadsheet. To that end, you will soon receive (or may have already received) a Google Docs invite from Glenda Valdez (WO-100's summer intern) to provide content to the Google Sheets (i.e., the spreadsheet template for this assignment).

The spreadsheet allegedly does NOT ask for any additional info, above and beyond what you've already provided in the narrative. The task of populating the spreadsheet should be a cut-and-paste exercise, in other words.

As with the report, please add your material as soon as possible. Let me know if you have questions with the assignment. Finally, please recall that I'll be on annual leave tomorrow and Friday (7/21); Kelly Orr will be acting CoS in my absence (I've cc:ed her here).

Thanks,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------

From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

On Thu, Jun 29, 2017 at 12:17 PM, Appel, Elizabeth <elizabeth.appel@bia.gov> wrote:

> Hi Everyone-
>
> The attachment to the memo is provided in MS Word here for your convenience.
>
> Thank you!
> Liz
>
> On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:
>
>> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
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>> --
>> Robert Howarth
>> Deputy Director for Correspondence and FOIA Management
>> Office of the Executive Secretariat and Regulatory Affairs
>> Department of the Interior
>> 1849 C Street, NW
>> Washington, DC 20240
>> 202-208-3181
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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
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(202) 273-4680 - office
(202) 738-6065 - cell

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 12:39:33 GMT-0600 (MDT)
To:	"Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3).xlsx

All,

I just spoke to Peter and he asked that we hold off on populating the spreadsheet until he has finalized the document. He is still making changes to the document and we want the spreadsheet to be consistent. Also, please see attached version of the spreadsheet that was previously submitted when Shannon Stewart was here as Chief of Staff.

Thanks, Shelley

---------- Forwarded message ----------
From: **Valdez, Glenda** <gavaldez@blm.gov>
Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

---------- Forwarded message ----------

From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

ADs for 200/300/400:

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Thanks,

Peter

Peter Mali
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Bureau of Land Management
Office: (202) 208-4586
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Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas"

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> Elizabeth K. Appel
> Office of Regulatory Affairs & Collaborative Action
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Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 15:11:59 GMT-0600 (MDT)
To:	Christopher McAlear <cmcalear@blm.gov>, Nikki Moore <nmoore@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Attachments:	BLM_Sec2_EO13783 (3) (2).xlsx

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Nikki Moore <nmoore@blm.gov>

From:	Nikki Moore <nmoore@blm.gov>
Sent:	Wed Jul 19 2017 15:15:29 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Nikki Moore
Acting Deputy Assistant Director,
National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington DC
202.219.3180 (office)
202.288.9114 (cell)

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<BLM_Sec2_EO13783 (3) (2).xlsx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 11:05:47 GMT-0600 (MDT)
To:	Nikki Moore <nmoore@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Shelley et al. -

Wondering if you guys could give me an update on the spreadsheet for EO 13783. In the notes that Peter left for me and sent to Rich he indicated that 200, 300, and 400 were still populating the spreadsheet.

Is this still in progress or are you waiting on anything from WO-100? ASLM is anxiously awaiting this and when I get back in touch with them it would be helpful to have a sense of when we might be able to submit it.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
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--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
> 1849 C Street NW, Room 5625
> Washington, DC 20240
> Office: 202-208-6551
> Cell: 202-578-3010
> Email: smcginnis@blm.gov

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Email: smcginnis@blm.gov

<BLM_Sec2_EO13783 (3) (2).xlsx>

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Thu Jul 20 2017 11:09:58 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	Nikki Moore <nmoore@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Glenda set up the spreadsheet as a Google doc for the divisions to populate. WO-300 has completed the entries for our divisions. I am not sure of the status of the other divisions. The link to the Google doc is below:

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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Kelly Orr
Advisor to the Director's Office
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To: Shelley McGinnis <smcginnis@blm.gov>

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"Bartholomew, Thomas" <tbarthol@blm.gov>

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Sent:	Thu Jul 20 2017 11:31:18 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

I'm checking with Kristin on whether she's good with what has been added to the table. Will get back with you shortly.

Best,

T

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Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate

Washington, DC
202-208-5922

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--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

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--

Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

Kelly Orr <korr@blm.gov>

From:	Kelly Orr <korr@blm.gov>
Sent:	Thu Jul 20 2017 12:17:47 GMT-0600 (MDT)
To:	"McAlear, Christopher" <cmcalear@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Thanks Chris.

Shelley - (b) (5) [redacted]

Thomas - please let Glenda and I know as soon as you have Kristin's OK so we can send this upstairs.

Thanks,
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Sent from my iPhone

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202.219.3180 (office)
202.288.9114 (cell)

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"Bartholomew, Thomas" <tbarthol@blm.gov>

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Sent: Thu Jul 20 2017 12:58:23 GMT-0600 (MDT)
To: Kelly Orr <korr@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject: Re: Draft Report under E.O. 13783

WO200 is good.

Best,

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Thomas Bartholomew
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Washington, DC
202-208-5922

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Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--
Glenda Valdez
Administrative Intern
Office of the Director

1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

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Conversation Contents

Fwd: BLM Narrative to Accompany Spreadsheet

Attachments:

/4. Fwd: BLM Narrative to Accompany Spreadsheet/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

"Moran, Jill" <jcmoran@blm.gov>

From:	"Moran, Jill" <jcmoran@blm.gov>
Sent:	Thu Jul 20 2017 10:18:47 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
CC:	Peter Mali <pmali@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet

Hi Kelly,

I am working with Rich on the BLM's narrative, but it looks like Peter did not send the spreadsheet to Rich. Do you know that status of that? I'm available to chat too if that would be helpful.

Thanks,
Jill

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management

"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:08:49 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

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Conversation Contents

BLM E.O 13783 cleaned up version

Attachments:

/5. BLM E.O 13783 cleaned up version/1.1 BLM Report Under E.O. 13783.xlsx

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:40:46 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	BLM E.O 13783 cleaned up version
Attachments:	BLM Report Under E.O. 13783.xlsx

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

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Conversation Contents

EO 13783 Spreadsheet - Update to Text in One of the Cells

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 13:13:53 GMT-0600 (MDT)
To:	Glenda Valdez <gavaldez@blm.gov>
Subject:	EO 13783 Spreadsheet - Update to Text in One of the Cells

Glenda,

Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:

(b) (5)



Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:17:16 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: EO 13783 Spreadsheet - Update to Text in One of the Cells

Ok will do

On Thu, Jul 20, 2017 at 3:13 PM, Orr, Kelly <korr@blm.gov> wrote:

> Glenda,
>
> Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:
>
> (b) (5) [redacted]
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov

--

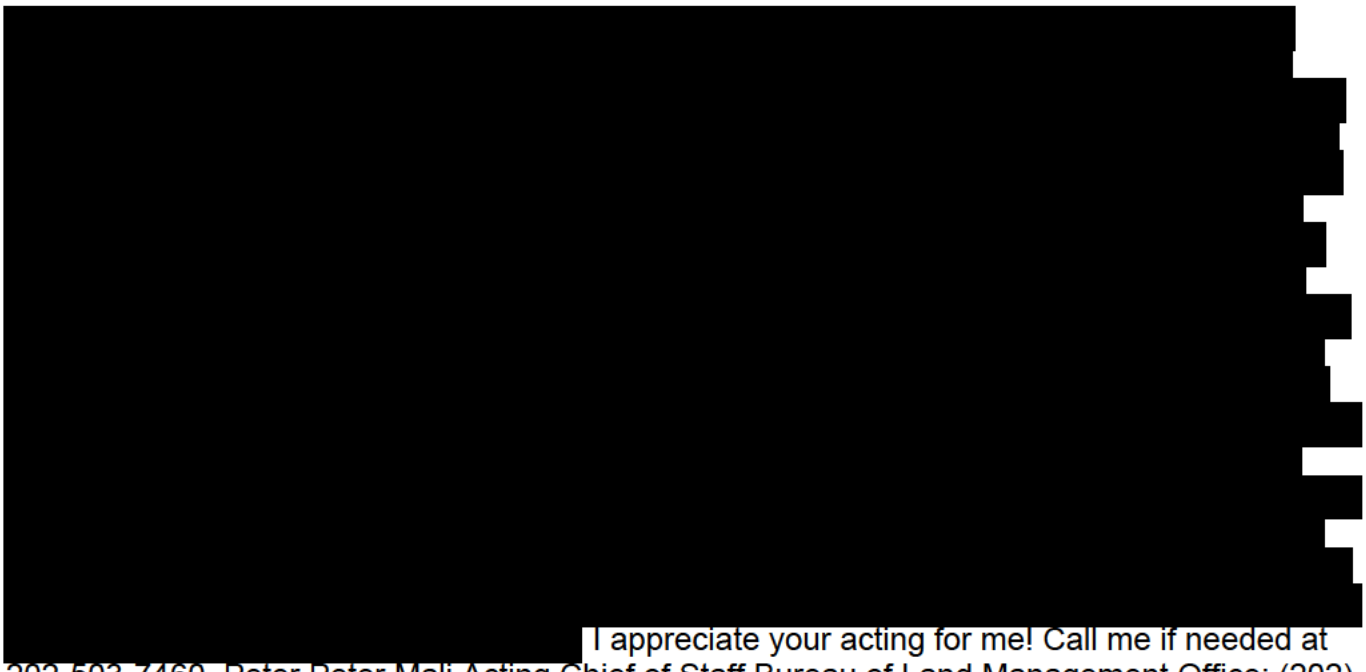
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

Conversation Contents

Bulletized List

Peter Mali <pmali@blm.gov>

From:	Peter Mali <pmali@blm.gov>
Sent:	Thu Jul 20 2017 05:58:50 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
Subject:	Bulletized List



I appreciate your acting for me! Call me if needed at 202-503-7460. Peter Peter Mali Acting Chief of Staff Bureau of Land Management Office: (202) 208-4586 Mobile: (202) 503-7460 Sent from my iPhone

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 12:46:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
Subject:	Re: Bulletized List

Peter - for our discussion this afternoon to help with handing the torch back to you as COS.

Recaps and updates on moving items + new items are in red text below.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 7:58 AM, Peter Mali <pmali@blm.gov> wrote:

[redacted]

[redacted]

- [redacted]
- [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
- [redacted]
  - [redacted]
  - [redacted]

> That's all I have on my list for now. I'll probably have a few other dribs and drabs, which I'll send you later.
>
> I appreciate your acting for me! Call me if needed at 202-503-7460.
>
> Peter
>
> Peter Mali
> Acting Chief of Staff
> Bureau of Land Management
> Office: (202) 208-4586
> Mobile: (202) 503-7460
>
> Sent from my iPhone

Conversation Contents

BLM Report Under E.O. 13783 - Invitation to edit

"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>

From:	"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>
Sent:	Wed Jul 19 2017 11:04:34 GMT-0600 (MDT)
To:	<korr@blm.gov>
CC:	<tspisak@blm.gov>, <jkalish@blm.gov>, <kbail@blm.gov>, <stryon@blm.gov>, <kkelleh@blm.gov>, <pmali@blm.gov>, <rwootton@blm.gov>, <cmcalear@blm.gov>
Subject:	BLM Report Under E.O. 13783 - Invitation to edit

Glenda Valdez has invited you to **edit** the following spreadsheet:

BLM Report Under E.O. 13783



google sheet per Peter Mali's email

Open in Sheets

Google Sheets: Create and edit spreadsheets online.
Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
You have received this email because someone shared a spreadsheet with you from Google Sheets.

Conversation Contents

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Attachments:

/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.2 EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/2.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 13:51:33 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 12 2017 15:08:04 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	RE: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

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Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 15:22:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Wed, Jul 12, 2017 at 5:08 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Peter,
>
> I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
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Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

September 7, 2017

In Reply Refer To:
1278-FOIA (640)
FOIA# 2017-00883

Ms. Laura King
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601

Dear Ms. King:

This letter is in response to your Freedom of Information Act (FOIA) request, dated April 25, 2017 and received in our office on the same day. The tracking number is 2016-00883. In your letter, you asked for the following:

" I. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(ii) of Secretary of the Interior Ryan Zinke's Secretarial Order 3349 ("SO 3349"), ordering the Director of the Bureau of Land Management ("BLM") to "review the final rule entitled, 'Waste Prevention, Production Subject to Royalties, and Resource Conservation,' 81 Fed. Reg. 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O."

"II. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(v) of SO 3349, ordering that "[w]ithin 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources."

"III. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(b)(i) of SO 3349, ordering that "[w]ithin 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O. . . ."

While we continue to review additional records that are responsive to your requests, we are writing to provide you an Interim Response to your request. We have sent via electronic mail a PDF file consisting of 912 pages, which are being released to you in part. Portions of 725 pages are being withheld under FOIA Exemption 5.

Exemption 5 allows an agency to withhold "inter-agency or intra-agency memorandums or letters which would not be available by law to a party... in litigation with the agency." 5 U.S.C. § 552(b)(5); *see Nat'l Labor Relations Bd. v. Sears Roebuck & Co.*, 421 U.S. 132, 149 (1975). Exemption 5 therefore incorporates the privileges that protect materials from discovery in litigation, including the deliberative process, attorney work-product and attorney-client privileges. The deliberative process privilege protects the decision-making process of government agencies and encourages the "frank exchange of ideas on legal or policy matters" by ensuring agencies are not "forced to operate in a fish bowl." *Mead Data Cent., Inc. v. United States Dep't of the Air Force*, 566 F.2d 242, 256 (D.C. Cir. 1977) (internal citations omitted). A number of policy purposes have been attributed to the deliberative process privilege. Among the most important are to: (1) "assure that subordinates . . . will feel free to provide the decision maker with their uninhibited opinions and recommendations;" (2) "protect against premature disclosure of proposed policies;" and (3) "protect against confusing the issues and misleading the public." *Coastal States Gas Corp. v. United States Dep't of Energy*, 617 F.2d 854, 866 (D.C. Cir. 1980). The deliberative process privilege protects materials that are both pre-decisional and deliberative. The privilege covers records that "reflect the give-and-take of the consultative process" and may include "recommendations, draft documents, proposals, suggestions, and other subjective documents which reflect the personal opinions of the writer rather than the policy of the agency." *Id.*

The materials that have been withheld under the deliberative process privilege of Exemption 5 are both pre-decisional and deliberative. They do not contain or represent formal or informal agency policies or decisions. They are the result of frank and open discussions among employees of the Department of the Interior. Their contents have been held confidential by all parties and public dissemination of this information would have a chilling effect on the agency's deliberative processes; expose the agency's decision-making process in such a way as to discourage candid discussion within the agency, and thereby undermine its ability to perform its mandated functions.

As incorporated into Exemption 5, the attorney-client privilege protects "confidential communications between an attorney and his client relating to a legal matter for which the client has sought professional advice" and is not limited to the context of litigation. Mead Data Cent, Inc. v. United States Dep't of the Air Force, 566 F.2d 242, 252-53 (D.C. Cir. 1977). Moreover, although it fundamentally applies to confidential facts divulged by a client to his/her attorney, this privilege also encompasses any opinions given by an attorney to his/her client based upon, and thus reflecting, those facts, as well as communications between attorneys that reflect confidential client-supplied information. See Elec. Privacy Info. Ctr. v. United States Dep't of Homeland Sec., 384 F. Supp. 2d 100, 114-15 (D.D.C. 2005). The information that has been withheld under the attorney-client privilege of Exemption 5 constitutes confidential communications between agency attorneys and agency clients, related to legal matters for which the client sought professional legal assistance and services. Additionally, the Bureau employees who communicated with the attorneys regarding this information were clients of the attorneys at the time the information was generated and the attorneys were acting in their capacities as lawyers at the time they communicated legal advice. Finally, the Bureau has held this information confidential and has not waived the attorney-client privilege.

Ryan Witt, Bureau of Land Management (BLM) FOIA Officer, is responsible for this partial release. Brett Myrick, Attorney Advisor in the Office of the Solicitor, was consulted.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you have any questions regarding this request, please contact Jillian Eanett, BLM WO FOIA Specialist, at (202) 912-7035 or via email at BLM_WO_FOIA@blm.gov.

Sincerely,

FOR:

Jeff Krause, Chief
Division of Intergovernmental and
External Affairs

From: jeanett@blm.gov
To: king@westernlaw.org
Subject: FOIA Request 2017-00883 Release 1
Date: Monday, September 11, 2017 7:37:19 AM
Attachments: 2017-00883_Release 1.zip

Ms. King,

Please see the attached PDF file of responsive documents to your FOIA request. This release is the first in a series of rolling releases. The BLM's response letter was sent in a separate email.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

Nedd, Michael <mnedd@blm.gov>

BLM-Approved Report re: E.O. 13783

5 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 6:20 PM
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Jill:

As discussed, attached is the BLM-approved contribution to the report pursuant to E.O. 13783. Please call my cell (202-503-7460) if you have questions or need to discuss further.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Moran, Jill <jcmoran@blm.gov> Wed, Jul 12, 2017 at 6:21 PM
To: "Mali, Peter" <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Great - thank you, Peter.
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:51 PM
To: Michael Nedd <mnedd@blm.gov>

Mike:

I'm re-sending this to you -- Chris McAlear said you are looking for a clean version.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:57 PM
To: Michael Nedd <mnedd@blm.gov>, Kristin Bail <kbail@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>

Folks:

Thanks for the work of your staff on this product -- here's a clean version of what we sent to ASLM.

Safe travels home.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 12, 2017 at 6:20 PM
Subject: BLM-Approved Report re: E.O. 13783
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Michael Nedd <mnedd@blm.gov> Thu, Jul 13, 2017 at 11:36 AM
To: Peter Mali <pmali@blm.gov>

I am? Thx anyway…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 11:51 PM
To: Michael Nedd <mnedd@blm.gov>
Subject: Fwd: BLM-Approved Report re: E.O. 13783

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Nedd, Michael <mnedd@blm.gov>

Draft Mitigation Policy for Awareness and Review

3 messages

Bail, Kristin <kbail@blm.gov> Fri, Jun 23, 2017 at 2:35 PM
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

DraftMitigationIM.docx
31K

Michael Nedd <mnedd@blm.gov> Tue, Jun 27, 2017 at 9:36 AM
To: Kristin Bail <kbail@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Kristin,

Thx for the information and I do have a few things/suggestions, but it can wait until you have gotten feedback from the states. I'll have some time schedule for us to meet after the ELT, given the holiday next week.

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Bail, Kristin [mailto:kbail@blm.gov]
Sent: Monday, June 26, 2017 5:34 PM
To: Michael Nedd
Cc: John Ruhs; Kathleen Benedetto
Subject: Re: Draft Mitigation Policy for Awareness and Review - No action required before Monday

Mike - as promised, here is a copy of the side-by-side that was included in your briefing packet. [redacted] A list of the needs that States have identified is also attached and was included in the packet. –Kristin

On Sun, Jun 25, 2017 at 5:54 PM, Michael Nedd <mnedd@blm.gov> wrote:

Kristin,

[redacted]

[redacted]

[redacted]

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

On Jun 23, 2017, at 2:36 PM, Bail, Kristin <kbail@blm.gov> wrote:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director

Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

<image001.png>

<DraftMitigationIM.docx>

Kristin Bail <kbail@blm.gov> Wed, Jul 12, 2017 at 11:58 AM
To: BLM_ELT@blm.gov, gshoop@blm.gov, aseidlitz@blm.gov, Marci Todd <m1todd@blm.gov>, jraby@blm.gov

As discussed at the ELT this morning, here is a re-send. Comments would be most helpful by COB on the 18th.
-Kristin

Sent from my iPhone

Begin forwarded message:

From: "Bail, Kristin" <kbail@blm.gov>
Date: June 23, 2017 at 12:35:40 PM MDT
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>
Subject: Draft Mitigation Policy for Awareness and Review

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

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4 attachments



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(b) (5)

Nedd, Michael <mnedd@blm.gov>

Draft Report under E.O. 13783

11 messages

Howarth, Robert <robert_howarth@ios.doi.gov> Thu, Jun 29, 2017 at 11:22 AM
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

Cason Memo EO 13783.pdf
154K

Appel, Elizabeth <elizabeth.appel@bia.gov> Thu, Jun 29, 2017 at 12:17 PM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

[Quoted text hidden]
--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Template for Input into July Draft Report on Energy FINAL.docx
23K

Michael Nedd <mnedd@blm.gov> Mon, Jul 3, 2017 at 11:25 AM
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM

To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

[Quoted text hidden]

2 attachments

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

Michael Nedd <mnedd@blm.gov> Wed, Jul 5, 2017 at 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: "Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

From: Michael Nedd <mnedd@blm.gov>
Date: July 3, 2017 at 11:25:01 AM EDT
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: FW: Draft Report under E.O. 13783

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4 attachments

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Template for Input into July Draft Report on Energy FINAL.docx
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Cason Memo EO 13783.pdf
154K

noname.html
1K

Appel, Elizabeth <elizabeth.appel@bia.gov> Fri, Jul 7, 2017 at 9:18 AM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

[Quoted text hidden]

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Moran, Jill <jcmoran@blm.gov> Fri, Jul 7, 2017 at 12:49 PM
To: Peter Mali <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter,

Following is the report I was speaking about earlier. Kate has asked that the BLM's report be delivered to ASLM no later than COB Tuesday, July 11.

Please send it to me as she has asked me to consolidate the reports from ASLM's four bureaus.

Thanks,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
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Cason Memo EO 13783.pdf
154K

Mali, Peter <pmali@blm.gov> Fri, Jul 7, 2017 at 5:43 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460
[Quoted text hidden]

2 attachments

Cason Memo EO 13783.pdf
154K

EO13783 Energy Report_DRAFT as of 5.30pm_07072017.docx
36K

Michael Nedd <mnedd@blm.gov> Mon, Jul 10, 2017 at 12:19 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
41K

Shannon, Timothy <tshannon@blm.gov> Mon, Jul 10, 2017 at 12:45 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.
[Quoted text hidden]

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

Moran, Jill <jcmoran@blm.gov> Mon, Jul 10, 2017 at 1:58 PM
To: Peter Mali <pmali@blm.gov>, Thomas Lillie <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, "Cruickshank, Walter" <walter.cruickshank@boem.gov>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, gowens@osmre.gov

Good afternoon,

With Rich Cardinale out of the office this week, I've been asked to gather your submissions for this report for Kate's review by **COB tomorrow**. Once Kate has reviewed and approved, I will send the submissions for all 4 agencies

together to Exec Sec. Please let me know if you anticipate any issues with meeting this deadline.

Thank you,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Moran, Jill <jcmoran@blm.gov> Mon, Jul 17, 2017 at 11:28 AM
To: Peter Mali <pmali@blm.gov>, Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter-

Attached is the narrative template the BLM submitted to Exec Sec in response to Jim Cason's memo on EO 13783. Exec Sec has asked that you add two or so paragraphs under the Executive Summary and return through ASLM by COB today.

Also, they have inquired about the status of the spreadsheet template which also needs to be filled out.

Do you think you could get the revised narrative to me today and the spreadsheet tomorrow?

Thanks,
Jill
[Quoted text hidden]

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

Nedd, Michael <mnedd@blm.gov>

Draft Tribal Consultation Letter re: Hydraulic Fracturing Rule and Venting & Flaring Rule

1 message

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 7:49 PM
To: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>, "Moran, Jill" <jcmoran@blm.gov>, Kelly Orr <korr@blm.gov>

Rich and Rob:

Attached is the draft tribal consultation letter for BLM's Hydraulic Fracturing Rule and Venting & Flaring Rule. The attached serves as a template to be sent to our SOs to send to their Tribal partners, and it deliberately covers both rules under one letter. Acting Director Nedd asked that I send this to ExecSec and ASLM simultaneously for clearance so that BLM can initiate the tribal consultation process as soon as practical.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Draft.Tribal.Consult.Ltr.Combined.HF_VF_Rules_7.12.12.docx
30K

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Nedd, Michael <mnedd@blm.gov>

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

3 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 3:51 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

2 attachments

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
42K

Michael Nedd <mnedd@blm.gov> Wed, Jul 12, 2017 at 5:08 PM
To: Peter Mali <pmali@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx
49K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 5:22 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Fwd: Time Sensitive: BLM's EO 13783 report

2 messages

Mali, Peter <pmali@blm.gov> Tue, Jul 18, 2017 at 2:37 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

(b) (5) [redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,

Jill

--

Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

BLM narrative_JM.docx
42K

Cason Memo EO 13783 (1).pdf
154K

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>

Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

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Nedd, Michael <mnedd@blm.gov>

Implications of Sec. Order on O&G Rules

4 messages

Sklar, Ryan <ryan.sklar@sol.doi.gov> Fri, Mar 31, 2017 at 7:57 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

Mike,

[redacted]

Thanks,
Ryan

--

Ryan Sklar
Acting Senior Litigation Specialist
Bureau of Land Management
U.S. Department of the Interior
202-208-4695

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2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:44 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:46 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 8:46 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Re: Implications of Sec. Order on O&G Rules

Mike,

I've shared it with Tim and Lonny. Please let me know if you would like it to go to any additional ADs.

Thanks,

Ryan

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Mon, Apr 3, 2017 at 9:36 AM
To: Jeff Brune <jbrune@blm.gov>, tshannon@blm.gov
Cc: Ryan Sklar <ryan.sklar@sol.doi.gov>

FYI

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Friday, March 31, 2017 8:44 AM
To: Ryan Sklar
Cc: Shannon Stewart
Subject: RE: Implications of Sec. Order on O&G Rules

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

Mike,

[Quoted text hidden]

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.DOCX
26K

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Nedd, Michael <mnedd@blm.gov>

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

2 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 5:48 PM
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

---

2 attachments

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
47K

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
38K

Orr, Kelly <korr@blm.gov> Fri, Jul 21, 2017 at 11:32 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.

I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:

(b) (5)



Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Kelly,
>
> When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.
>
> Rich
>
> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich,
> >
> > I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
> >
> > If you have any questions for me please let me know.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Thanks, Peter.
> > >
> > > Rich
> > >
> > > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> > >
> > > > Rich:

As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.

Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.

If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

3 attachments

BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
42K

BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
54K

BLM Report Under E.O. 13783 (1).xlsx
89K

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Nedd, Michael <mnedd@blm.gov>

Proposed Final Version of BLM Response to E.O. 13783

1 message

Mali, Peter <pmali@blm.gov> Tue, Jul 11, 2017 at 5:10 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Shannon, Timothy" <tshannon@blm.gov>

Mike:

Attached is a revised version of the **WO-200** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

Also attached is a revised version of the **WO-300** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

My goal was to send you a single document showing comments from both Kristin and Tim, but Microsoft Word didn't cooperate. Instead, I'm sending you the WO-200 document and the WO-300 document as separate attachments because I want you to see each file in track changes.

Finally, I've attached the Cason memo pursuant to E.O. 13783.

Please call me if you want to discuss further (my direct line is 202-208-4586).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

3 attachments

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN and KMB.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN_WO300.docx
42K

Cason Memo EO 13783.pdf
154K

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Nedd, Michael <mnedd@blm.gov>

RE: Time Sensitive: BLM's EO 13783 report

1 message

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

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[redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Nedd, Michael <mnedd@blm.gov>

Secretarial Order 3349 and Oil and Gas Rules

2 messages

Karen Hawbecker <karen.hawbecker@sol.doi.gov> Thu, Mar 30, 2017 at 11:33 PM
To: Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <Richard.McNeer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

[redacted]

Sent from my iPad

Begin forwarded message:

>

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:45 AM
To: Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <richard.mcneer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

Thx Karen... We'll take a look at it...

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"
[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Secretarial Orders for discussion at 10:00a

3 messages

Bagley, Lonny <lbagley@blm.gov> Thu, Mar 30, 2017 at 8:45 AM
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Erica Pionke <epionke@blm.gov>

You will be receiving an invite shortly to discuss actions related to yesterday's Secretarial Orders. To be sure everyone has a copy, please find them attached.

Thanks

--
Lonny R Bagley
Deputy Assistant Director (Acting),
Energy, Minerals and Realty Management
Washington Office
1849 C Street, NW Room 5625
Washington, DC 20204
O-202-208-4201
lbagely@blm.gov

Follow BLM Colorado on Social Media!

3 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

Michael Nedd <mnedd@blm.gov> Thu, Mar 30, 2017 at 11:08 AM
To: Shannon Stewart <scstewar@blm.gov>
Cc: Jerome Perez <jperez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Here you are and please distribute as you see fit…

In reading the SOs, there are a number of deliverables due beginning 14 days from the issuance of the order and then there are other deliverables at 21, 30, and 90 days. That being said, it may be helpful to send the SOs to WO-200 (the WO-300 team sent them to me and was scheduled to meet earlier today to review them) and have them collaborate with WO-300, if not already planned/initiated. I'm also aware that the SOL (Karen H) was planning to work with WO-300 to develop a chart of the various aspects.

I'm opened to su8ggestions, but I'm thinking we would want some initial feedback from the two key ADs either Monday or Tuesday as to the game plan for meeting the expectations as outlined in the SOs. This would also allow us to give some guidance if need be… Maybe a 30-minute get together would be in order…

Take care and have a wonderful day! :)

Michael Nedd

202-208-4201 Office

202-208-4800 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

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4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

Stewart, Shannon <scstewar@blm.gov> Thu, Mar 30, 2017 at 1:06 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>, mike nedd <mnedd@blm.gov>, Jerome Perez <jperez@blm.gov>

Mike would like to set-up 30 mins Monday or Tuesday next week to discuss our game plan for meeting the expectations in the newly issued SOs (attached). Linda will follow-up with an invite.

Thanks
Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

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4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

U.S. Department of the Interior

Royalty Policy Committee
Charter

1. **Committee's Official Designation.** Royalty Policy Committee (Committee).

2. **Authority.** The Royalty Policy Committee is a discretionary committee established under the authority of the Secretary of the Interior (Secretary) and regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2. It has been determined that the Committee is in the public interest in connection with the responsibilities of the Department of the Interior (DOI) under the:

   - Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 *et seq.*), including provisions of the Energy Policy Act of 2005 (P.L. 109-058);
   - Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701 *et seq.*), (1996);
   - Federal Oil and Gas Royalty Management Act, as amended (P.L. 114-94), (2015);
   - Federal Oil and Gas Royalty Simplification and Fairness Act of 1996 (P.L. 104-185);
   - Geothermal Steam Act of 1970 (30 U.S.C. 1001 *et seq.*);
   - Mineral Leasing Act (30 U.S.C. 181 *et seq.*);
   - Mineral Leasing Act for Acquired Lands (30 U.S.C. 351 *et seq.*);
   - The Act of March 3, 1909 (25 U.S.C. 396);
   - The Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);
   - Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);
   - The Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); and
   - The U.S. National Action Plan for the Open Government Partnership and other related authorities.

3. **Objectives and Scope of Activities.** The Secretary seeks to ensure the public receives the full value of the natural resources produced from Federal lands. The Committee will provide advice to the Secretary, through the Assistant Secretary - Land and Minerals Management (ASLM), Assistant Secretary - Indian Affairs (ASIA), and the Director of the Office of Natural Resources Revenue (ONRR), on the fair market value of and on the collection of revenues derived from, the development of energy and mineral resources on Federal and Indian lands.

4. **Description of Duties.** The duties of the Committee are solely advisory in nature. The Committee will, at the request of the Designated Federal Officer (DFO), advise on current and emerging issues related to the determination of fair market value, and the collection of revenue from energy and mineral resources on Federal and Indian lands. At the request of the DFO, the Committee also will advise on the potential impacts of proposed policies and regulations related to revenue collection from such development, including whether a need exists for regulatory reform.

5. **Agency or Official to Whom the Committee Reports.** The Committee will report to the Secretary through the ASLM, ASIA, and the Director of ONRR.

6. **Support.** The ONRR will provide administrative and logistical support for the Committee.

7. **Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Committee's functions are estimated to be $350,000, including all direct and indirect expenses and 3 full-time employees.

8. **Designated Federal Officer.** The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO or alternate DFO will approve or call all Committee and subcommittee meetings, prepare and approve all meeting agendas, attend all Committee and subcommittee meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest, and chair Committee meetings when directed to do so by the Secretary.

9. **Estimated Number and Frequency of Meetings.** The Committee will meet at least once each calendar year, and at such other times as determined necessary by the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Committee is subject to biennial review and will terminate 2 years from the date the Charter is filed, unless prior to that date, it is renewed in accordance with Section 14 of the FACA. The Committee will not meet or take any action without a valid current charter.

12. **Membership and Designation.** The Committee will not exceed 28 members and will be composed of non-Federal and Federal members in order to ensure fair and balanced representation. The Secretary will appoint non-Federal members and their alternates to the Committee to serve up to a 3-year term. Non-Federal members and alternates may not serve as a member or alternate for more than 6 consecutive years. However, after a 2-year break in service, any such non-Federal member or alternate will again be eligible for appointment.

The ASLM and the Director of ONRR, or their designee(s), shall serve as co-Chairs of the Committee.

Federal Members: The Secretary will appoint the following officials as nonvoting, ex-officio members of the Committee:

- A representative of the Secretary's Immediate Office
- Assistant Secretary – Indian Affairs
- Director, Bureau of Indian Affairs
- Director, Bureau of Land Management
- Director, Bureau of Ocean Energy Management
- Director, Bureau of Safety and Environmental Enforcement

These officials may designate a senior official to act on their behalf.

Non-Federal Members: The Secretary will appoint members in the following categories:

- Up to 6 members representing the Governors of States that receive more than $10,000,000 annually in royalty revenues from onshore and offshore Federal leases.

- Up to 4 members representing the Indian Tribes that are engaged in activities subject to:

  (i) the Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);

  (ii) Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);

  (iii) the Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); or

  (iv) any other law relating to mineral development that is specific to one or more Indian Tribes.

- Up to 6 members representing various mineral and/or energy stakeholders in Federal and Indian royalty policy.

- Up to 4 members representing academia and public interest groups.

Each non-Federal member may nominate an alternate member to the Committee. Alternate members must be approved and appointed to the Committee by the Secretary before attending meetings in lieu of primary members. Alternate members will have experience and/or expertise similar to that of the associated primary member.

Members of the Committee serve without compensation. However, while away from their homes or regular places of business, Committee and subcommittee members engaged in Committee or subcommittee business approved by the DFO may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by 5 U.S.C. 5703, in the same manner as persons employed intermittently in Federal Government service.

Any vacancy on the Committee will be filled in the same manner in which the original appointment was made. All members serve at the discretion of the Secretary.

13. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purposes of compiling information, conducting research, and/or drafting recommendations. However, such subcommittees must act only under the direction of the Committee and must report their recommendations to the full Committee for consideration. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

14. **Ethics Responsibilities of Members.** No Committee or subcommittee member or alternate member will participate in any specific party matter (including a lease, license, permit, contract, claim, agreement, or related litigation) with the DOI in which the member or alternate member has a direct financial interest. Members and alternate members will endeavor to avoid any actions that would cause the public to question the integrity of the Committee's operations, activities, or advice. The provisions of this paragraph do not affect any statutory or regulatory ethical obligations to which Federal members (and alternate members) are subject.

15. **Recordkeeping.** The records of the Committee, including formally and informally established subcommittees of the Committee, will be handled in accordance with General Records Schedule 6.2 or other approved Agency records disposition schedule. These records will be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

03-29-2017
Date

Date Filed

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3348

Subject: Concerning the Federal Coal Moratorium

Sec. 1 **Purpose**. The Federal coal leasing program is of critical importance to the economy of the United States, supplying approximately 40 percent of the coal produced in the Nation. On January 15, 2016, Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," was signed and placed a moratorium on the coal leasing program with limited exceptions. Given the critical importance of the Federal coal leasing program to energy security, job creation, and proper conservation stewardship, this Order directs efforts to enhance and improve the Federal coal leasing program.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended. Other statutory authorities for this Order include but are not limited to the following statutes:

a. Mineral Leasing Act, 30 U.S.C. §1181 *et seq*.

b. Mineral Leasing Act for Acquired Lands, 30 U.S.C. § 351 *et seq*.

c. Federal Land Policy and Management Act, 43 U.S.C. 1701-1785.

d. Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328.

Sec. 3 **Background**. Secretary's Order 3338 directs the Bureau of Land Management (BLM) to analyze and "consider potential leasing and management reforms to the current Federal coal program." Secretary's Order 3338 ordered the preparation of a discretionary Programmatic Environmental Impact Statement (PEIS) to analyze potential reforms and ordered a "pause on leasing, with limited exceptions" pending completion of the discretionary Federal Coal Program PEIS. The PEIS is estimated to cost many millions of dollars and would be completed no sooner than 2019, even with robust funding.

Sec. 4 **Revocation of Secretary's Order 3338**. Based upon the Department's review of Secretary's Order 3338, the scoping report for the discretionary Federal Coal Program PEIS issued in January 2017, and other information provided by BLM, I find that the public interest is not served by halting the Federal coal program for an extended time, nor is a PEIS required to consider potential improvements to the program. Accordingly, consistent with the principles of responsible public stewardship entrusted to this office, I revoke Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program."

Sec. 5 **Implementation**. With the revocation of Secretary's Order 3338, BLM is directed to process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of Secretary's Order 3338. All activities associated with the preparation of the Federal Coal Program PEIS shall cease. The Deputy Secretary, Assistant Secretaries, and heads of bureaus and offices are hereby directed to make changes in their policy and guidance documents that are consistent with the revocation of Secretary's Order 3338.

Sec. 6 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7 **Expiration Date**. This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3349

Subject: American Energy Independence

Sec. 1 **Purpose**. This Order implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017 and entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (Department) in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and other applicable statutory authorities.

Sec. 3 **Background**. Among other provisions, the March 28, 2017 E.O. directs the Department to review all existing regulations, orders, guidance documents, policies, and any other similar actions that potentially burden the development or utilization of domestically produced energy resources. A plan to carry out the review must be submitted to the Director of the Office of Management and Budget (OMB) and to certain other White House officials within 45 days of the date of the March 28, 2017 E.O. The objective of the review is to identify agency actions that unnecessarily burden the development or utilization of the Nation's energy resources and support action to appropriately and lawfully suspend, revise, or rescind such agency actions as soon as practicable.

The March 28, 2017 E.O. also directs the Department to promptly review certain specific actions recently taken by the Department, in particular Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," and four rules related to onshore oil and gas development.

The March 28, 2017 E.O. also rescinds certain Presidential Actions, reports, and final guidance related to climate change, including:

a. E.O. 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change);

b. Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); and

c. Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

The March 28, 2017 E.O. directs the Department to identify agency actions "related to or arising from" the rescinded Presidential Actions, reports, and guidance, and to initiate a lawful and appropriate process to suspend, revise, or rescind such actions.

The March 28, 2017 E.O. also rescinds the Presidential Memorandum issued on November 3, 2015, entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." That Memorandum directed the Secretary of the Interior, among other Cabinet officials, to undertake a number of actions to implement a landscape-scale mitigation policy, including specific directions to the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) to develop mitigation policies that incorporated compensatory mitigation into planning and permitting processes.

Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 13, 2013, is directly related to the rescinded Presidential Memorandum on mitigation. Secretary's Order 3330 dovetails with the subsequently issued Presidential Memorandum by directing the development and implementation of a landscape-scale mitigation policy for the Department. As directed by the Order, the Secretary received a report in April 2014 entitled, "A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior." The Strategy set forth a number of "deliverables" by nearly every office and bureau within the Department to advance the stated goal of "landscape-scale mitigation." Given the close nexus between the rescinded Presidential Memorandum and Secretary's Order 3330, a thorough reexamination is needed of the policies set out in that Order.

Sec. 4 **Policy**. To begin implementing the March 28, 2017 E.O., I hereby order the following:

a. Revocation of Secretary's Order 3330. I hereby revoke Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 31, 2013. As set forth below, all actions taken pursuant to Secretary's Order 3330 must be reviewed for possible reconsideration, modification, or rescission as appropriate.

b. Review of Department Actions. As set forth in Sec. 5 below, each bureau and office shall review all existing regulations, orders, guidance documents, policies, instructions, notices, implementing actions, and any other similar actions (Department Actions) related to or arising from the Presidential Actions set forth above and, to the extent deemed necessary and permitted by law, initiate an appropriate process to suspend, revise, or rescind any such actions, consistent with the policies set forth in the March 28, 2017 E.O.

Sec. 5 **Implementation**. The following actions shall be taken pursuant to this Order:

a. Mitigation Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action for review.

b. Climate Change Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O., in particular: Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change); Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); Presidential Memorandum of September 21, 2016 (Climate Change and National Security); Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions); and the Council on Environmental Quality's final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 *Fed. Reg.* 51866 (August 5, 2016).

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions identified in the review required by subsection (i) above.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action, for review.

c. Review of Other Department Actions Impacting Energy Development.

(i) As previously announced by the Department, BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015).

(ii) Within 21 days, the Director, BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iii) Within 21 days, the Director, National Park Service shall review the final rule entitled, "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (Nov. 4, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iv) Within 21 days, the Director, FWS shall review the final rule entitled, "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (Nov. 14, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(v) Within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

(vi) Within 35 days, the Deputy Secretary shall provide to me a plan to complete the review of Department Actions contemplated by Section 2 of the March 28, 2017 E.O. The plan must meet all objectives and time lines set forth in the March 28, 2017 E.O.

Sec. 5 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies,

instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 6 **Expiration Date.** This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

- - - - - - -

PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

Conversation Contents

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Attachments:

/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/1.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
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"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 15:48:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as

"pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?
>
> Thanks,
> Jill
>
> --
> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:08:09 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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Folks:

Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.

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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:16:58 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

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Take care,

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Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office (202) 208 4586
Mobile: (202) 503-7460

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Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Sent:	Wed Jul 19 2017 16:26:02 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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Sent:	Thu Jul 20 2017 14:05:23 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report 7.20.2017.docx BLM Report Under E.O. 13783.xlsx

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To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Rich - can you send me the version that had your edits? I used the clean version that Peter sent to you last night at 6:16. I haven't been engaged before this so haven't seen anyone's edits.

I'm heading out the door but can try to connect later as needed.

Thanks,

Kelly Orr
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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks, Kelly. Do you have the narrative in track changes so we can see what has changed from the version we have?

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Peter

Peter Mali
Acting Chief of Staff

Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
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Jill Moran
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Kelly Orr <korr@blm.gov>

From:	Kelly Orr <korr@blm.gov>
Sent:	Thu Jul 20 2017 15:11:13 GMT-0600 (MDT)
To:	"Moran, Jill" <jcmoran@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

I don't because I don't have earlier versions of it. In Peter's 6:16 email last night he attached a clean and track changes version. Perhaps that track changes one is responsive to Rich's edits and for some reason the clean version wasn't?

Sent from my iPhone

On Jul 20, 2017, at 5:08 PM, Moran, Jill <jcmoran@blm.gov> wrote:

> Thanks, Kelly. Do you have the narrative in track changes so we can see what has changed from the version we have?
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> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>> Rich,
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>> I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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Sent:	Thu Jul 20 2017 15:12:08 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx

Kelly,

Our emails crossed over. Attached is the version with ASLM edits.

Thanks,
Jill

On Thu, Jul 20, 2017 at 5:05 PM, Orr, Kelly <korr@blm.gov> wrote:

> Rich - can you send me the version that had your edits? I used the clean version that Peter sent to you last night at 6:16. I haven't been engaged before this so haven't seen anyone's edits.
>
> I'm heading out the door but can try to connect later as needed.
>
> Thanks,
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> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov
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> On Thu, Jul 20, 2017 at 5:00 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
>
> > Kelly,
> >
> > The version you attached does not appear to address any of my questions/comments or incorporate my edits. Just wanted to check to make certain that you attached the correct version.
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> > From: **Mali, Peter** <pmali@blm.gov>
> > Date: Wed, Jul 19, 2017 at 5:48 PM
> > Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 16:56:15 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

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Inline image 1

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Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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Subject: Re: Time Sensitive: BLM's EO 13783 report

To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)

[redacted]

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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Fri Jul 21 2017 09:32:56 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>

CC:	"Thurn, Linda" <lthurn@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx BLM Report Under E.O. 13783 (1).xlsx

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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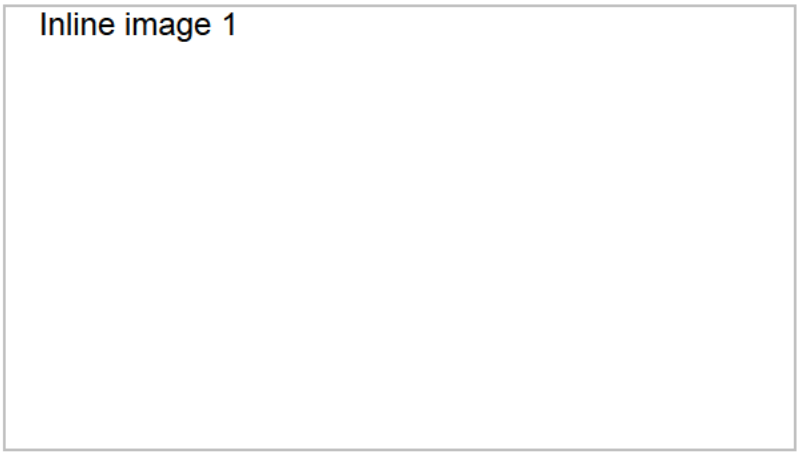

Let me know if there's anything else I can do to help on this item.

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Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

One of the concerns raised by Exec Sec. is the regulatory descriptions look and read as if they were taken from materials previously prepared (during the last

Administration). Hence, they tend to speaking in very positive terms about the what the rules do, rather than focusing on the fact that this administration views many of these rules as creating unnecessary regulatory burdens. I would begin the narratives by explaining exactly that the Administration's concerns are with each of the rules and then explain why the rule is either being rescinded or reviewed.

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
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> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 08:53:21 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Peter/Kelly,

Would it be possible for you to send us the latest version of this that incorporates ASLM comments?

Thanks, Shelley

On Wed, Jul 19, 2017 at 6:08 PM, Mali, Peter <pmali@blm.gov> wrote:

> Folks:
>
> Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):
>
> https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQqRRFtq9v4YhpqwtCDZ3cpAy9OIcq0/edit?usp=sharing
>
> As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.
>
> Thanks,
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> Peter
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--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010

Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:02 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Here you go! Sorry for the delay.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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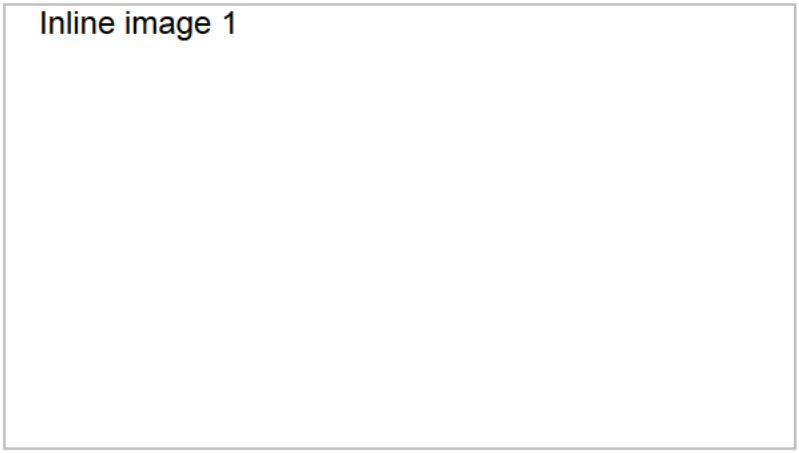

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Attachments:	image.png

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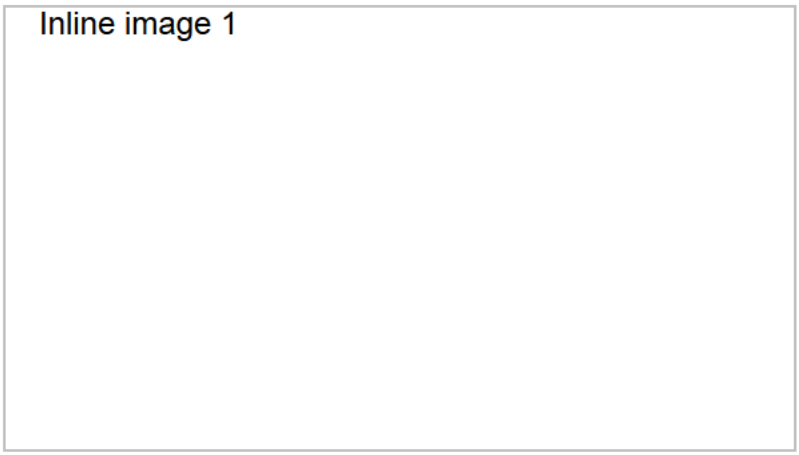
> 
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> > > > Peter Mali
> > > > Acting Chief of Staff
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> > > > Office: (202) 208-4586
> > > > Mobile: (202) 503-7460

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From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

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Office: 202-208-6551
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Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 14:59:17 GMT-0600 (MDT)
To:	Thomas Bartholomew <tbarthol@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Thomas -

I don't think this report has much nexus to stuff in 200 since it's related to an EO on energy, but Peter wanted me to share it with you in case it was helpful in the BLM priorities exercise that's due tomorrow.

Thanks,

Kelly Orr
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Mobile: 202-510-5119
korr@blm.gov

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To: Shelley McGinnis <smcginnis@blm.gov>

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"McGinnis, Shelley" <smcginnis@blm.gov>

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Sent:	Tue Jul 25 2017 07:03:53 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

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Sent:	Tue Jul 25 2017 07:33:49 GMT-0600 (MDT)
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CC:	Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM Report Under E.O. 13783 (2).xlsx BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (1).docx

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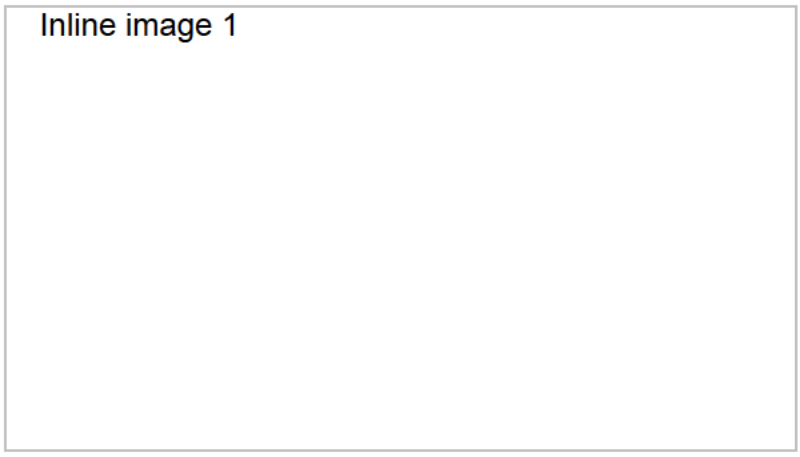

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> Can I also get the final version of the spreadsheet?
>
> On Mon, Jul 24, 2017 at 1:34 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Here you go! Sorry for the delay.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > ---------- Forwarded message ----------
> > From: **Orr, Kelly** <korr@blm.gov>
> > Date: Thu, Jul 20, 2017 at 6:56 PM
> > Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> > To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
> > Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
> >
> > Rich - I reviewed your version and the edits from you and Jill looked good.
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> > I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.
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> > Inline image 1
> >
> > Let me know if there's anything else I can do to help on this item.

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Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
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On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

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If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
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Office: (202) 208-4586
Mobile: (202) 503-7460

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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report

To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)

[redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> Jill
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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Tue Jul 25 2017 12:00:17 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

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korr@blm.gov

On Fri, Jul 21, 2017 at 8:09 AM, Richard Cardinale <richard_cardinale@ios.doi.gov> wrote:

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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Tue Jul 25 2017 12:04:47 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks, Kelly.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Tue, Jul 25, 2017 at 2:00 PM, Orr, Kelly <korr@blm.gov> wrote:

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Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

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<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

Shelley McGinnis <smcginnis@blm.gov>

From:	Shelley McGinnis <smcginnis@blm.gov>
Sent:	Wed Jul 26 2017 12:23:52 GMT-0600 (MDT)
To:	korr@blm.gov
CC:	tspisak@blm.gov, jkalish@blm.gov
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

Kelly, the attached version of the report has the language about the 17 recommendations (actions).

Sent from my iPhone

Begin forwarded message:

From: "Orr, Kelly" <korr@blm.gov>
Date: July 25, 2017 at 2:00:17 PM EDT
To: Richard Cardinale <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)
[redacted]

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From: "Orr, Kelly" <korr@blm.gov>
Sent: Wed Jul 26 2017 12:40:59 GMT-0600 (MDT)
To: Shelley McGinnis <smcginnis@blm.gov>

CC: Timothy Spisak <tspisak@blm.gov>, John Kalish <jkalish@blm.gov>

Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks Shelley.

I've changed that paragraph to read:

. (b) (5) [redacted]

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 26, 2017 at 2:23 PM, Shelley McGinnis <smcginnis@blm.gov> wrote:

> Kelly, the attached version of the report has the language about the 17 recommendations (actions).
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** "Orr, Kelly" <korr@blm.gov>
> **Date:** July 25, 2017 at 2:00:17 PM EDT
> **To:** Richard Cardinale <richard_cardinale@ios.doi.gov>
> **Cc:** "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
> **Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec**
>
> Rich and Jill,
>
> I realized we never updated the spreadsheet with ASLMs edits in the narrative version. So, I've attached a revised spreadsheet that now matches the appropriate text from the word version.
>
> If you have any questions please let me know - sorry for any confusion this causes!

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Fri, Jul 21, 2017 at 8:09 AM, Richard Cardinale <richard_cardinale@ios.doi.gov> wrote:

> Thanks.
>
> Sent from my iPhone
>
> On Jul 20, 2017, at 6:57 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich - I reviewed your version and the edits from you and Jill looked good.
> >
> > I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.
> >
> > I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:
> >
> > <image.png>
> >
> > Let me know if there's anything else I can do to help on this item.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Kelly,
> > >
> > > When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.

Rich

On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:

> Rich,
>
> I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
>
> If you have any questions for me please let me know.
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov
>
> On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
>
> > Thanks, Peter.
> >
> > Rich
> >
> > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> >
> > > Rich:
> > >
> > > As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.
> > >
> > > Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.
> > >
> > > If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.
> > >
> > > Take care,
> > >
> > > Peter
> > >
> > > Peter Mali
> > > Acting Chief of Staff
> > > Bureau of Land Management
> > > Office: (202) 208-4586
> > > Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 5:48 PM
Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5)
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[redacted]

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

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Conversation Contents

Latest Draft of BLM's E.O. 13783 Report

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 10:10:06 GMT-0600 (MDT)
To:	Jill Moran <jcmoran@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Kelly Orr <korr@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report

Hi Jill,

Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.

Thanks, Shelley

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:30 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Jill Moran <jcmoran@blm.gov>, "Mali, Peter" <pmali@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report

Shelley - just forwarded it to you on a separate chain.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Mon, Jul 24, 2017 at 12:10 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Hi Jill,
>
> Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.
>
> Thanks, Shelley
>
> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
> 1849 C Street NW, Room 5625
> Washington, DC 20240
> Office: 202-208-6551
> Cell: 202-578-3010
> Email: smcginnis@blm.gov

Conversation Contents

FW: Draft Report under E.O. 13783

Attachments:

/3. FW: Draft Report under E.O. 13783/1.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/1.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/2.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/2.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/3.1 Input into July Draft Report on Energy_WO300_06JUL17.docx
/3. FW: Draft Report under E.O. 13783/5.1 EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
/3. FW: Draft Report under E.O. 13783/7.1 AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
/3. FW: Draft Report under E.O. 13783/8.1 BLM_Sec2_EO13783 (3).xlsx
/3. FW: Draft Report under E.O. 13783/9.1 BLM_Sec2_EO13783 (3) (2).xlsx

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 03 2017 09:25:01 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
CC:	John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject:	FW: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]

Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 05 2017 05:11:02 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	"Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

> **From:** Michael Nedd <mnedd@blm.gov>
> **Date:** July 3, 2017 at 11:25:01 AM EDT
> **To:** Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
> **Cc:** John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
> **Subject: FW: Draft Report under E.O. 13783**
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> **Take care and have a wonderful day! :)**
>
> Michael D. Nedd
> 202-208-3801 Office
> 202-208-5242 Fax
> mnedd@blm.gov
>
> **A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"**

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

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> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
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> 1849 C Street, NW
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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action

Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

"Pionke, Erica" <epionke@blm.gov>

From:	"Pionke, Erica" <epionke@blm.gov>
Sent:	Thu Jul 06 2017 13:46:57 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783
Attachments:	Input into July Draft Report on Energy_WO300_06JUL17.docx

Peter,

Here is WO-300's input on the Draft Report under E.O. 13783.

Please let me know if you have any questions or need changes.

Thanks!

Erica

On Wed, Jul 5, 2017 at 9:57 AM, Timothy Spisak <tspisak@blm.gov> wrote:

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> Thanks!
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> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
> 'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997
>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
> tspisak@blm.gov
> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** Michael Nedd [mailto:mnedd@blm.gov]
> **Sent:** Wednesday, July 5, 2017 7:11 AM

To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
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MDN 202-208-3801

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Elizabeth K. Appel
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Erica Pionke, JD, PMP

WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
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epionke@blm.gov

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Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Fri Jul 07 2017 15:26:38 GMT-0600 (MDT)
To:	"Pionke, Erica" <epionke@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783

Thanks, all!

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Thu, Jul 6, 2017 at 3:46 PM, Pionke, Erica <epionke@blm.gov> wrote:

> Peter,
>
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Erica Pionke, JD, PMP
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BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 10 2017 10:19:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
CC:	Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Subject:	RE: Draft Report under E.O. 13783
Attachments:	EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
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From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

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Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Subject:	Re: Draft Report under E.O. 13783

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.

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Subject: Draft Report under E.O. 13783
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
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Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 11:38:13 GMT-0600 (MDT)
To:	Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
CC:	"Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx

ADs for 200/300/400:

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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 12:39:33 GMT-0600 (MDT)
To:	"Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3).xlsx

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Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

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Subject: Fwd: Draft Report under E.O. 13783
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>
> --
> Elizabeth K. Appel
> Office of Regulatory Affairs & Collaborative Action
> Office of the Assistant Secretary - Indian Affairs
> (202) 273-4680 - office
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Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 15:11:59 GMT-0600 (MDT)
To:	Christopher McAlear <cmcalear@blm.gov>, Nikki Moore <nmoore@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
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Nikki Moore <nmoore@blm.gov>

From:	Nikki Moore <nmoore@blm.gov>
Sent:	Wed Jul 19 2017 15:15:29 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Shelley,

We didn't. We were asked to add the manuals only recently. This is the first I've seen of the spreadsheet. (b) (5) [redacted]

Nikki Moore
Acting Deputy Assistant Director,
National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington DC
202.219.3180 (office)
202.288.9114 (cell)

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<scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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>> 202-208-3181
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gavaldez@blm.gov

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"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 11:05:47 GMT-0600 (MDT)
To:	Nikki Moore <nmoore@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

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Is this still in progress or are you waiting on anything from WO-100? ASLM is anxiously awaiting this and when I get back in touch with them it would be helpful to have a sense of when we might be able to submit it.

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<BLM_Sec2_EO13783 (3) (2).xlsx>

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Thu Jul 20 2017 11:09:58 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	Nikki Moore <nmoore@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Glenda set up the spreadsheet as a Google doc for the divisions to populate. WO-300 has completed the entries for our divisions. I am not sure of the status of the other divisions. The link to the Google doc is below:

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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"Bartholomew, Thomas" <tbarthol@blm.gov>

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To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

I'm checking with Kristin on whether she's good with what has been added to the table. Will get back with you shortly.

Best,

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Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas"

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> Elizabeth K. Appel
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gavaldez@blm.gov

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--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate

Washington, DC
202-208-5922

"McAlear, Christopher" <cmcalear@blm.gov>

From:	"McAlear, Christopher" <cmcalear@blm.gov>
Sent:	Thu Jul 20 2017 12:09:25 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Assistant Director
National Conservation Lands
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(W) 202-208-4731
(C) 775-722-9539

Kelly Orr <korr@blm.gov>

From:	Kelly Orr <korr@blm.gov>
Sent:	Thu Jul 20 2017 12:17:47 GMT-0600 (MDT)
To:	"McAlear, Christopher" <cmcalear@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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The spreadsheet allegedly does NOT ask for any additional info, above and beyond what you've already provided in the narrative. The task of populating the spreadsheet should be a cut-and-paste exercise, in other words.

As with the report, please add your material as soon as possible. Let me know if you have questions with the assignment. Finally, please recall that I'll be on annual leave tomorrow and Friday (7/21); Kelly Orr will be acting CoS in my absence (I've cc:ed her here).

Thanks,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

On Thu, Jun 29, 2017 at 12:17 PM, Appel, Elizabeth <elizabeth.appel@bia.gov> wrote:

> Hi Everyone-
>
> The attachment to the memo is provided in MS Word here for your convenience.
>
> Thank you!
> Liz

On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

> Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.
>
> Regards, Rob
>
> --
> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

<BLM_Sec2_EO13783 (3) (2).xlsx>

--

Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate
Washington, DC
202-208-5922

"Moore, Nikki" <nmoore@blm.gov>

From: "Moore, Nikki" <nmoore@blm.gov>

Sent:	Fri Jul 21 2017 11:12:05 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Can you please copy me on these. Thanks!

Nikki Moore
Acting Deputy Assistant Director, National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington D.C.
202.219.3180 (office)
202.740.0835 (cell)

On Thu, Jul 20, 2017 at 1:05 PM, Orr, Kelly <korr@blm.gov> wrote:

> Shelley et al. -
>
> Wondering if you guys could give me an update on the spreadsheet for EO 13783. In the notes that Peter left for me and sent to Rich he indicated that 200, 300, and 400 were still populating the spreadsheet.
>
> Is this still in progress or are you waiting on anything from WO-100? ASLM is anxiously awaiting this and when I get back in touch with them it would be helpful to have a sense of when we might be able to submit it.
>
> Thanks,
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov
>
> On Wed, Jul 19, 2017 at 5:15 PM, Nikki Moore <nmoore@blm.gov> wrote:
>
> > Hi Shelley,
> >
> > We didn't. We were asked to add the manuals only recently. This is the first I've seen of the spreadsheet. (b) (5) [redacted]
> >
> > Nikki Moore
> > Acting Deputy Assistant Director,
> > National Conservation Lands and Community Partnerships
> > Bureau of Land Management, Washington DC
> > 202.219.3180 (office)

202.288.9114 (cell)

On Jul 19, 2017, at 5:12 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Chris/Nikki - did you previously complete a spreadsheet similar to the attached for BLM Manual 6220, BLM Manual 6400, and BLM Manual 6280? If so, could you please email it?
>
> Thanks, Shelley
>
> On Wed, Jul 19, 2017 at 2:39 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:
>> All,
>>
>> I just spoke to Peter and he asked that we hold off on populating the spreadsheet until he has finalized the document. He is still making changes to the document and we want the spreadsheet to be consistent. Also, please see attached version of the spreadsheet that was previously submitted when Shannon Stewart was here as Chief of Staff.
>>
>> Thanks, Shelley
>>
>> ---------- Forwarded message ----------
>> From: **Valdez, Glenda** <gavaldez@blm.gov>
>> Date: Wed, Jul 19, 2017 at 2:33 PM
>> Subject: Fwd: Draft Report under E.O. 13783
>> To: Shelley McGinnis <smcginnis@blm.gov>
>>
>>
>> ---------- Forwarded message ----------
>> From: **Mali, Peter** <pmali@blm.gov>
>> Date: Wed, Jul 19, 2017 at 1:38 PM
>> Subject: Fwd: Draft Report under E.O. 13783
>> To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
>> Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
>>
>> ADs for 200/300/400:
>>
>> Regarding the spreadsheet I referenced yesterday (i.e., an additional deliverable under BLM's report on E.O. 13783), I'm told that Exec Sec is anxious to get this product. This spreadsheet is apparently intended to be an attachment to the narrative report (i.e., the Google Doc you worked on yesterday).
>>
>> First things first: please task staff with populating this spreadsheet. To that end, you will soon receive (or may have already received) a Google Docs invite from Glenda Valdez (WO-100's summer intern) to provide content to the Google Sheets (i.e., the spreadsheet template for this assignment).
>>
>> The spreadsheet allegedly does NOT ask for any additional info, above and beyond what you've already provided in the narrative. The task of populating

the spreadsheet should be a cut-and-paste exercise, in other words.

As with the report, please add your material as soon as possible. Let me know if you have questions with the assignment. Finally, please recall that I'll be on annual leave tomorrow and Friday (7/21); Kelly Orr will be acting CoS in my absence (I've cc:ed her here).

Thanks,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
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From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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Hi Everyone-

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On Thu, Jun 29, 2017 at 11:22 AM, Howarth, Robert <robert_howarth@ios.doi.gov> wrote:

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

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Robert Howarth
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Glenda Valdez
Administrative Intern
Office of the Director

1849 C St NW Rm 5641
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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

(b) (5)

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Conversation Contents

Fwd: BLM Narrative to Accompany Spreadsheet

Attachments:

/4. Fwd: BLM Narrative to Accompany Spreadsheet/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

"Moran, Jill" <jcmoran@blm.gov>

From:	"Moran, Jill" <jcmoran@blm.gov>
Sent:	Thu Jul 20 2017 10:18:47 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
CC:	Peter Mali <pmali@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet

Hi Kelly,

I am working with Rich on the BLM's narrative, but it looks like Peter did not send the spreadsheet to Rich. Do you know that status of that? I'm available to chat too if that would be helpful.

Thanks,
Jill

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management

"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:08:49 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

(b) (5)

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Conversation Contents

BLM E.O 13783 cleaned up version

Attachments:

/5. BLM E.O 13783 cleaned up version/1.1 BLM Report Under E.O. 13783.xlsx

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:40:46 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	BLM E.O 13783 cleaned up version
Attachments:	BLM Report Under E.O. 13783.xlsx

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

(b) (5)

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(b) (5)

Conversation Contents

EO 13783 Spreadsheet - Update to Text in One of the Cells

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 13:13:53 GMT-0600 (MDT)
To:	Glenda Valdez <gavaldez@blm.gov>
Subject:	EO 13783 Spreadsheet - Update to Text in One of the Cells

Glenda,

Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:

(b) (5)



Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:17:16 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: EO 13783 Spreadsheet - Update to Text in One of the Cells

Ok will do

On Thu, Jul 20, 2017 at 3:13 PM, Orr, Kelly <korr@blm.gov> wrote:

> Glenda,
>
> Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:
>
> (b) (5) [redacted]
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov

--

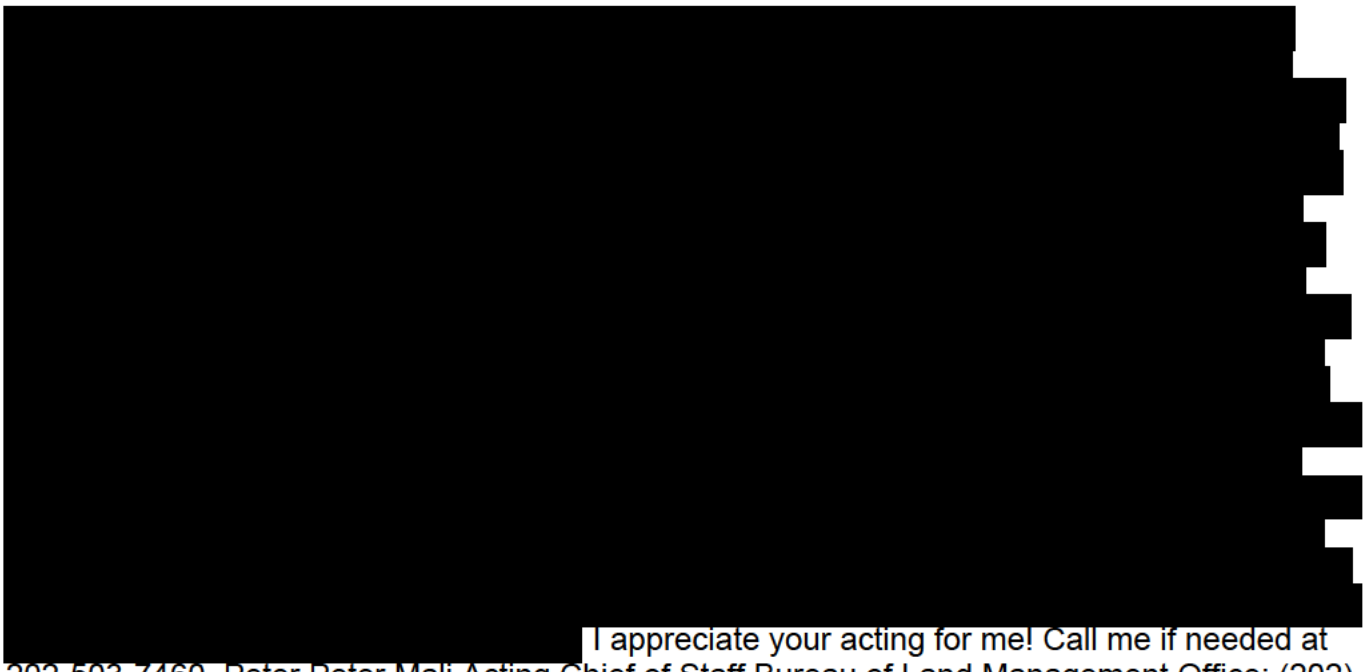
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

Conversation Contents

Bulletized List

Peter Mali <pmali@blm.gov>

From:	Peter Mali <pmali@blm.gov>
Sent:	Thu Jul 20 2017 05:58:50 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
Subject:	Bulletized List



I appreciate your acting for me! Call me if needed at 202-503-7460. Peter Peter Mali Acting Chief of Staff Bureau of Land Management Office: (202) 208-4586 Mobile: (202) 503-7460 Sent from my iPhone

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 12:46:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
Subject:	Re: Bulletized List

Peter - for our discussion this afternoon to help with handing the torch back to you as COS.

Recaps and updates on moving items + new items are in red text below.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 7:58 AM, Peter Mali <pmali@blm.gov> wrote:

[redacted]

[redacted]

- [redacted]
- [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
- [redacted]
  - [redacted]
  - [redacted]

> That's all I have on my list for now. I'll probably have a few other dribs and drabs, which I'll send you later.
>
> I appreciate your acting for me! Call me if needed at 202-503-7460.
>
> Peter
>
> Peter Mali
> Acting Chief of Staff
> Bureau of Land Management
> Office: (202) 208-4586
> Mobile: (202) 503-7460
>
> Sent from my iPhone

Conversation Contents

BLM Report Under E.O. 13783 - Invitation to edit

"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>

From:	"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>
Sent:	Wed Jul 19 2017 11:04:34 GMT-0600 (MDT)
To:	<korr@blm.gov>
CC:	<tspisak@blm.gov>, <jkalish@blm.gov>, <kbail@blm.gov>, <stryon@blm.gov>, <kkelleh@blm.gov>, <pmali@blm.gov>, <rwootton@blm.gov>, <cmcalear@blm.gov>
Subject:	BLM Report Under E.O. 13783 - Invitation to edit

Glenda Valdez has invited you to **edit** the following spreadsheet:

BLM Report Under E.O. 13783



google sheet per Peter Mali's email

Open in Sheets

Google Sheets: Create and edit spreadsheets online.
Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
You have received this email because someone shared a spreadsheet with you from Google Sheets.

Conversation Contents

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Attachments:

/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.2 EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/2.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 13:51:33 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 12 2017 15:08:04 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	RE: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
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Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 15:22:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Wed, Jul 12, 2017 at 5:08 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Peter,
>
> I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

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I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: jeanett@blm.gov
To: king@westernlaw.org
Subject: FOIA Request 2017-00883 Release 1 Part A
Date: Monday, September 11, 2017 8:08:59 AM
Attachments: 2017-00883_Signed_Interim Respone_1.pdf
2017-00883_Interim Response_1_Redacted_Part1.pdf

Ms. King,
Please see the attached response letter for the first interim release and Part A of responsive documents to your FOIA request. Part B of responsive documents was sent in a separate email.

Thank you,

Jillian Eanett

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

September 7, 2017

In Reply Refer To:
1278-FOIA (640)
FOIA# 2017-00883

Ms. Laura King
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601

Dear Ms. King:

This letter is in response to your Freedom of Information Act (FOIA) request, dated April 25, 2017 and received in our office on the same day. The tracking number is 2016-00883. In your letter, you asked for the following:

" I. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(ii) of Secretary of the Interior Ryan Zinke's Secretarial Order 3349 ("SO 3349"), ordering the Director of the Bureau of Land Management ("BLM") to "review the final rule entitled, 'Waste Prevention, Production Subject to Royalties, and Resource Conservation,' 81 Fed. Reg. 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O."

"II. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(v) of SO 3349, ordering that "[w]ithin 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources."

"III. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(b)(i) of SO 3349, ordering that "[w]ithin 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O. . . ."

While we continue to review additional records that are responsive to your requests, we are writing to provide you an Interim Response to your request. We have sent via electronic mail a PDF file consisting of 912 pages, which are being released to you in part. Portions of 725 pages are being withheld under FOIA Exemption 5.

Exemption 5 allows an agency to withhold "inter-agency or intra-agency memorandums or letters which would not be available by law to a party... in litigation with the agency." 5 U.S.C. § 552(b)(5); *see Nat'l Labor Relations Bd. v. Sears Roebuck & Co.*, 421 U.S. 132, 149 (1975). Exemption 5 therefore incorporates the privileges that protect materials from discovery in litigation, including the deliberative process, attorney work-product and attorney-client privileges. The deliberative process privilege protects the decision-making process of government agencies and encourages the "frank exchange of ideas on legal or policy matters" by ensuring agencies are not "forced to operate in a fish bowl." *Mead Data Cent., Inc. v. United States Dep't of the Air Force*, 566 F.2d 242, 256 (D.C. Cir. 1977) (internal citations omitted). A number of policy purposes have been attributed to the deliberative process privilege. Among the most important are to: (1) "assure that subordinates . . . will feel free to provide the decision maker with their uninhibited opinions and recommendations;" (2) "protect against premature disclosure of proposed policies;" and (3) "protect against confusing the issues and misleading the public." *Coastal States Gas Corp. v. United States Dep't of Energy*, 617 F.2d 854, 866 (D.C. Cir. 1980). The deliberative process privilege protects materials that are both pre-decisional and deliberative. The privilege covers records that "reflect the give-and-take of the consultative process" and may include "recommendations, draft documents, proposals, suggestions, and other subjective documents which reflect the personal opinions of the writer rather than the policy of the agency." *Id.*

The materials that have been withheld under the deliberative process privilege of Exemption 5 are both pre-decisional and deliberative. They do not contain or represent formal or informal agency policies or decisions. They are the result of frank and open discussions among employees of the Department of the Interior. Their contents have been held confidential by all parties and public dissemination of this information would have a chilling effect on the agency's deliberative processes; expose the agency's decision-making process in such a way as to discourage candid discussion within the agency, and thereby undermine its ability to perform its mandated functions.

As incorporated into Exemption 5, the attorney-client privilege protects "confidential communications between an attorney and his client relating to a legal matter for which the client has sought professional advice" and is not limited to the context of litigation. Mead Data Cent, Inc. v. United States Dep't of the Air Force, 566 F.2d 242, 252-53 (D.C. Cir. 1977). Moreover, although it fundamentally applies to confidential facts divulged by a client to his/her attorney, this privilege also encompasses any opinions given by an attorney to his/her client based upon, and thus reflecting, those facts, as well as communications between attorneys that reflect confidential client-supplied information. See Elec. Privacy Info. Ctr. v. United States Dep't of Homeland Sec., 384 F. Supp. 2d 100, 114-15 (D.D.C. 2005). The information that has been withheld under the attorney-client privilege of Exemption 5 constitutes confidential communications between agency attorneys and agency clients, related to legal matters for which the client sought professional legal assistance and services. Additionally, the Bureau employees who communicated with the attorneys regarding this information were clients of the attorneys at the time the information was generated and the attorneys were acting in their capacities as lawyers at the time they communicated legal advice. Finally, the Bureau has held this information confidential and has not waived the attorney-client privilege.

Ryan Witt, Bureau of Land Management (BLM) FOIA Officer, is responsible for this partial release. Brett Myrick, Attorney Advisor in the Office of the Solicitor, was consulted.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you have any questions regarding this request, please contact Jillian Eanett, BLM WO FOIA Specialist, at (202) 912-7035 or via email at BLM_WO_FOIA@blm.gov.

Sincerely,

FOR:

Jeff Krause, Chief
Division of Intergovernmental and
External Affairs

Nedd, Michael <mnedd@blm.gov>

BLM-Approved Report re: E.O. 13783

5 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 6:20 PM
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Jill:

As discussed, attached is the BLM-approved contribution to the report pursuant to E.O. 13783. Please call my cell (202-503-7460) if you have questions or need to discuss further.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Moran, Jill <jcmoran@blm.gov> Wed, Jul 12, 2017 at 6:21 PM
To: "Mali, Peter" <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

Great - thank you, Peter.
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:51 PM
To: Michael Nedd <mnedd@blm.gov>

Mike:

I'm re-sending this to you -- Chris McAlear said you are looking for a clean version.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 11:57 PM
To: Michael Nedd <mnedd@blm.gov>, Kristin Bail <kbail@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>

Folks:

Thanks for the work of your staff on this product -- here's a clean version of what we sent to ASLM.

Safe travels home.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 12, 2017 at 6:20 PM
Subject: BLM-Approved Report re: E.O. 13783
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>

[Quoted text hidden]

EO13783 Energy Report_BLM Approved Version_DRAFT_7.12.2017_6.15pm.docx
39K

Michael Nedd <mnedd@blm.gov> Thu, Jul 13, 2017 at 11:36 AM
To: Peter Mali <pmali@blm.gov>

I am? Thx anyway…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 11:51 PM
To: Michael Nedd <mnedd@blm.gov>
Subject: Fwd: BLM-Approved Report re: E.O. 13783

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Nedd, Michael <mnedd@blm.gov>

Draft Mitigation Policy for Awareness and Review

3 messages

Bail, Kristin <kbail@blm.gov> Fri, Jun 23, 2017 at 2:35 PM
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

DraftMitigationIM.docx
31K

Michael Nedd <mnedd@blm.gov> Tue, Jun 27, 2017 at 9:36 AM
To: Kristin Bail <kbail@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Kristin,

Thx for the information and I do have a few things/suggestions, but it can wait until you have gotten feedback from the states. I'll have some time schedule for us to meet after the ELT, given the holiday next week.

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Bail, Kristin [mailto:kbail@blm.gov]
Sent: Monday, June 26, 2017 5:34 PM
To: Michael Nedd
Cc: John Ruhs; Kathleen Benedetto
Subject: Re: Draft Mitigation Policy for Awareness and Review - No action required before Monday

Mike - as promised, here is a copy of the side-by-side that was included in your briefing packet. [redacted] A list of the needs that States have identified is also attached and was included in the packet. –Kristin

On Sun, Jun 25, 2017 at 5:54 PM, Michael Nedd <mnedd@blm.gov> wrote:

Kristin,

[redacted]

[redacted]

[redacted]

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

On Jun 23, 2017, at 2:36 PM, Bail, Kristin <kbail@blm.gov> wrote:

[redacted]

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[redacted]

[redacted]

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- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director

Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

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Kristin Bail <kbail@blm.gov> Wed, Jul 12, 2017 at 11:58 AM
To: BLM_ELT@blm.gov, gshoop@blm.gov, aseidlitz@blm.gov, Marci Todd <m1todd@blm.gov>, jraby@blm.gov

As discussed at the ELT this morning, here is a re-send. Comments would be most helpful by COB on the 18th.
-Kristin

Sent from my iPhone

Begin forwarded message:

From: "Bail, Kristin" <kbail@blm.gov>
Date: June 23, 2017 at 12:35:40 PM MDT
To: BLM_ELT@blm.gov, BLM_Field_Comm <blm_field_comm@blm.gov>, "Moody, Aaron" <aaron.moody@sol.doi.gov>
Cc: Deborah Mead <dmead@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Robin Hawks <rhawks@blm.gov>, Heather Bernier <hbernier@blm.gov>, "Melvin (Joe) Tague" <jtague@blm.gov>, Kimberly Dow <kddow@blm.gov>, Byron Loosle <bloosle@blm.gov>, Miyoshi Stith <mstith@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Sally Butts <sbutts@blm.gov>
Subject: Draft Mitigation Policy for Awareness and Review

[redacted]

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- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

--Kristin

Kristin Bail, Assistant Director
Resources and Planning (WO-200)
1849 C. Street NW, Room 5648
Washington, D.C. 20240
(202) 208-6731 Cell (202) 823-1086
kbail@blm.gov

USDI Bureau of Land Management

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4 attachments



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Nedd, Michael <mnedd@blm.gov>

Draft Report under E.O. 13783

11 messages

Howarth, Robert <robert_howarth@ios.doi.gov> Thu, Jun 29, 2017 at 11:22 AM
To: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>
Cc: Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Elizabeth Appel <elizabeth.appel@bia.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Good morning. Attached for review and action is a signed memorandum from James Cason regarding the Draft Report on Energy Independence under Executive Order 13783.

Regards, Rob

--
Robert Howarth
Deputy Director for Correspondence and FOIA Management
Office of the Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

Cason Memo EO 13783.pdf
154K

Appel, Elizabeth <elizabeth.appel@bia.gov> Thu, Jun 29, 2017 at 12:17 PM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

The attachment to the memo is provided in MS Word here for your convenience.

Thank you!
Liz

[Quoted text hidden]
--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Template for Input into July Draft Report on Energy FINAL.docx
23K

Michael Nedd <mnedd@blm.gov> Mon, Jul 3, 2017 at 11:25 AM
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Hi team,

Pls see incoming and request for us to get feedback to DOI (via ASLM) NLT July 14. Given the July 4 holiday and the likely hood of folks being gone, coupled with our ELT meeting next week, I'm thinking a week extension would be in order…

Peter, I leave it to you and the Advisors to help steer us through this effort…

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM

To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

[Quoted text hidden]

2 attachments

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

Michael Nedd <mnedd@blm.gov> Wed, Jul 5, 2017 at 7:11 AM
To: Peter Mali <pmali@blm.gov>
Cc: "Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>

Looping in ADs (my oversight).

Also, looks like folks will not grant an extension.

My read suggest the report will be primarily a compilation of on going activities, I'm hoping we can have a good draft by cob Friday.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

Begin forwarded message:

From: Michael Nedd <mnedd@blm.gov>
Date: July 3, 2017 at 11:25:01 AM EDT
To: Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: FW: Draft Report under E.O. 13783

[Quoted text hidden]

4 attachments

noname.html
1K

Template for Input into July Draft Report on Energy FINAL.docx
23K

Cason Memo EO 13783.pdf
154K

noname.html
1K

Appel, Elizabeth <elizabeth.appel@bia.gov> Fri, Jul 7, 2017 at 9:18 AM
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

Hi Everyone-

Please find attached the spreadsheet provided by OMB that is referenced in the template. Apologies for not providing earlier.

Liz

[Quoted text hidden]

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Moran, Jill <jcmoran@blm.gov> Fri, Jul 7, 2017 at 12:49 PM
To: Peter Mali <pmali@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter,

Following is the report I was speaking about earlier. Kate has asked that the BLM's report be delivered to ASLM no later than COB Tuesday, July 11.

Please send it to me as she has asked me to consolidate the reports from ASLM's four bureaus.

Thanks,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Mali, Peter <pmali@blm.gov> Fri, Jul 7, 2017 at 5:43 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460
[Quoted text hidden]

2 attachments

Cason Memo EO 13783.pdf
154K

EO13783 Energy Report_DRAFT as of 5.30pm_07072017.docx
36K

Michael Nedd <mnedd@blm.gov> Mon, Jul 10, 2017 at 12:19 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
41K

Shannon, Timothy <tshannon@blm.gov> Mon, Jul 10, 2017 at 12:45 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.
[Quoted text hidden]

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

Moran, Jill <jcmoran@blm.gov> Mon, Jul 10, 2017 at 1:58 PM
To: Peter Mali <pmali@blm.gov>, Thomas Lillie <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, "Cruickshank, Walter" <walter.cruickshank@boem.gov>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, gowens@osmre.gov

Good afternoon,

With Rich Cardinale out of the office this week, I've been asked to gather your submissions for this report for Kate's review by **COB tomorrow**. Once Kate has reviewed and approved, I will send the submissions for all 4 agencies

together to Exec Sec. Please let me know if you anticipate any issues with meeting this deadline.

Thank you,
Jill

---------- Forwarded message ----------
From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
[Quoted text hidden]

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
39K

Cason Memo EO 13783.pdf
154K

Moran, Jill <jcmoran@blm.gov> Mon, Jul 17, 2017 at 11:28 AM
To: Peter Mali <pmali@blm.gov>, Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>

Peter-

Attached is the narrative template the BLM submitted to Exec Sec in response to Jim Cason's memo on EO 13783. Exec Sec has asked that you add two or so paragraphs under the Executive Summary and return through ASLM by COB today.

Also, they have inquired about the status of the spreadsheet template which also needs to be filled out.

Do you think you could get the revised narrative to me today and the spreadsheet tomorrow?

Thanks,
Jill
[Quoted text hidden]

2 attachments

AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
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Cason Memo EO 13783.pdf
154K

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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

Nedd, Michael <mnedd@blm.gov>

Draft Tribal Consultation Letter re: Hydraulic Fracturing Rule and Venting & Flaring Rule

1 message

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 7:49 PM
To: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>, "Moran, Jill" <jcmoran@blm.gov>, Kelly Orr <korr@blm.gov>

Rich and Rob:

Attached is the draft tribal consultation letter for BLM's Hydraulic Fracturing Rule and Venting & Flaring Rule. The attached serves as a template to be sent to our SOs to send to their Tribal partners, and it deliberately covers both rules under one letter. Acting Director Nedd asked that I send this to ExecSec and ASLM simultaneously for clearance so that BLM can initiate the tribal consultation process as soon as practical.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Draft.Tribal.Consult.Ltr.Combined.HF_VF_Rules_7.12.12.docx
30K

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Nedd, Michael <mnedd@blm.gov>

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

3 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 3:51 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

2 attachments

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
42K

Michael Nedd <mnedd@blm.gov> Wed, Jul 12, 2017 at 5:08 PM
To: Peter Mali <pmali@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)

Michael Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

[Quoted text hidden]

EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx
49K

Mali, Peter <pmali@blm.gov> Wed, Jul 12, 2017 at 5:22 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kelly Orr <korr@blm.gov>

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Nedd, Michael <mnedd@blm.gov>

Fwd: Time Sensitive: BLM's EO 13783 report

2 messages

Mali, Peter <pmali@blm.gov> Tue, Jul 18, 2017 at 2:37 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

(b) (5) [redacted]

(b) (5) [redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,

Jill

--

Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

2 attachments

BLM narrative_JM.docx
42K

Cason Memo EO 13783 (1).pdf
154K

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>

Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

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Nedd, Michael <mnedd@blm.gov>

Implications of Sec. Order on O&G Rules

4 messages

Sklar, Ryan <ryan.sklar@sol.doi.gov> Fri, Mar 31, 2017 at 7:57 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

Mike,

[redacted]

Thanks,
Ryan

--

Ryan Sklar
Acting Senior Litigation Specialist
Bureau of Land Management
U.S. Department of the Interior
202-208-4695

NOTICE: This e-mail (including attachments) is intended for the use of the individual or entity to which it is addressed. It may contain information that is privileged, confidential, or otherwise protected by applicable law. If you are not the intended recipient, you are hereby notified that any dissemination, distribution, copying, or use of this e-mail or its contents is strictly prohibited. If you receive this e-mail in error, please notify the sender immediately and destroy all copies.

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:44 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:46 AM
To: Ryan Sklar <ryan.sklar@sol.doi.gov>
Cc: Shannon Stewart <scstewar@blm.gov>

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 8:46 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Re: Implications of Sec. Order on O&G Rules

Mike,

I've shared it with Tim and Lonny. Please let me know if you would like it to go to any additional ADs.

Thanks,

Ryan

[Quoted text hidden]

Michael Nedd <mnedd@blm.gov> Mon, Apr 3, 2017 at 9:36 AM
To: Jeff Brune <jbrune@blm.gov>, tshannon@blm.gov
Cc: Ryan Sklar <ryan.sklar@sol.doi.gov>

FYI

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Friday, March 31, 2017 8:44 AM
To: Ryan Sklar
Cc: Shannon Stewart
Subject: RE: Implications of Sec. Order on O&G Rules

[redacted]

Take care and have a wonderful day! :)

Michael D. Nedd

202-208-3801 Office

202-208-5242 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Sklar, Ryan [mailto:ryan.sklar@sol.doi.gov]
Sent: Friday, March 31, 2017 7:58 AM
To: Michael Nedd
Cc: Shannon Stewart
Subject: Implications of Sec. Order on O&G Rules

Mike,

[Quoted text hidden]

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.DOCX
26K

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Nedd, Michael <mnedd@blm.gov>

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

2 messages

Mali, Peter <pmali@blm.gov> Wed, Jul 19, 2017 at 5:48 PM
To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Cc: Kelly Orr <korr@blm.gov>

Mike, John, and Kathy:

Attached is a new version of BLM's report pursuant to E.O. 13783, which reflects feedback from ASLM and Exec Sec (see email from Rich Cardinale below). It appears below both in Track Changes and as a "clean" version.

As you know, Exec Sec is anxious to receive this report, as it was due to the Department last week.

When you provide comments, please reply to all recipients of this message. On a related note, recall that I will be on annual leave tomorrow and Friday. Kelly Orr (cc:ed here) will serve as Acting CoS, and she will assign the task of compiling/consolidating your comments to staff as she sees fit (Briana Collier and Greg Fuhs (WO-610) are helping out tomorrow and Friday as "pinch-hitters").

Finally, there is an additional element of this assignment: a spreadsheet that needs to be filled out. This product is being worked on by staff for 200, 300, and 400.

If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
>
> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
>
> Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Thanks,
Jill

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

---

2 attachments

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
47K

BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
38K

Orr, Kelly <korr@blm.gov> Fri, Jul 21, 2017 at 11:32 AM
To: Michael Nedd <mnedd@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

I've attached two new versions here - track changes with yours and Jill's edits, and a clean version.

I checked the spreadsheet and everything is showing up fine for me - not sure what the lines are that you're seeing. Here's a print screen of how it looks when I open it:

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Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 5:48 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:

> Kelly,
>
> When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.
>
> Rich
>
> On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
>
> > Rich,
> >
> > I've attached an updated version of the report, as well as BLM's spreadsheet. Kathy Benedetto is still reviewing and can touch base as needed with Kate on these materials.
> >
> > If you have any questions for me please let me know.
> >
> > Kelly Orr
> > Advisor to the Director's Office
> > Bureau of Land Management
> > 1849 C St NW, Rm. 5648
> > Washington DC 20240
> > Office: 202-208-6262
> > Mobile: 202-510-5119
> > korr@blm.gov
> >
> > On Wed, Jul 19, 2017 at 6:26 PM, Cardinale, Richard <richard_cardinale@ios.doi.gov> wrote:
> >
> > > Thanks, Peter.
> > >
> > > Rich
> > >
> > > On Wed, Jul 19, 2017 at 6:16 PM, Mali, Peter <pmali@blm.gov> wrote:
> > >
> > > > Rich:

As discussed, attached is a Track Changes and "clean" version of the latest iteration of BLM's report pursuant to E.O. 13783. The attached version incorporates changes intended to reframe our narrative per your and Exec Sec's comments.

Regarding the related spreadsheet, staff for WO-200, 300, and 400 are populating it. They are aware that Exec Sec wants to receive this spreadsheet just as urgently as the narrative.

If you need to reach me today or tomorrow, I can be reached by cell at 202-503-7460. Otherwise, I'll be back in the office on Monday.

Take care,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

[Quoted text hidden]

3 attachments

BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
42K

BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
54K

BLM Report Under E.O. 13783 (1).xlsx
89K

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Nedd, Michael <mnedd@blm.gov>

Proposed Final Version of BLM Response to E.O. 13783

1 message

Mali, Peter <pmali@blm.gov> Tue, Jul 11, 2017 at 5:10 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Shannon, Timothy" <tshannon@blm.gov>

Mike:

Attached is a revised version of the **WO-200** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

Also attached is a revised version of the **WO-300** input on E.O. 13783, which answers your questions and incorporates your earlier edits.

My goal was to send you a single document showing comments from both Kristin and Tim, but Microsoft Word didn't cooperate. Instead, I'm sending you the WO-200 document and the WO-300 document as separate attachments because I want you to see each file in track changes.

Finally, I've attached the Cason memo pursuant to E.O. 13783.

Please call me if you want to discuss further (my direct line is 202-208-4586).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

3 attachments

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN and KMB.docx
42K

EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN_WO300.docx
42K

Cason Memo EO 13783.pdf
154K

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Nedd, Michael <mnedd@blm.gov>

RE: Time Sensitive: BLM's EO 13783 report

1 message

Timothy Spisak <tspisak@blm.gov> Tue, Jul 18, 2017 at 2:47 PM
To: Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>

WO300 will be tomorrow morning.

Thanks!

Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak

Acting Assistant Director,

Energy, Minerals & Realty Management, WO-300

DOI-Bureau of Land Management

tspisak@blm.gov

(202) 208-4201 office

(202) 251-3079 cell

****

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Tuesday, July 18, 2017 2:38 PM
To: Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>; McAlear, Christopher <cmcalear@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>; John Ruhs <jruhs@blm.gov>; Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject: Fwd: Time Sensitive: BLM's EO 13783 report

Kristin, Tim, and Chris:

Attached and immediately below are comments on BLM's submission last week ("BLM E.O. 13783 Energy Report"). Exec Sec's comments are summed up well by the following comment from Rich Cardinale:

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[redacted]. Therefore, please review the parts of the attached document and recast accordingly.

In addition to the overarching comment from Rich Cardinale, Jill Moran has made specific comments/edits in the attached document. Her comments are intended to serve as a guide of sorts as you rework the sections under your purview. BUT please do not go back and simply respond to Jill's comments. The point of the revision is to change the posture of this document, so you need to re-read your sections and make changes wherever necessary.

For reference, I've attached a copy of the Associate Deputy Secretary's June 28, 2017, memo.

ASLM has asked for a revised version of our report by COB today. I know how busy each of you are: while I would like to receive your revision by the end of the day, I'll understand if it has to be tomorrow. Just let me know.

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Moran, Jill** <jcmoran@blm.gov>
Date: Tue, Jul 18, 2017 at 10:34 AM
Subject: Time Sensitive: BLM's EO 13783 report
To: Peter Mali <pmali@blm.gov>
Cc: Richard Cardinale <richard_cardinale@ios.doi.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

Peter,

As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.

Exec Sec is really anxious to get this back from BLM - they still have work to do with it prior to sending it to the White House. Can we get it by COB today?

Nedd, Michael <mnedd@blm.gov>

Secretarial Order 3349 and Oil and Gas Rules

2 messages

Karen Hawbecker <karen.hawbecker@sol.doi.gov> Thu, Mar 30, 2017 at 11:33 PM
To: Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <Richard.McNeer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

[redacted]

Sent from my iPad

Begin forwarded message:

>

2017.03.30 Order 3349 - V&F, Onshore Orders DMR.docx
26K

Michael Nedd <mnedd@blm.gov> Fri, Mar 31, 2017 at 8:45 AM
To: Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Mike Nedd <mike_nedd@blm.gov>
Cc: Richard McNeer <richard.mcneer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

Thx Karen... We'll take a look at it...

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"
[Quoted text hidden]

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Nedd, Michael <mnedd@blm.gov>

Secretarial Orders for discussion at 10:00a

3 messages

Bagley, Lonny <lbagley@blm.gov> Thu, Mar 30, 2017 at 8:45 AM
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Erica Pionke <epionke@blm.gov>

You will be receiving an invite shortly to discuss actions related to yesterday's Secretarial Orders. To be sure everyone has a copy, please find them attached.

Thanks

--
Lonny R Bagley
Deputy Assistant Director (Acting),
Energy, Minerals and Realty Management
Washington Office
1849 C Street, NW Room 5625
Washington, DC 20204
O-202-208-4201
lbagely@blm.gov

Follow BLM Colorado on Social Media!

3 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

Michael Nedd <mnedd@blm.gov> Thu, Mar 30, 2017 at 11:08 AM
To: Shannon Stewart <scstewar@blm.gov>
Cc: Jerome Perez <jperez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Linda Thurn <lthurn@blm.gov>

Here you are and please distribute as you see fit…

In reading the SOs, there are a number of deliverables due beginning 14 days from the issuance of the order and then there are other deliverables at 21, 30, and 90 days. That being said, it may be helpful to send the SOs to WO-200 (the WO-300 team sent them to me and was scheduled to meet earlier today to review them) and have them collaborate with WO-300, if not already planned/initiated. I'm also aware that the SOL (Karen H) was planning to work with WO-300 to develop a chart of the various aspects.

I'm opened to su8ggestions, but I'm thinking we would want some initial feedback from the two key ADs either Monday or Tuesday as to the game plan for meeting the expectations as outlined in the SOs. This would also allow us to give some guidance if need be… Maybe a 30-minute get together would be in order…

Take care and have a wonderful day! :)

Michael Nedd

202-208-4201 Office

202-208-4800 Fax

mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

---

4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

Stewart, Shannon <scstewar@blm.gov> Thu, Mar 30, 2017 at 1:06 PM
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Cc: "Thurn, Linda" <lthurn@blm.gov>, mike nedd <mnedd@blm.gov>, Jerome Perez <jperez@blm.gov>

Mike would like to set-up 30 mins Monday or Tuesday next week to discuss our game plan for meeting the expectations in the newly issued SOs (attached). Linda will follow-up with an invite.

Thanks
Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

---

4 attachments

2017_signed_charter_royalty_policy_committee_03_29_17.pdf
73K

SO 3348 Coal Moratorium.pdf
910K

SO 3349 -American Energy Independence.pdf
2551K

EO_promoting energy independence.pdf
116K

U.S. Department of the Interior

Royalty Policy Committee
Charter

1. **Committee's Official Designation.** Royalty Policy Committee (Committee).

2. **Authority.** The Royalty Policy Committee is a discretionary committee established under the authority of the Secretary of the Interior (Secretary) and regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2. It has been determined that the Committee is in the public interest in connection with the responsibilities of the Department of the Interior (DOI) under the:

   - Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 *et seq.*), including provisions of the Energy Policy Act of 2005 (P.L. 109-058);
   - Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701 *et seq.*), (1996);
   - Federal Oil and Gas Royalty Management Act, as amended (P.L. 114-94), (2015);
   - Federal Oil and Gas Royalty Simplification and Fairness Act of 1996 (P.L. 104-185);
   - Geothermal Steam Act of 1970 (30 U.S.C. 1001 *et seq.*);
   - Mineral Leasing Act (30 U.S.C. 181 *et seq.*);
   - Mineral Leasing Act for Acquired Lands (30 U.S.C. 351 *et seq.*);
   - The Act of March 3, 1909 (25 U.S.C. 396);
   - The Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);
   - Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);
   - The Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); and
   - The U.S. National Action Plan for the Open Government Partnership and other related authorities.

3. **Objectives and Scope of Activities.** The Secretary seeks to ensure the public receives the full value of the natural resources produced from Federal lands. The Committee will provide advice to the Secretary, through the Assistant Secretary - Land and Minerals Management (ASLM), Assistant Secretary - Indian Affairs (ASIA), and the Director of the Office of Natural Resources Revenue (ONRR), on the fair market value of and on the collection of revenues derived from, the development of energy and mineral resources on Federal and Indian lands.

4. **Description of Duties.** The duties of the Committee are solely advisory in nature. The Committee will, at the request of the Designated Federal Officer (DFO), advise on current and emerging issues related to the determination of fair market value, and the collection of revenue from energy and mineral resources on Federal and Indian lands. At the request of the DFO, the Committee also will advise on the potential impacts of proposed policies and regulations related to revenue collection from such development, including whether a need exists for regulatory reform.

5. **Agency or Official to Whom the Committee Reports.** The Committee will report to the Secretary through the ASLM, ASIA, and the Director of ONRR.

6. **Support.** The ONRR will provide administrative and logistical support for the Committee.

7. **Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Committee's functions are estimated to be $350,000, including all direct and indirect expenses and 3 full-time employees.

8. **Designated Federal Officer.** The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO or alternate DFO will approve or call all Committee and subcommittee meetings, prepare and approve all meeting agendas, attend all Committee and subcommittee meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest, and chair Committee meetings when directed to do so by the Secretary.

9. **Estimated Number and Frequency of Meetings.** The Committee will meet at least once each calendar year, and at such other times as determined necessary by the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Committee is subject to biennial review and will terminate 2 years from the date the Charter is filed, unless prior to that date, it is renewed in accordance with Section 14 of the FACA. The Committee will not meet or take any action without a valid current charter.

12. **Membership and Designation.** The Committee will not exceed 28 members and will be composed of non-Federal and Federal members in order to ensure fair and balanced representation. The Secretary will appoint non-Federal members and their alternates to the Committee to serve up to a 3-year term. Non-Federal members and alternates may not serve as a member or alternate for more than 6 consecutive years. However, after a 2-year break in service, any such non-Federal member or alternate will again be eligible for appointment.

The ASLM and the Director of ONRR, or their designee(s), shall serve as co-Chairs of the Committee.

Federal Members: The Secretary will appoint the following officials as nonvoting, ex-officio members of the Committee:

- A representative of the Secretary's Immediate Office
- Assistant Secretary – Indian Affairs
- Director, Bureau of Indian Affairs
- Director, Bureau of Land Management
- Director, Bureau of Ocean Energy Management
- Director, Bureau of Safety and Environmental Enforcement

These officials may designate a senior official to act on their behalf.

Non-Federal Members: The Secretary will appoint members in the following categories:

- Up to 6 members representing the Governors of States that receive more than $10,000,000 annually in royalty revenues from onshore and offshore Federal leases.

- Up to 4 members representing the Indian Tribes that are engaged in activities subject to:

  (i) the Act of May 11, 1938 (commonly known as the "Indian Mineral Leasing Act of 1938") (25 U.S.C. 396a *et seq.*);

  (ii) Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 *et seq.*);

  (iii) the Indian Mineral Development Act of 1982 (25 U.S.C. 2101 *et seq.*); or

  (iv) any other law relating to mineral development that is specific to one or more Indian Tribes.

- Up to 6 members representing various mineral and/or energy stakeholders in Federal and Indian royalty policy.

- Up to 4 members representing academia and public interest groups.

Each non-Federal member may nominate an alternate member to the Committee. Alternate members must be approved and appointed to the Committee by the Secretary before attending meetings in lieu of primary members. Alternate members will have experience and/or expertise similar to that of the associated primary member.

Members of the Committee serve without compensation. However, while away from their homes or regular places of business, Committee and subcommittee members engaged in Committee or subcommittee business approved by the DFO may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by 5 U.S.C. 5703, in the same manner as persons employed intermittently in Federal Government service.

Any vacancy on the Committee will be filled in the same manner in which the original appointment was made. All members serve at the discretion of the Secretary.

13. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purposes of compiling information, conducting research, and/or drafting recommendations. However, such subcommittees must act only under the direction of the Committee and must report their recommendations to the full Committee for consideration. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

14. **Ethics Responsibilities of Members.** No Committee or subcommittee member or alternate member will participate in any specific party matter (including a lease, license, permit, contract, claim, agreement, or related litigation) with the DOI in which the member or alternate member has a direct financial interest. Members and alternate members will endeavor to avoid any actions that would cause the public to question the integrity of the Committee's operations, activities, or advice. The provisions of this paragraph do not affect any statutory or regulatory ethical obligations to which Federal members (and alternate members) are subject.

15. **Recordkeeping.** The records of the Committee, including formally and informally established subcommittees of the Committee, will be handled in accordance with General Records Schedule 6.2 or other approved Agency records disposition schedule. These records will be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

03-29-2017
Date

Date Filed

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3348

Subject: Concerning the Federal Coal Moratorium

Sec. 1 **Purpose**. The Federal coal leasing program is of critical importance to the economy of the United States, supplying approximately 40 percent of the coal produced in the Nation. On January 15, 2016, Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," was signed and placed a moratorium on the coal leasing program with limited exceptions. Given the critical importance of the Federal coal leasing program to energy security, job creation, and proper conservation stewardship, this Order directs efforts to enhance and improve the Federal coal leasing program.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended. Other statutory authorities for this Order include but are not limited to the following statutes:

a. Mineral Leasing Act, 30 U.S.C. §1181 *et seq*.

b. Mineral Leasing Act for Acquired Lands, 30 U.S.C. § 351 *et seq*.

c. Federal Land Policy and Management Act, 43 U.S.C. 1701-1785.

d. Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328.

Sec. 3 **Background**. Secretary's Order 3338 directs the Bureau of Land Management (BLM) to analyze and "consider potential leasing and management reforms to the current Federal coal program." Secretary's Order 3338 ordered the preparation of a discretionary Programmatic Environmental Impact Statement (PEIS) to analyze potential reforms and ordered a "pause on leasing, with limited exceptions" pending completion of the discretionary Federal Coal Program PEIS. The PEIS is estimated to cost many millions of dollars and would be completed no sooner than 2019, even with robust funding.

Sec. 4 **Revocation of Secretary's Order 3338**. Based upon the Department's review of Secretary's Order 3338, the scoping report for the discretionary Federal Coal Program PEIS issued in January 2017, and other information provided by BLM, I find that the public interest is not served by halting the Federal coal program for an extended time, nor is a PEIS required to consider potential improvements to the program. Accordingly, consistent with the principles of responsible public stewardship entrusted to this office, I revoke Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program."

Sec. 5 **Implementation**. With the revocation of Secretary's Order 3338, BLM is directed to process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of Secretary's Order 3338. All activities associated with the preparation of the Federal Coal Program PEIS shall cease. The Deputy Secretary, Assistant Secretaries, and heads of bureaus and offices are hereby directed to make changes in their policy and guidance documents that are consistent with the revocation of Secretary's Order 3338.

Sec. 6 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7 **Expiration Date**. This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3349

Subject: American Energy Independence

Sec. 1 **Purpose**. This Order implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017 and entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (Department) in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.

Sec. 2 **Authorities**. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and other applicable statutory authorities.

Sec. 3 **Background**. Among other provisions, the March 28, 2017 E.O. directs the Department to review all existing regulations, orders, guidance documents, policies, and any other similar actions that potentially burden the development or utilization of domestically produced energy resources. A plan to carry out the review must be submitted to the Director of the Office of Management and Budget (OMB) and to certain other White House officials within 45 days of the date of the March 28, 2017 E.O. The objective of the review is to identify agency actions that unnecessarily burden the development or utilization of the Nation's energy resources and support action to appropriately and lawfully suspend, revise, or rescind such agency actions as soon as practicable.

The March 28, 2017 E.O. also directs the Department to promptly review certain specific actions recently taken by the Department, in particular Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," and four rules related to onshore oil and gas development.

The March 28, 2017 E.O. also rescinds certain Presidential Actions, reports, and final guidance related to climate change, including:

a. E.O. 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change);

b. Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); and

c. Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

The March 28, 2017 E.O. directs the Department to identify agency actions "related to or arising from" the rescinded Presidential Actions, reports, and guidance, and to initiate a lawful and appropriate process to suspend, revise, or rescind such actions.

The March 28, 2017 E.O. also rescinds the Presidential Memorandum issued on November 3, 2015, entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." That Memorandum directed the Secretary of the Interior, among other Cabinet officials, to undertake a number of actions to implement a landscape-scale mitigation policy, including specific directions to the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) to develop mitigation policies that incorporated compensatory mitigation into planning and permitting processes.

Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 13, 2013, is directly related to the rescinded Presidential Memorandum on mitigation. Secretary's Order 3330 dovetails with the subsequently issued Presidential Memorandum by directing the development and implementation of a landscape-scale mitigation policy for the Department. As directed by the Order, the Secretary received a report in April 2014 entitled, "A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior." The Strategy set forth a number of "deliverables" by nearly every office and bureau within the Department to advance the stated goal of "landscape-scale mitigation." Given the close nexus between the rescinded Presidential Memorandum and Secretary's Order 3330, a thorough reexamination is needed of the policies set out in that Order.

Sec. 4 **Policy**. To begin implementing the March 28, 2017 E.O., I hereby order the following:

a. Revocation of Secretary's Order 3330. I hereby revoke Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 31, 2013. As set forth below, all actions taken pursuant to Secretary's Order 3330 must be reviewed for possible reconsideration, modification, or rescission as appropriate.

b. Review of Department Actions. As set forth in Sec. 5 below, each bureau and office shall review all existing regulations, orders, guidance documents, policies, instructions, notices, implementing actions, and any other similar actions (Department Actions) related to or arising from the Presidential Actions set forth above and, to the extent deemed necessary and permitted by law, initiate an appropriate process to suspend, revise, or rescind any such actions, consistent with the policies set forth in the March 28, 2017 E.O.

Sec. 5 **Implementation**. The following actions shall be taken pursuant to this Order:

a. Mitigation Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action for review.

b. Climate Change Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O., in particular: Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change); Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); Presidential Memorandum of September 21, 2016 (Climate Change and National Security); Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions); and the Council on Environmental Quality's final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 *Fed. Reg.* 51866 (August 5, 2016).

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions identified in the review required by subsection (i) above.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action, for review.

c. Review of Other Department Actions Impacting Energy Development.

(i) As previously announced by the Department, BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015).

(ii) Within 21 days, the Director, BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iii) Within 21 days, the Director, National Park Service shall review the final rule entitled, "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (Nov. 4, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iv) Within 21 days, the Director, FWS shall review the final rule entitled, "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (Nov. 14, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(v) Within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

(vi) Within 35 days, the Deputy Secretary shall provide to me a plan to complete the review of Department Actions contemplated by Section 2 of the March 28, 2017 E.O. The plan must meet all objectives and time lines set forth in the March 28, 2017 E.O.

Sec. 5 **Effect of the Order**. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies,

instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 6 **Expiration Date.** This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.

Secretary of the Interior

Date: MAR 29 2017

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

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PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

Conversation Contents

Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Attachments:

/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/1.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/1.2 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/2.2 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/3.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx
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/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/5.1 BLM EO 13783 Energy Report 7.20.2017.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/5.2 BLM Report Under E.O. 13783.xlsx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/10.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/12.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/12.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/12.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/14.4 BLM Report Under E.O. 13783 (1).xlsx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/16.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/16.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/16.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/17.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/18.1 image.png
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec

Sec/18.2 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/18.3 BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/19.1 image.png
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/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/21.1 image.png
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/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/22.2 BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/24.1 BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx
/1. Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec/24.2 BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 15:48:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

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If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

> Peter,
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> As a follow-up to our conversation yesterday, I added some comments to the BLM's report on EO 13783 based on my understanding of what Exec Sec would like to see. My notes are not comprehensive but will hopefully give you an idea. In general, I think they are looking for more focus on what the BLM is doing to reduce the potential burden and how these actions support what the Secretary is trying to achieve.
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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:08:09 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

Folks:

Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

As a reminder, I'm on annual leave tomorrow and Friday. Kelly Orr will serve as Acting CoS while I'm away.

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Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
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From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 16:16:58 GMT-0600 (MDT)
To:	Richard Cardinale <richard_cardinale@ios.doi.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_Track Changes.docx BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN.docx

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"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Wed Jul 19 2017 16:26:02 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks, Peter.

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"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 14:05:23 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report 7.20.2017.docx BLM Report Under E.O. 13783.xlsx

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If you have any questions for me please let me know.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Kelly,

The version you attached does not appear to address any of my questions/comments or incorporate my edits. Just wanted to check to make certain that you attached the correct version.

Thanks
Rich

On Thu, Jul 20, 2017 at 4:05 PM, Orr, Kelly <korr@blm.gov> wrote:
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> > Cc: Kelly Orr <korr@blm.gov>
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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 15:05:38 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

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Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
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To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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Office of the Assistant Secretary - Land and Minerals Management
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Sent:	Thu Jul 20 2017 15:11:13 GMT-0600 (MDT)
To:	"Moran, Jill" <jcmoran@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

I don't because I don't have earlier versions of it. In Peter's 6:16 email last night he attached a clean and track changes version. Perhaps that track changes one is responsive to Rich's edits and for some reason the clean version wasn't?

Sent from my iPhone

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Sent:	Thu Jul 20 2017 15:12:08 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>, "Mali, Peter" <pmali@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC (1) JM.docx

Kelly,

Our emails crossed over. Attached is the version with ASLM edits.

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To:	"Orr, Kelly" <korr@blm.gov>
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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Kelly,

When you open the spreadsheet, do you see a series of lines that stretch across the top portion (columns c through g)? When I open it, I see such lines.

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If you have questions or need information, please call my cell (202-503-7460).

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> Thanks,
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> --
> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 16:56:15 GMT-0600 (MDT)
To:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

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Inline image 1

Let me know if there's anything else I can do to help on this item.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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> > >
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Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

Richard Cardinale <richard_cardinale@ios.doi.gov>

From:	Richard Cardinale <richard_cardinale@ios.doi.gov>
Sent:	Fri Jul 21 2017 06:09:24 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks.

Sent from my iPhone

On Jul 20, 2017, at 6:57 PM, Orr, Kelly <korr@blm.gov> wrote:

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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Fri Jul 21 2017 09:32:56 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>

CC:	"Thurn, Linda" <lthurn@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx BLM Report Under E.O. 13783 (1).xlsx

Mike - Here is the copy of our EO 13783 Report that went to ASLM (attached is a track changes version that reflects Rich and Jill's edits, and a clean copy).

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
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korr@blm.gov

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From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
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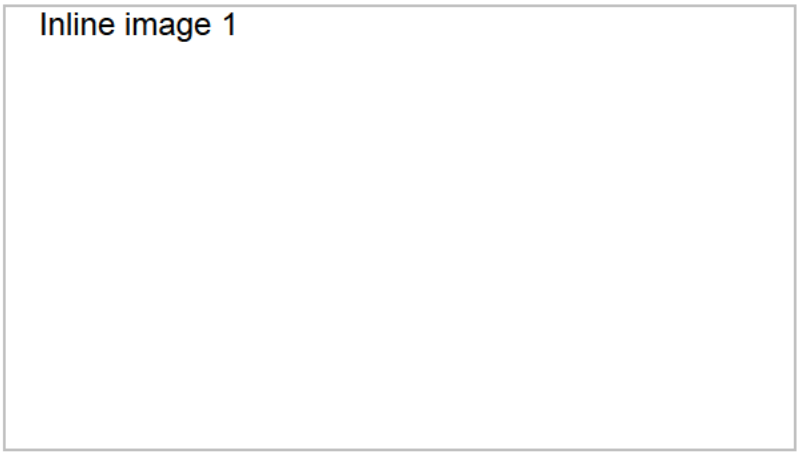

Let me know if there's anything else I can do to help on this item.

Kelly Orr

From: jeanett@blm.gov
To: king@westernlaw.org
Subject: FOIA Request 2017-00883 Release 1 Part B
Date: Monday, September 11, 2017 8:13:52 AM
Attachments: 2017-00883_Interim Response_1_Redacted_Part2.pdf

---

Ms. King,

Please see the attached PDF file of responsive documents to your FOIA request. This release is the first in a series of rolling releases. The BLM's response letter and Part A of this release was sent in a separate email.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

Advisor to the Director's Office
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One of the concerns raised by Exec Sec. is the regulatory descriptions look and read as if they were taken from materials previously prepared (during the last

Administration). Hence, they tend to speaking in very positive terms about the what the rules do, rather than focusing on the fact that this administration views many of these rules as creating unnecessary regulatory burdens. I would begin the narratives by explaining exactly that the Administration's concerns are with each of the rules and then explain why the rule is either being rescinded or reviewed.

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> **Jill Moran**
> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 08:53:21 GMT-0600 (MDT)
To:	"Mali, Peter" <pmali@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Nikki Moore <nmoore@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Peter/Kelly,

Would it be possible for you to send us the latest version of this that incorporates ASLM comments?

Thanks, Shelley

On Wed, Jul 19, 2017 at 6:08 PM, Mali, Peter <pmali@blm.gov> wrote:

> Folks:
>
> Thank you for your work responding to the feedback we received from Exec Sec/ASLM on our E.O. 13783 report. Attached below is the latest version of the narrative, which I just sent to the BLM principals. Please use the attached "clean" version to begin populating the E.O. 13783 spreadsheet that Glenda Valdez shared earlier today (use URL below if hyperlink doesn't work):
>
> https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQqRRFtq9v4YhpqwtCDZ3cpAy9OIcq0/edit?usp=sharing
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--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010

Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:02 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Here you go! Sorry for the delay.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

---------- Forwarded message ----------
From: **Orr, Kelly** <korr@blm.gov>
Date: Thu, Jul 20, 2017 at 6:56 PM
Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
To: "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>

Rich - I reviewed your version and the edits from you and Jill looked good.

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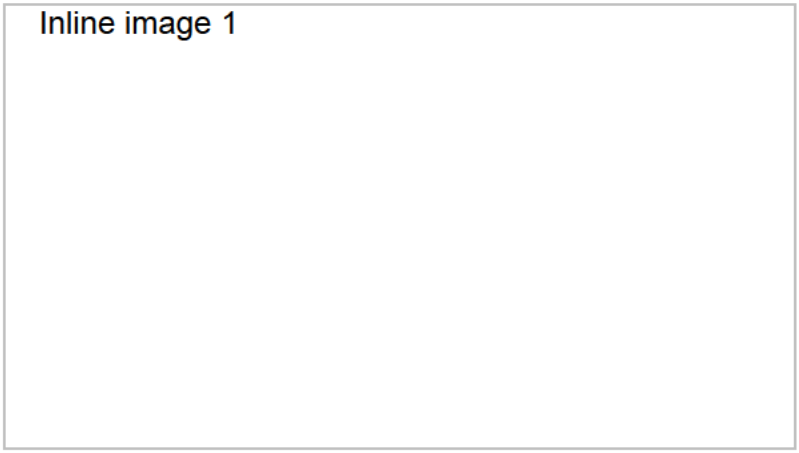

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Peter Mali
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Mobile: (202) 503-7460

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Office of the Assistant Secretary - Land and Minerals Management
(202) 208-4114

"McGinnis, Shelley" <smcginnis@blm.gov>

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Sent:	Mon Jul 24 2017 13:16:52 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

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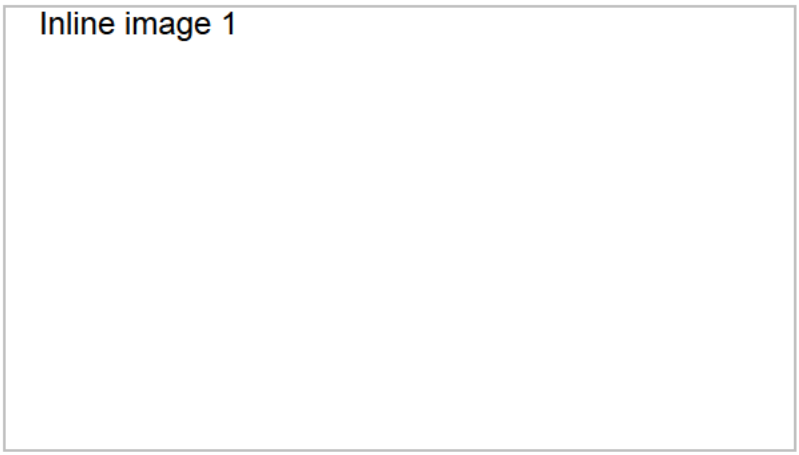
> 
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"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 14:59:17 GMT-0600 (MDT)
To:	Thomas Bartholomew <tbarthol@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx

Thomas -

I don't think this report has much nexus to stuff in 200 since it's related to an EO on energy, but Peter wanted me to share it with you in case it was helpful in the BLM priorities exercise that's due tomorrow.

Thanks,

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From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Jul 25 2017 07:03:53 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Tue, Jul 18, 2017 at 1:02 PM
Subject: Re: Time Sensitive: BLM's EO 13783 report
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

Rich

On Tue, Jul 18, 2017 at 10:34 AM, Moran, Jill <jcmoran@blm.gov> wrote:

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> ***Energy Program Analyst - BLM Liaison***
> Office of the Assistant Secretary - Land and Minerals Management
> **(202) 208-4114**

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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Tue Jul 25 2017 07:33:49 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png BLM Report Under E.O. 13783 (2).xlsx BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (1).docx

Shelley - this made me realize I never carried over the edits in the narrative to the spreadsheet.

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1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

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> > Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
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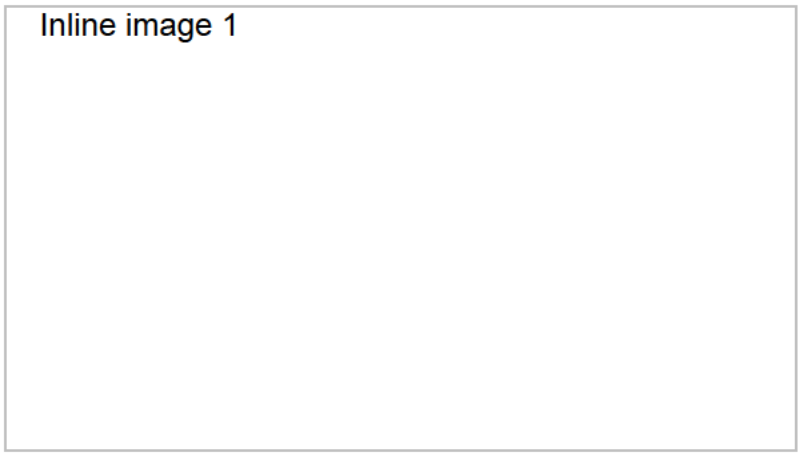

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"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Tue Jul 25 2017 10:03:24 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	image.png

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https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

"Orr, Kelly" <korr@blm.gov>

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Subject:	Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

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> Washington DC 20240
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> > Subject: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
> > To: Michael Nedd <mnedd@blm.gov>, John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
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To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, "Joseph (Gene) Seidlitz" <gseidlit@blm.gov>

(b) (5) [redacted]

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Office of the Assistant Secretary - Land and Minerals Management
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<BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits.docx>

<BLM EO 13783 Energy Report_7.20 Track Changes ASLM.docx>

Shelley McGinnis <smcginnis@blm.gov>

From:	Shelley McGinnis <smcginnis@blm.gov>
Sent:	Wed Jul 26 2017 12:23:52 GMT-0600 (MDT)
To:	korr@blm.gov
CC:	tspisak@blm.gov, jkalish@blm.gov
Subject:	Fwd: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec
Attachments:	BLM EO 13783 Energy Report_7.20 CLEAN with ASLM edits (2).docx BLM Report Under E.O. 13783 - Updated 7.25.2017.xlsx

Kelly, the attached version of the report has the language about the 17 recommendations (actions).

Sent from my iPhone

Begin forwarded message:

From: "Orr, Kelly" <korr@blm.gov>
Date: July 25, 2017 at 2:00:17 PM EDT
To: Richard Cardinale <richard_cardinale@ios.doi.gov>
Cc: "Mali, Peter" <pmali@blm.gov>, Jill Moran <jcmoran@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
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Sent: Wed Jul 26 2017 12:40:59 GMT-0600 (MDT)
To: Shelley McGinnis <smcginnis@blm.gov>

CC: Timothy Spisak <tspisak@blm.gov>, John Kalish <jkalish@blm.gov>

Subject: Re: Latest Draft of BLM's E.O. 13783 Report -- Revised per Feedback from Exec Sec

Thanks Shelley.

I've changed that paragraph to read:

. (b) (5) [redacted]

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Conversation Contents

Latest Draft of BLM's E.O. 13783 Report

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Jul 24 2017 10:10:06 GMT-0600 (MDT)
To:	Jill Moran <jcmoran@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, Kelly Orr <korr@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Latest Draft of BLM's E.O. 13783 Report

Hi Jill,

Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.

Thanks, Shelley

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 11:34:30 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Jill Moran <jcmoran@blm.gov>, "Mali, Peter" <pmali@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Latest Draft of BLM's E.O. 13783 Report

Shelley - just forwarded it to you on a separate chain.

Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Mon, Jul 24, 2017 at 12:10 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Hi Jill,
>
> Would it be possible for you to send us the latest version of this that includes ASLM comments? We need it for another priority exercise that is due tomorrow.
>
> Thanks, Shelley
>
> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
> 1849 C Street NW, Room 5625
> Washington, DC 20240
> Office: 202-208-6551
> Cell: 202-578-3010
> Email: smcginnis@blm.gov

Conversation Contents

FW: Draft Report under E.O. 13783

Attachments:

/3. FW: Draft Report under E.O. 13783/1.1 Template for Input into July Draft Report on Energy FINAL.docx
/3. FW: Draft Report under E.O. 13783/1.2 Cason Memo EO 13783.pdf
/3. FW: Draft Report under E.O. 13783/2.1 Template for Input into July Draft Report on Energy FINAL.docx
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/3. FW: Draft Report under E.O. 13783/3.1 Input into July Draft Report on Energy_WO300_06JUL17.docx
/3. FW: Draft Report under E.O. 13783/5.1 EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx
/3. FW: Draft Report under E.O. 13783/7.1 AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx
/3. FW: Draft Report under E.O. 13783/8.1 BLM_Sec2_EO13783 (3).xlsx
/3. FW: Draft Report under E.O. 13783/9.1 BLM_Sec2_EO13783 (3) (2).xlsx

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 03 2017 09:25:01 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, korr@blm.gov, Jeff Brune <jbrune@blm.gov>, Timothy Shannon <tshannon@blm.gov>
CC:	John Ruhs <jruhs@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>
Subject:	FW: Draft Report under E.O. 13783
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Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

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To: Howarth, Robert <robert_howarth@ios.doi.gov>
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Subject: Re: Draft Report under E.O. 13783

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Thank you!
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> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
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--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 05 2017 05:11:02 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	"Kristin Bail," <kbail@blm.gov>, Tim Spisak <tspisak@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
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Attachments:	Template for Input into July Draft Report on Energy FINAL.docx Cason Memo EO 13783.pdf

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(202) 273-4680 - office
(202) 738-6065 - cell

"Pionke, Erica" <epionke@blm.gov>

From:	"Pionke, Erica" <epionke@blm.gov>
Sent:	Thu Jul 06 2017 13:46:57 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783
Attachments:	Input into July Draft Report on Energy_WO300_06JUL17.docx

Peter,

Here is WO-300's input on the Draft Report under E.O. 13783.

Please let me know if you have any questions or need changes.

Thanks!

Erica

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>
> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
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>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
> tspisak@blm.gov
> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** Michael Nedd [mailto:mnedd@blm.gov]
> **Sent:** Wednesday, July 5, 2017 7:11 AM

To: Peter Mali <pmali@blm.gov>
Cc: Kristin Bail, <kbail@blm.gov>; Tim Spisak <tspisak@blm.gov>; Kelly Orr <korr@blm.gov>; Timothy Shannon <tshannon@blm.gov>; Jeff Brune <jbrune@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

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Elizabeth K. Appel
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(202) 273-4680 - office
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--

Erica Pionke, JD, PMP

WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
Direct: (202) 912-7219
Cell: (202) 570-2624
epionke@blm.gov

Find the BLM on social media!
BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Fri Jul 07 2017 15:26:38 GMT-0600 (MDT)
To:	"Pionke, Erica" <epionke@blm.gov>
CC:	James Scrivner <jscrivne@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, Alfred Elser <aelser@blm.gov>, "Buhler, Don" <dbuhler@blm.gov>, Robert Jolley <rbjolley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Kristin Bail <kbail@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: FW: Draft Report under E.O. 13783

Thanks, all!

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Thu, Jul 6, 2017 at 3:46 PM, Pionke, Erica <epionke@blm.gov> wrote:

> Peter,
>
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Timothy 'Tim' R. Spisak
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From: Appel, Elizabeth [mailto:elizabeth.appel@bia.gov]
Sent: Thursday, June 29, 2017 12:18 PM
To: Howarth, Robert <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>; Katharine Macgregor <katharine_macgregor@ios.doi.gov>; Scott Cameron <scott_cameron@ios.doi.gov>; Virginia Johnson <virginia_johnson@ios.doi.gov>; Michael Black <Mike.Black@bia.gov>; Michael Reynolds <Michael_Reynolds@nps.gov>; Gregory Sheehan <gregory_sheehan@fws.gov>; Weldon Loudermilk <weldon.loudermilk@bia.gov>; Dearman, Tony <tony.dearman@bie.edu>; Michael Nedd <mnedd@blm.gov>; Scott Angelle <scott.angelle@bsee.gov>; Walter Cruickshank <walter.cruickshank@boem.gov>; Glenda Owens <gowens@osmre.gov>; William Werkheiser <whwerkhe@usgs.gov>; Alan Mikkelsen <amikkelsen@usbr.gov>; Jorjani, Daniel <daniel_jorjani@ios.doi.gov>; Wackowski, Stephen <stephen_wackowski@ios.doi.gov>; Nikolao Pula <nikolao_pula@ios.doi.gov>; Vincent Devito <vincent_devito@ios.doi.gov>; James Cason <james_cason@ios.doi.gov>; Juliette Lillie <juliette_lillie@ios.doi.gov>; Rich Cardinale <Richard_Cardinale@ios.doi.gov>; Kerry Rae <kerry_rae@ios.doi.gov>; Maureen Foster <maureen_foster@nps.gov>; Peter Mali <pmali@blm.gov>; Lillie, Thomas <thomas.lillie@bsee.gov>; Emily Lindow <emily.lindow@boem.gov>; Judy Nowakowski <jnowakowski@usgs.gov>; James Hess <jhess@usbr.gov>; Laura Rigas <laura_rigas@ios.doi.gov>; Gavin Clarkson <gavin.clarkson@bia.gov>; Downey Magallanes <downey_magallanes@ios.doi.gov>; Beverly (Grace) Stephens <grace_stephens@nps.gov>; Charisa Morris <charisa_morris@fws.gov>
Subject: Re: Draft Report under E.O. 13783

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Thank you!
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> Robert Howarth
> Deputy Director for Correspondence and FOIA Management
> Office of the Executive Secretariat and Regulatory Affairs
> Department of the Interior
> 1849 C Street, NW
> Washington, DC 20240
> 202-208-3181
> 202-208-4451 (direct)
> 202-549-8961 (cell)

--
Elizabeth K. Appel
Office of Regulatory Affairs & Collaborative Action
Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
(202) 738-6065 - cell

--

Erica Pionke, JD, PMP
WO-301 Realty Specialist - Roads, Railroads, Pipelines
and Diversity Change Agent
Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC 20003
Direct: (202) 912-7219
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epionke@blm.gov

Find the BLM on social media!
BLM.gov, Facebook, Tumblr, Instagram, Twitter,
Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Mon Jul 10 2017 10:19:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>
CC:	Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>, Timothy Shannon <tshannon@blm.gov>
Subject:	RE: Draft Report under E.O. 13783
Attachments:	EO13783 Energy Report_DRAFT as of 5.30pm_071017 MDN.docx

Hi all,

Thx to you and your team for moving this along. I believe we're almost there and attached are my comments and edits. The goal is to turn this around ASAP.

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Friday, July 7, 2017 5:44 PM
To: Michael Nedd <mnedd@blm.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>; John Ruhs <jruhs@blm.gov>; Kristin Bail <kbail@blm.gov>; Timothy Spisak <tspisak@blm.gov>
Subject: Fwd: Draft Report under E.O. 13783

Mike:

Per your request, attached is a draft of our input to date re: E.O. 13783. This reflects input from 200 and 300.

I've spoken to 800 about contributions that they might be able to report on re: Sections F & G. More to come on that next week.

Have a great weekend,

Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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Regards, Rob

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Department of the Interior
1849 C Street, NW
Washington, DC 20240
202-208-3181
202-208-4451 (direct)
202-549-8961 (cell)

"Shannon, Timothy" <tshannon@blm.gov>

From:	"Shannon, Timothy" <tshannon@blm.gov>
Sent:	Mon Jul 10 2017 10:45:04 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Peter Mali <pmali@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Chris McAlear <cmcalear@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, John Ruhs <jruhs@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Please send comments and edits in track changes for respective directorates to me and I will combine to the final version and clear with WO100. Thanks TR.

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> Hi all,
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1849 C Street, NW
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202-208-4451 (direct)
202-549-8961 (cell)

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 19 2017 11:38:13 GMT-0600 (MDT)
To:	Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
CC:	"Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	AgencyName_Sec2_EO13783 TEMPLATE FROM OMB.xlsx

ADs for 200/300/400:

Regarding the spreadsheet I referenced yesterday (i.e., an additional deliverable under BLM's report on E.O. 13783), I'm told that Exec Sec is anxious to get this product. This spreadsheet is apparently intended to be an attachment to the narrative report (i.e., the Google Doc you worked on yesterday).

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Peter

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Mobile: (202) 503-7460

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From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 12:39:33 GMT-0600 (MDT)
To:	"Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Fwd: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3).xlsx

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Thanks, Shelley

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From: **Valdez, Glenda** <gavaldez@blm.gov>
Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

---------- Forwarded message ----------

From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
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--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Jul 19 2017 15:11:59 GMT-0600 (MDT)
To:	Christopher McAlear <cmcalear@blm.gov>, Nikki Moore <nmoore@blm.gov>
CC:	"Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783
Attachments:	BLM_Sec2_EO13783 (3) (2).xlsx

Chris/Nikki - did you previously complete a spreadsheet similar to the attached for BLM Manual 6220, BLM Manual 6400, and BLM Manual 6280? If so, could you please email it?

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Acting Chief of Staff
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Office: (202) 208-4586
Mobile: (202) 503-7460

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Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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Nikki Moore <nmoore@blm.gov>

From:	Nikki Moore <nmoore@blm.gov>
Sent:	Wed Jul 19 2017 15:15:29 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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<BLM_Sec2_EO13783 (3) (2).xlsx>

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 11:05:47 GMT-0600 (MDT)
To:	Nikki Moore <nmoore@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Jared Kalt <jkalt@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
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Hi Kelly,

Glenda set up the spreadsheet as a Google doc for the divisions to populate. WO-300 has completed the entries for our divisions. I am not sure of the status of the other divisions. The link to the Google doc is below:

https://docs.google.com/a/doi.gov/spreadsheets/d/18arBW-LUs2irjQgRRFtg9v4YhpgwtCDZ3cpAy9OIcq0/edit?usp=sharing

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Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan

<gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason <james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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>> Washington, DC 20240
>> 202-208-3181
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Glenda Valdez
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Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

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"Bartholomew, Thomas" <tbarthol@blm.gov>

From:	"Bartholomew, Thomas" <tbarthol@blm.gov>
Sent:	Thu Jul 20 2017 11:31:18 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

I'm checking with Kristin on whether she's good with what has been added to the table. Will get back with you shortly.

Best,

T

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To: Shelley McGinnis <smcginnis@blm.gov>

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Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

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<BLM_Sec2_EO13783 (3) (2).xlsx>

--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate

Washington, DC
202-208-5922

"McAlear, Christopher" <cmcalear@blm.gov>

From:	"McAlear, Christopher" <cmcalear@blm.gov>
Sent:	Thu Jul 20 2017 12:09:25 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

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Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

Kelly Orr <korr@blm.gov>

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Shelley - (b) (5) [redacted]

Thomas - please let Glenda and I know as soon as you have Kristin's OK so we can send this upstairs.

Thanks,
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Sent from my iPhone

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Peter

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From: **Appel, Elizabeth** <elizabeth.appel@bia.gov>
Date: Fri, Jul 7, 2017 at 9:18 AM
Subject: Re: Draft Report under E.O. 13783
To: "Howarth, Robert" <robert_howarth@ios.doi.gov>
Cc: Amy Holley <amy_holley@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>, Scott Cameron <scott_cameron@ios.doi.gov>, Virginia Johnson <virginia_johnson@ios.doi.gov>, Michael Black <Mike.Black@bia.gov>, Michael Reynolds <Michael_Reynolds@nps.gov>, Gregory Sheehan <gregory_sheehan@fws.gov>, Weldon Loudermilk <weldon.loudermilk@bia.gov>, "Dearman, Tony" <tony.dearman@bie.edu>, Michael Nedd <mnedd@blm.gov>, Scott Angelle <scott.angelle@bsee.gov>, Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, William Werkheiser <whwerkhe@usgs.gov>, Alan Mikkelsen <amikkelsen@usbr.gov>, "Jorjani, Daniel" <daniel_jorjani@ios.doi.gov>, "Wackowski, Stephen" <stephen_wackowski@ios.doi.gov>, Nikolao Pula <nikolao_pula@ios.doi.gov>, Vincent Devito <vincent_devito@ios.doi.gov>, James Cason

<james_cason@ios.doi.gov>, Juliette Lillie <juliette_lillie@ios.doi.gov>, Rich Cardinale <Richard_Cardinale@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Maureen Foster <maureen_foster@nps.gov>, Peter Mali <pmali@blm.gov>, "Lillie, Thomas" <thomas.lillie@bsee.gov>, Emily Lindow <emily.lindow@boem.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, James Hess <jhess@usbr.gov>, Laura Rigas <laura_rigas@ios.doi.gov>, Gavin Clarkson <gavin.clarkson@bia.gov>, Downey Magallanes <downey_magallanes@ios.doi.gov>, "Beverly (Grace) Stephens" <grace_stephens@nps.gov>, Charisa Morris <charisa_morris@fws.gov>

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> > Robert Howarth
> > Deputy Director for Correspondence and FOIA Management
> > Office of the Executive Secretariat and Regulatory Affairs
> > Department of the Interior
> > 1849 C Street, NW
> > Washington, DC 20240
> > 202-208-3181
> > 202-208-4451 (direct)
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>
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Elizabeth K. Appel
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Office of the Assistant Secretary - Indian Affairs
(202) 273-4680 - office
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Glenda Valdez
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gavaldez@blm.gov

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Christopher McAlear
Assistant Director
National Conservation Lands
and Community Partnerships
(W) 202-208-4731
(C) 775-722-9539

"Bartholomew, Thomas" <tbarthol@blm.gov>

From: "Bartholomew, Thomas" <tbarthol@blm.gov>
Sent: Thu Jul 20 2017 12:58:23 GMT-0600 (MDT)
To: Kelly Orr <korr@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject: Re: Draft Report under E.O. 13783

WO200 is good.

Best,

T

On Thu, Jul 20, 2017 at 2:17 PM, Kelly Orr <korr@blm.gov> wrote:

> Thanks Chris.
>
> Shelley - (b) (5) [redacted]
>
> Thomas - please let Glenda and I know as soon as you have Kristin's OK so we can send this upstairs.
>
> Thanks,
> Kelly
>
> Sent from my iPhone
>
> On Jul 20, 2017, at 2:09 PM, McAlear, Christopher <cmcalear@blm.gov> wrote:
>
> > WO 400 has updated spreadsheet. We may need to add something later when we see WO 200 info on mitigation but for now we are done.
> >
> > Chris m
> >
> > On Thu, Jul 20, 2017 at 1:05 PM, Orr, Kelly <korr@blm.gov> wrote:
> > Shelley et al. -

Wondering if you guys could give me an update on the spreadsheet for EO 13783. In the notes that Peter left for me and sent to Rich he indicated that 200, 300, and 400 were still populating the spreadsheet.

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Thanks,

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Wed, Jul 19, 2017 at 5:15 PM, Nikki Moore <nmoore@blm.gov> wrote:

Hi Shelley,

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Nikki Moore
Acting Deputy Assistant Director,
National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington DC
202.219.3180 (office)
202.288.9114 (cell)

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Stewart was here as Chief of Staff.

Thanks, Shelley

---------- Forwarded message ----------
From: **Valdez, Glenda** <gavaldez@blm.gov>
Date: Wed, Jul 19, 2017 at 2:33 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Shelley McGinnis <smcginnis@blm.gov>

---------- Forwarded message ----------
From: **Mali, Peter** <pmali@blm.gov>
Date: Wed, Jul 19, 2017 at 1:38 PM
Subject: Fwd: Draft Report under E.O. 13783
To: Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>
Cc: "Valdez, Glenda" <gavaldez@blm.gov>, Rachel Wootton <rwootton@blm.gov>, Kelly Orr <korr@blm.gov>

ADs for 200/300/400:

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(W) 202-208-4731
(C) 775-722-9539

--
Thomas Bartholomew
Resource Advisor - WO200
Bureau of Land Management
Resources and Planning Directorate
Washington, DC
202-208-5922

"Moore, Nikki" <nmoore@blm.gov>

From: "Moore, Nikki" <nmoore@blm.gov>

Sent:	Fri Jul 21 2017 11:12:05 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, "Mali, Peter" <pmali@blm.gov>, "Wootton, Rachel" <rwootton@blm.gov>, Glenda Valdez <gavaldez@blm.gov>
Subject:	Re: Draft Report under E.O. 13783

Hi Kelly,

Can you please copy me on these. Thanks!

Nikki Moore
Acting Deputy Assistant Director, National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington D.C.
202.219.3180 (office)
202.740.0835 (cell)

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>> Date: Wed, Jul 19, 2017 at 2:33 PM
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Agency	Sub-agency	RIN Agency Identifier (If applicable)	Referenced Recommendation Number	Agency Action Title	Type of Agency Action	Preamble Summary	Timeframe		Energy Independency Affected	Identified in EO 13771 and/or EO 13777	Costs or Cost Savings (Present Value Monetized Estimates over year in 2016 dollars)						Length of Time that Cost Savings Occur (in years)	How Implementation will be Tracked	Mandated by Law	Necessary for Public Interest	Consistent with the Policy Set Forth in Sect ion 1 of EO 13783	Responded to Reviewed
							Expected Start Date (XX/20XX)	Expected Finalization (XX/20XX)			Primary Estimate		Range Favorable								
													Low Estimate		High Estimate						
											7 percent	3 percent	7 percent	3 percent	7 percent	3 percent					
XXXX	YYY	AAAA-AA00	1	ZZZZZ	Guidance Document	ABCDE	10/2017	04/2018	Natural Gas	EO 13771	$75	$30	$10	$5	$150	$50	5	AAAAEEE	Yes	Yes	No	Yes

(b) (5)

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(b) (5)

(b) (5)

Conversation Contents

Fwd: BLM Narrative to Accompany Spreadsheet

Attachments:

/4. Fwd: BLM Narrative to Accompany Spreadsheet/2.1 BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

"Moran, Jill" <jcmoran@blm.gov>

From:	"Moran, Jill" <jcmoran@blm.gov>
Sent:	Thu Jul 20 2017 10:18:47 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
CC:	Peter Mali <pmali@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet

Hi Kelly,

I am working with Rich on the BLM's narrative, but it looks like Peter did not send the spreadsheet to Rich. Do you know that status of that? I'm available to chat too if that would be helpful.

Thanks,
Jill

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

--
Jill Moran
Energy Program Analyst - BLM Liaison
Office of the Assistant Secretary - Land and Minerals Management

"Cardinale, Richard" <richard_cardinale@ios.doi.gov>

From:	"Cardinale, Richard" <richard_cardinale@ios.doi.gov>
Sent:	Thu Jul 20 2017 15:08:49 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Fwd: BLM Narrative to Accompany Spreadsheet
Attachments:	BLM EO 13783 Energy Report_REVISED per feedback from Exec Sec and ASLM_DRAFT as of 5pm_07.19.2017_CLEAN (2) RTC.docx

---------- Forwarded message ----------
From: **Cardinale, Richard** <richard_cardinale@ios.doi.gov>
Date: Thu, Jul 20, 2017 at 10:55 AM
Subject: BLM Narrative to Accompany Spreadsheet
To: "Moran, Jill" <jcmoran@blm.gov>
Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>

Jill,

Per our conversation, attached please find the narrative with my proposed edits. Please work with the BLM to ensure that my revisions don't result in any unintended substantive changes. Also, please have them send us the spreadsheet ASAP. Thanks.

Rich

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Conversation Contents

BLM E.O 13783 cleaned up version

Attachments:

/5. BLM E.O 13783 cleaned up version/1.1 BLM Report Under E.O. 13783.xlsx

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:40:46 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	BLM E.O 13783 cleaned up version
Attachments:	BLM Report Under E.O. 13783.xlsx

--
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

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Conversation Contents

EO 13783 Spreadsheet - Update to Text in One of the Cells

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Thu Jul 20 2017 13:13:53 GMT-0600 (MDT)
To:	Glenda Valdez <gavaldez@blm.gov>
Subject:	EO 13783 Spreadsheet - Update to Text in One of the Cells

Glenda,

Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:

(b) (5)



Kelly Orr
Advisor to the Director's Office
Bureau of Land Management
1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

"Valdez, Glenda" <gavaldez@blm.gov>

From:	"Valdez, Glenda" <gavaldez@blm.gov>
Sent:	Thu Jul 20 2017 13:17:16 GMT-0600 (MDT)
To:	"Orr, Kelly" <korr@blm.gov>
Subject:	Re: EO 13783 Spreadsheet - Update to Text in One of the Cells

Ok will do

On Thu, Jul 20, 2017 at 3:13 PM, Orr, Kelly <korr@blm.gov> wrote:

> Glenda,
>
> Can you replace the text in the following cell with this text - cell G12, the narrative on the IM on Waste Mine Methane Policy IM 2017-037:
>
> (b) (5) [redacted]
>
> Kelly Orr
> Advisor to the Director's Office
> Bureau of Land Management
> 1849 C St NW, Rm. 5648
> Washington DC 20240
> Office: 202-208-6262
> Mobile: 202-510-5119
> korr@blm.gov

--

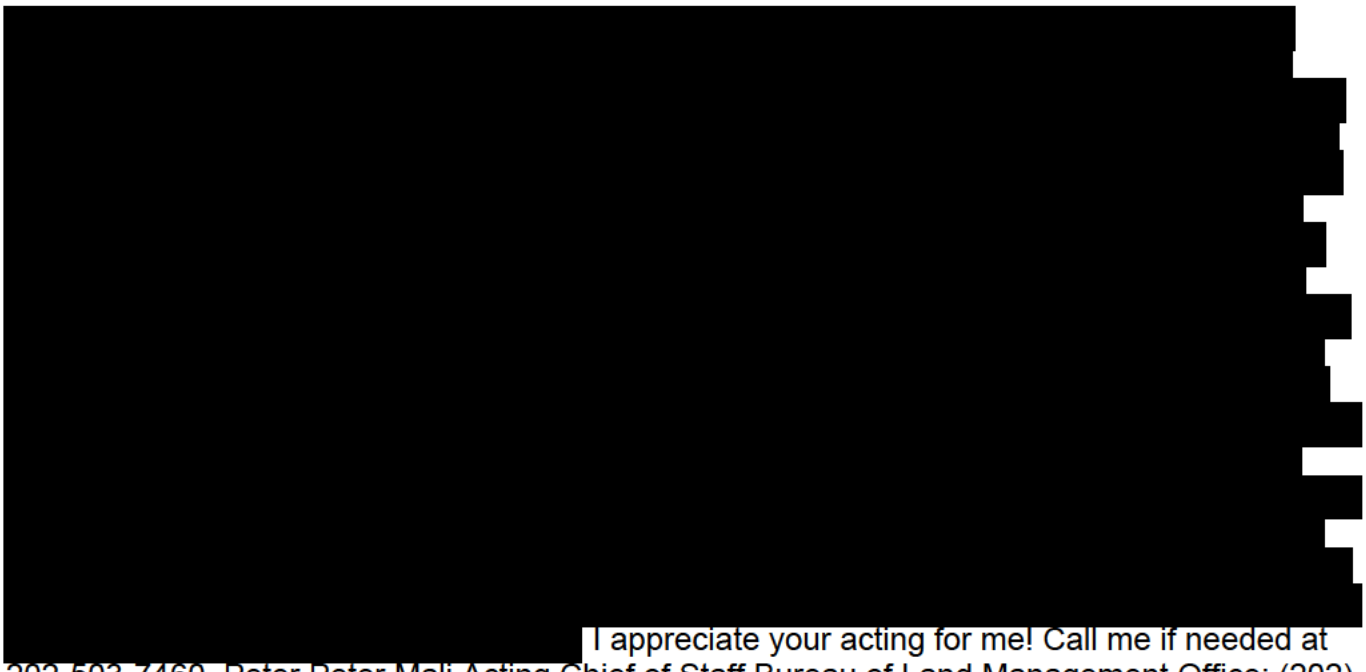
Glenda Valdez
Administrative Intern
Office of the Director
1849 C St NW Rm 5641
Washington, DC 20240
Office: 202 208 4019
gavaldez@blm.gov

Conversation Contents

Bulletized List

Peter Mali <pmali@blm.gov>

From:	Peter Mali <pmali@blm.gov>
Sent:	Thu Jul 20 2017 05:58:50 GMT-0600 (MDT)
To:	Kelly Orr <korr@blm.gov>
Subject:	Bulletized List



I appreciate your acting for me! Call me if needed at 202-503-7460. Peter Peter Mali Acting Chief of Staff Bureau of Land Management Office: (202) 208-4586 Mobile: (202) 503-7460 Sent from my iPhone

"Orr, Kelly" <korr@blm.gov>

From:	"Orr, Kelly" <korr@blm.gov>
Sent:	Mon Jul 24 2017 12:46:17 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
Subject:	Re: Bulletized List

Peter - for our discussion this afternoon to help with handing the torch back to you as COS.

Recaps and updates on moving items + new items are in red text below.

Kelly Orr
Advisor to the Director's Office
Bureau of Land Management

1849 C St NW, Rm. 5648
Washington DC 20240
Office: 202-208-6262
Mobile: 202-510-5119
korr@blm.gov

On Thu, Jul 20, 2017 at 7:58 AM, Peter Mali <pmali@blm.gov> wrote:

[redacted]

[redacted]

- [redacted]
- [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
- [redacted]
  - [redacted]
  - [redacted]

> That's all I have on my list for now. I'll probably have a few other dribs and drabs, which I'll send you later.
>
> I appreciate your acting for me! Call me if needed at 202-503-7460.
>
> Peter
>
> Peter Mali
> Acting Chief of Staff
> Bureau of Land Management
> Office: (202) 208-4586
> Mobile: (202) 503-7460
>
> Sent from my iPhone

Conversation Contents

BLM Report Under E.O. 13783 - Invitation to edit

"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>

From:	"Glenda Valdez (via Google Sheets)" <drive-shares-noreply@google.com>
Sent:	Wed Jul 19 2017 11:04:34 GMT-0600 (MDT)
To:	<korr@blm.gov>
CC:	<tspisak@blm.gov>, <jkalish@blm.gov>, <kbail@blm.gov>, <stryon@blm.gov>, <kkelleh@blm.gov>, <pmali@blm.gov>, <rwootton@blm.gov>, <cmcalear@blm.gov>
Subject:	BLM Report Under E.O. 13783 - Invitation to edit

Glenda Valdez has invited you to **edit** the following spreadsheet:

BLM Report Under E.O. 13783



google sheet per Peter Mali's email

Open in Sheets

Google Sheets: Create and edit spreadsheets online.
Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
You have received this email because someone shared a spreadsheet with you from Google Sheets.

Conversation Contents

For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Attachments:

/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/1.2 EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx
/9. For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)/2.1 EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 13:51:33 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400.docx EO13783 Energy Report_DRAFT as of 5.30pm_071017_WO300 responses in TRACK CHANGES to MDN edits.docx

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
2. The second file shows the responses from WO-300 (Shelley McGinnis) in Track Changes, responding to your edits.

Please make any additional edits to either attachment using whatever method works best for you (i.e., marking up a hard copy, using Track Changes, etc.). When you're finished editing, please send me your edits. In the alternative, I'm cc:ing Kelly Orr here if you would like staff help transmitting your edits (Sorry, Kelly! I know you've got a full plate with facilitating, etc.).

Once you've approved the contents of both parts, I'll create a single, CLEAN, master version, which I will then send to ASLM.

I'm standing by, ready to answer your questions. Please call me at 202-208-4586 if you need anything.

Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed Jul 12 2017 15:08:04 GMT-0600 (MDT)
To:	Peter Mali <pmali@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	RE: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)
Attachments:	EO13783 Energy Report_DRAFT as of 3.00pm_071217_CLEAN version of WO200 response to MDN edits + CLEAN version of Mitigation piece from WO400 MDN Cleared.docx

Peter,

I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

For the time being, the response is in two parts. The parts are as follows:

1. The first file is a CLEAN version of the content provided by WO-200, since I believe you've already reviewed and approved Kristin's responses to your edits.* This attachment also contains a CLEAN version of the mitigation piece that WO-400 provided. The WO-400 mitigation piece begins near the bottom of pp. 2 and continues to about the middle of pp. 4 (there is a comment from me in this document, flagging where the WO-400 mitigation piece begins).
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Peter

* If I misunderstood our conversation this morning, and you still need to review and consider Kristin's responses to your edits, let me know: I'll send you a Track Changes version of same.

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

"Mali, Peter" <pmali@blm.gov>

From:	"Mali, Peter" <pmali@blm.gov>
Sent:	Wed Jul 12 2017 15:22:25 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Kelly Orr <korr@blm.gov>
Subject:	Re: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

I'll incorporate your edits to the WO-400 Mitigation section, create the "Uber Master Clean Version," and send to ASLM ASAP (I'll cc: you, Kristin Bail, Tim Spisak, and Chris McAlear).

Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

On Wed, Jul 12, 2017 at 5:08 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Peter,
>
> I'm good to go with the WO-200 and WO-300 Edits. Attached you'll find my edits to the WO-400 Mitigation Section… Once incorporated, please move the complete package forward… Again, thanks to you and the team a getting this done…

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Mali, Peter [mailto:pmali@blm.gov]
Sent: Wednesday, July 12, 2017 3:52 PM
To: Michael Nedd
Cc: Kelly Orr
Subject: For Your Review: Latest Version of BLM Response to E.O. 13783 (in 2 Parts)

Mike:

Attached for your review is what is intended to be the final version of BLM's response to E.O. 13783.

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Peter

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Peter Mali
Acting Chief of Staff
Bureau of Land Management
Office: (202) 208-4586
Mobile: (202) 503-7460

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From:	Michael Saul
To:	BLM_MT_Billingsfo_Lease_EA@blm.gov; BLM_MT_Butte_FO_Lease_EA@blm.gov; BLM_MT_Great_Falls_Lease_EA@blm.gov; BLM_MT_North_DakotaFO_Lease_EA@blm.gov
Date:	Wednesday, September 20, 2017 6:52:10 PM
Attachments:	Scoping Comment MT ND Lease Sale March 2018.pdf

Please find attached the scoping comments of the Center for Biological Diversity and Earthworks on the BLM's proposed Montana/Dakota March 2018 oil and gas lease sale, including proposed parcels within the Billings Field Office, Butte Field Office, North Central Montana District, and North Dakota Field Office.

Sincerely,

Michael Saul
Senior Attorney, Public Lands
Center for Biological Diversity
phone/text (303) 915-8308
This e-mail message is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure, or distribution is prohibited by law. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message.

September 20, 2017

Via electronic mail to:

BLM_MT_Billingsfo_Lease_EA@blm.gov
BLM_MT_Butte_FO_Lease_EA@blm.gov
BLM_MT_Great_Falls_Lease_EA@blm.gov
BLM_MT_North_DakotaFO_Lease_EA@blm.gov

Re: Scoping Comments on BLM's Proposed March 2018 Montana/Dakotas Oil and Gas Lease Sale (Billings Field Office, Butte Field Office, North Central Montana District, and North Dakota Field Office)

The Center for Biological Diversity (Center) and Earthworks write to submit the following comments on BLM's proposed March 2018 Montana/Dakotas oil and gas lease sale, including proposed parcels in the Billings Field Office, Butte Field Office, North Central Montana District, and North Dakota Field Office.

The Center is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has over 850,000 members and activists, including those living in Montana who have visited these public lands in the Miles City planning areas for recreational, scientific, educational, and other pursuits and intend to continue to do so in the future, and are particularly interested in protecting the many native, imperiled, and sensitive species and their habitats that may be affected by the proposed oil and gas leasing.

Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. Earthworks stands for clean air, water and land, healthy communities, and corporate accountability. We work for solutions that protect both the Earth's resources and our communities.

I. BLM Must Prepare an Environmental Impact Statement

The proposed lease of over 63,000 acres, including lands along the Beartooth Front and Clark Fork of the Yellowstone River and over 23,000 acres of greater-sage grouse habitat, has the potential for serious impacts to numerous resources including greater sage-grouse habitat, Canada lynx habitat, Yellowstone cutthroat trout habitat, water quality in the Clark Fork and

other waterbodies, air quality, aesthetic and recreational uses, and historical and cultural properties. Because of the scope and intensity of potential impacts, BLM must not proceed with the proposed leasing action without preparation of a full Environmental Impact Statement ("EIS").

NEPA demands that a federal agency prepare an EIS before taking a "'major [f]ederal action[] *significantly* affecting the quality' of the environment."[1] In order to determine whether a project's impacts may be "significant," an agency may first prepare an Environmental Assessment ("EA").[2] If the EA reveals that "the agency's action may have a significant effect upon the . . . environment, an EIS must be prepared."[3]

The issues discussed below show that the potential impacts that the proposed action could have on the environment are indeed significant, which compels the preparation of an EIS. These factors include:

- risks to the survival and recovery of BLM-sensitive greater sage-grouse, including the proposed leasing of over 23,000 acres of designated sage-grouse habitat
- risks to the survival and recovery of the threatened Canada lynx, including six proposed parcels within five miles of less of lynx critical habitat
- risks to water quality in the Clark Fork of the Yellowstone River, including Yellowstone cutthroat trout recovery habitat, from numerous factors associated with oil and gas drilling, including hydraulic fracturing, waste disposal, pipeline and road crossings, and chemical and petroleum spills
- the risk of induced seismicity, including the cumulative risks resulting from development across all 63,749 acres;

An EIS must be prepared if substantial "questions are raised as to whether a project . . . may cause significant degradation of some human environmental factor."[4] It is not necessary to show that significant effects will in fact occur; raising substantial questions about whether a project *may* have a significant effect is enough to trigger BLM's obligation to prepare an EIS.[5] Because the aforementioned impacts are likely to have a significant effect on the environment, BLM is legally required under NEPA to prepare an EIS. This is especially true in light of the high likelihood that fracking would occur on the leases.

In considering whether the proposed oil and gas leasing would have significant effects on the environment, NEPA's regulations require BLM to evaluate ten factors regarding the "intensity" of the impacts.[6] The existence of any "one of these factors may be sufficient to

[1] *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1067 (9th Cir. 2002) (emphasis added).
[2] 40 C.F.R. §§ 1501.4, 1508.9.
[3] *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 730 (9th Cir. 2001) (internal quotations omitted).
[4] *Ocean Advocates v. United States Army Corps of Eng'rs*, 402 F.3d 846, 864-65 (9th Cir. 2005) (internal quotes omitted).
[5] *Id.*
[6] 40 C.F.R. § 1508.27(b); *see also Center for Biological Diversity, et al. v. Bureau of Land Management, et al.*, 937 F. Supp. 2d 1140, 1155-59 (holding that oil and gas leases were issued in violation of NEPA where BLM failed to

require preparation of an EIS."[7] Several of these "significance factors" are implicated in this proposed action and clearly warrant the preparation of an EIS:

> The degree to which the effects on the quality of the human environment are likely to be highly controversial.
>
> The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
>
> The degree to which the proposed action affects public health or safety.
>
> The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.[8]

Here, individually and considered as a whole, there is no doubt that significant effects may result from this proposal; thus, NEPA requires that BLM must prepared an EIS for the action.

a. The effects on the human environment will be highly controversial

A proposal is highly controversial when "substantial questions are raised as to whether a project . . . may cause significant degradation" of a resource, *Nw. Envtl. Def. Ctr. v. Bonneville Power Admin.*, 117 F.3d 1520, 1536 (9th Cir. 1997), or when there is a "substantial dispute [about] the size, nature, or effect of the" action. *Blue Mtns. Biodiversity*, 161 F.3d at 1212. A "substantial dispute exists when evidence, raised prior to the preparation of [a] . . . FONSI, casts serious doubt upon the reasonableness of an agency's conclusions." *Nat'l Parks & Conserv. Ass'n*, 241 F.3d at 736. When such a doubt is raised, "NEPA then places the burden on the agency to come forward with a 'well-reasoned explanation' demonstrating why those responses disputing the EA's conclusions 'do not . . . create a public controversy.'" *Id.* See *CBD*, 937 F. Supp. 2d 1140.

There is abundant evidence that oil and gas operations, particularly hydraulic fracturing ("fracking"), can cause significant impacts to human health, water resources, air quality, imperiled species, and seismicity. The potential for these significant impacts to occur is particularly clear in light of the potential for fracking to result from the lease sale. Fracking is among the top, if not the single most controversial energy issue facing America today. The controversy spans the public arena, scientific discourse, local governments, and the halls of Congress. As the base of scientific knowledge regarding risks from hydraulic fracturing

---

prepare an EIS and failed to properly address the significance factors for context and intensity in 40 C.F.R. § 1508.27).

[7] *Ocean Advocates*, 402 F.3d at 865; *Nat'l Parks & Conservation Ass'n*, 241 F.3d at 731.

[8] 40 C.F.R. § 1508.27(b)(4), (5), (2) & (9); *See Center for Biological Diversity*, 937 F. Supp. 2d at 1158-59 (holding that BLM failed to properly address the significance factors regarding controversy and uncertainty that may have been resolved by further data collection (citing *Native Ecosystems Council v. U.S. Forest Serv*., 428 F.3d 1233, 1240 (9th Cir. 2005)).

continues to develop, the evidence continues to build that hydraulic fracturing and shale and tight gas development processes pose a wide range of risks to human health and the environment, including air pollution, water contamination, and risks to human health. Based on these risks, jurisdictions throughout the world and the country have imposed bans or moratoria on some or all hydraulic fracturing – including France, Bulgaria, and Scotland, and Germany. Vermont, New York, and local governments in Texas, Colorado, Florida, and California have banned (or attempted to ban) hydraulic fracturing. The most comprehensive review to date of the over 900 available published studies on risks and harms of hydraulic fracturing finds that:

> fracking operations pose severe threats to health, both from water contamination and from air pollution. In the United States, more than two billion gallons of fluid are injected daily under high pressure into the earth with the purpose of enabling oil and gas extraction via fracking or, after the fracking is finished, to flush the extracted wastewater down any of the 187,570 disposal wells across the country that accept oil and gas waste. All of those two billion daily gallons of fluid is toxic, and it all passes through our nation's groundwater aquifers on its way to the deep geological strata below where it demonstrably raises the risk for earthquakes. In the air around drilling and fracking operations and their attendant infrastructure, researchers have measured strikingly high levels of toxic pollutants, including the potent carcinogen benzene and the chemical precursors of ground-level ozone (smog). In some cases, concentrations of fracking-related air pollutants in communities where people live and work exceed federal safety standards. Research shows that air emissions from fracking can drift and pollute the air hundreds of miles downwind.[9]

Substantial new information, also reveals that both hydraulic fracturing itself and the underground disposal of drilling-related wastes prevents substantial risks of induced earthquakes. Scientific research has linked fracking with induced earthquakes ranging up to magnitude 4.6. Induced earthquakes have been linked to fracking in Ohio and Oklahoma, England, British Columbia and Alberta, including larger events of magnitudes 3 and 4. Research also indicates that maximum earthquake size induced by fracking may be controlled by the size of the fault surface in a critical stress state, rather than the net injected fluid volume, meaning that large fracking-induced earthquakes are possible.

A 2016 study cautioned that fracking in the United States may be causing higher-than-recognized induced earthquake activity that is being masked by more abundant wastewater-induced earthquakes. The injection of oil and gas wastewater, often associated with fracking, has been linked to the dangerous proliferation of earthquakes in many parts of the country, including

[9] Concerned Health Professionals of New York & Physicians for Social Responsibility. (2016, November 17). Compendium of scientific, medical, and media finding demonstrating risks and harms of fracking (unconventional gas and oil extraction) 7 (4th ed.)

damaging earthquakes. For example, a magnitude 5.8 induced earthquake near Pawnee, Oklahoma, in 2016 caused at least one injury and severe structural damage; a magnitude 5.7 induced earthquake outside Oklahoma City in 2011 injured two people, destroyed 14 homes, and caused millions of dollars' worth of damage to buildings and infrastructure. A magnitude 5.3 induced earthquake near Trinidad, Colorado, in 2011 and magnitude 4.8 near Timpson, Texas, in 2012 also caused significant structural damage. In the central and eastern U.S., a U.S. Geological Survey analysis found that 7 million people live and work in areas vulnerable to damaging injection-induced earthquakes.

The level of controversy associated with fracking, oil and gas waste disposal, and their expansion in Montana and North Dakota in association with the proposed lease sale is sufficient to trigger the need for an EIS. 40 C.F.R. § 1508.27(b)(4)

b. The lease sale presents highly uncertain or unknown risks

An EIS must also be prepared when an action's effects are "highly uncertain or involve unique or unknown risks." 40 C.F.R. § 1508.27(b)(5). Preparation of an EIS is "mandated where uncertainty may be resolved by further collection of data, or where the collection of such data may prevent speculation on potential . . . effects."[10] As one court recently explained regarding oil and gas leasing that may facilitate fracking, "BLM erroneously discounted the uncertainty from fracking that may be resolved by further data collection."[11] There is also great uncertainty, for example, in the contributions of this action to the resulting effects of climate change, which are potentially catastrophic. While it is clear that oil and gas activities can cause great harm, there remains much to be learned about the specific pathways through which harm may occur and the potential degree of harm that may result. Additional information is needed, for example, about possible rates of natural gas leakage, the potential for fluids to migrate through the ground in and around the parcels, and the potential for drilling to affect local faults. NEPA dictates that the way to address such uncertainties is through the preparation of an EIS

c. The lease sale poses threats to public health and safety

As discussed in detail below, the oil and gas activities that may occur as a result of the lease sale could cause significant impacts to public health and safety. 40 C.F.R. § 1508.27(b)(2). Fracking would pose a grave threat to the region's water resources, harm air quality, pose seismic risks, negatively affect wildlife, and fuel climate change.

As a congressional report noted, oil and gas companies have used fracking products containing at least 29 products that are known as possible carcinogens, regulated for their human health risk, or listed as hazardous air pollutants.[12] The public's exposure to these harmful

[10] *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1240 (9th Cir. 2005) (internal citations omitted).
[11] *Center for Biological Diversity*, 937 F. Supp. 2d at 1159.
[12] Waxman, Henry et al., United States House of Representatives, Committee on Energy and Commerce, Minority Staff, Chemicals Used in Hydraulic Fracturing (Apr. 2011) ("Waxman 2011")

pollutants alone would plainly constitute a significant impact. Furthermore, and as previously discussed, information continues to emerge on the risk of earthquakes induced by wastewater injected into areas near faults. It is undeniable that these earthquakes pose risks to the residents of the area and points beyond.

The use of fracking fluid, which is likely to occur as a result of the lease sale, poses a major threat to public health and safety and therefore constitutes a significant impact. BLM therefore must evaluate such impacts in an EIS.

d. The action may adversely affect listed and agency sensitive species and their habitat

An EIS may also be required when an action "may adversely affect an endangered or threatened species or its habitat." 40 C.F.R. § 1508.27(b)(9). Although a finding that a project has "some negative effects does not mandate a finding of significant impact," an agency must nonetheless fully and closely evaluate the effects on listed species and issue an EIS if those impacts are significant. *Klamath-Siskiyou Wildlands Ctr. v. U.S. Forest Serv.*, 373 F. Supp. 2d 1069, 1081 (E.D. Cal. 2004) (finding agency's conclusion that action "may affect, is likely to adversely affect" species due to "disturbance and disruption of breeding" and "degradation" of habitat is "[a]t a minimum, . . . an important factor supporting the need for an EIS").

Preliminary review of the proposed parcels indicates that six parcels (MTM 79010-JJ, MTM 79010-8R, MTM 105431-JW, MTM 108952-DU, MTM 108952-FT, and MTM 108952-FU) would allow oil and gas drilling, and associated infrastructure and increased human use, within five miles of designated critical habitat for the threatened Canada lynx.[13] Another twenty-six parcels comprising 23972.27 acres, would affect designated habitat for the BLM-sensitive greater sage-grouse. Parcels parcels MTM 79010-8R, MTM 79010-JJ, and MTM 105431-HW also contain potential habitat for the Yellowstone cutthroat trout, a BLM Montana sensitive species.

II. BLM Must Analyze Impacts to Greater Sage-Grouse and Prioritize Leasing Outside Grouse Habitat

BLM must analyze in detail indirect and cumulative impacts from oil and gas leasing and development on the greater sage-grouse and its habitat. Furthermore, under BLM's own greater sage-grouse RMP amendments and the recent BLM Instruction Memorandum 2016-143, *Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments - Oil & Gas Leasing and Development Sequential Prioritization* (September 1, 2016) ("IM 2016-143"), BLM's amended RMPs require it to prioritize oil and gas leasing outside of greater sage-

[13] *See* Map of Montana March 2018 Parcels and Lynx Critical Habitat, Attachment A.

grouse priority and general habitats. Based on review of the preliminary parcel lists, the following parcels contain sage-grouse habitat[14]:

Priority Habitat Management Areas:	MTM 105431-HR, MTM 105431-HT, MTM 105431-KG, MTM 105431-KQ, MTM 105431-WK, MTM 108952-DH, MTM 108952-DM, MTM 108952-DN, MTM 108952-DP, MTM 108952-FD, MTM 108952-FE, MTM 108952-FF, MTM 08952-FG, MTM 108952-FH, MTM 108952-FJ, MTM 108952-FK, MTM 108952-FL (13,649 acres)
General Habitat Management Areas:	MTM 105431-KQ, MTM 108952-DL, MTM 108952-DQ, MTM 108952-DR, MTM 108952-E6, MTM 108952-E7, MTM 108952-E8, MTM 108952-E9, MTM 108952-FA, MTM 108952-FB, MTM 108952-FD, MTM 108952-FE, MTM 108952-FF, MTM 108952-FG, MTM 108952-FJ, MTM 108952-FK, MTM 108952-FL, MTM 108952-GH, MTM 108952-GN, MTM 79010-B9, MTM 79010-C1, MTM 79010-HS, MTM 79010-PX (9,803 acres)
Other sage-grouse habitat:	MTM 105431-KG, MTM 108952-FE, MTM 108952-FG (520 acres)

The proposed leasing of nearly 24,000 acres of sage-grouse habitat and, in particular, over 13,500 acres of Priority Habitat Management Areas, requires careful examination of the consequences to the particular greater sage-grouse populations that may be affected. In addition, BLM must consider potential consequences to sage-grouse seasonal habitats not protected by the PHMA and GHMA designations, including but not limited to winter habitat areas and migration corridors.

The greater sage-grouse is not just a BLM sensitive species, but one that has led to a massive revision of BLM land use plans throughout the west in an effort to stave off its extinction. The U.S. Fish and Wildlife Service ("USFWS") identified in 2010 that the greater sage grouse warranted Endangered Species Act protection, that it faced numerous threats to its continued survival, and that inadequacy of regulatory mechanisms in general (and the inadequacy of protections in federal land-use plans in particular) were contributing to the need to list the species. In September 2015, the Service declined to list the species, citing, in part, BLM's recent sage-grouse RMP amendments. We have contended, and continue to contend, that those plans do not provide the level of protection that the best available science says is necessary to

[14] *See* Map of Montana March 2018 Proposed Lease Parcels and Greater Sage-Grouse Habitat (Attachment B).

reverse sage-grouse decline and recover the species. However, the 2015 RMP amendments do incorporate a great deal of information and analysis regarding the species and effects of oil and gas development, and adopt significant mitigation requirements for development within various categories (priority, general, and restoration habitat management areas).

BLM's proposed decision to lease the parcels within Priority Habitat Management Areas (PHMAs), General Habitat Management Areas (GHMAs) or Restoration Habitat Management Areas (RHMAs), will not conform to the Amended RMPs and the agency's IM 2016-143 unless the leasing EIS fully evaluates site-specific impacts to Greater Sage-Grouse, and prioritizes leasing outside both PHMAs and GHMAs. IM 2016-143's purpose is to provide consistency across the agency when leasing decisions impact Greater Sage-Grouse habitat. It provides a "prioritization sequence" for BLM state offices to follow when choosing to lease areas near or in Greater Sage-Grouse habitats. The IM prioritization sequence is as follows:

> 1. Lands outside of GHMAs and PHMAs: BLM State Offices will first consider leasing EOIs for lands outside of PHMAs and GHMAs. These lands should be the first priority for leasing in any given lease sale.
>
> 2. Lands within GHMAs: BLM State Offices will consider EOIs for lands within the GHMAs, after considering lands outside of both GHMAs and PHMAs. When considering the GHMA lands for leasing, the BLM State Office will ensure that a decision to lease those lands would conform to the conservation objectives and provisions in the GRSG Plans (e.g., Stipulations).
>
> 3. Lands within PHMAs: BLM state offices will consider EOIs for lands within PHMAs after lands outside of GHMAs and PHMAs have been considered, and EOIs for lands within GHMA have been considered. When considering the PHMA lands for leasing, the BLM State Offices will ensure that a decision to lease those lands would conform to the conservation objectives and provisions in the GRSG Plans (e.g., Stipulations) including special consideration of any identified SFAs.

IM 2016-143 at 4.

According to BLM's preliminary parcel data, at least twenty-six parcels in the proposed lease sale are located within the current range of Greater Sage-Grouse, including seventeen parcels encompassing 13,649 acres within Priority Habitat Management Areas. . All of the parcels in Sage Grouse habitat also fall within four miles of leks, which provide "important life-history habitat features," IM 2016-143 at 10.[15] Under the sage-grouse RMP amendments and prioritization policy, BLM must consider, prior to determining to issue leases, factors including proximity to existing leases, oil and gas potential, and, importantly the proximity of the proposed

[15] *Id.*

leases to "important life-history habitat features (for example, distance from any active sage-grouse leks)." IM 2016-143 at 4.

IM 2016-143 further instructs BLM that "[a]t the time the leasing priority is determined, when leasing within GHMA or PHMA is considered, BLM should consider, first, areas determined to be non-sage-grouse habitat and then consider areas of lower value habitat." *Id*. The EIS must contain sufficient detailed, site-specific analysis to provide BLM and the public with sufficient information to permit a reasonable determination of whether the proposed leasing action could be limited to areas of either non-sage-grouse habitat or areas of lower value habitat.

Any proposed leasing must conform to a key management prescription of those plans – the obligation to "prioritize the leasing and development of fluid mineral resources outside GRSG habitat." The BLM is subject to clear direction in the IM 2016-143 and the RMP amendments that its sage-grouse RMP plans and conservation strategy rely not only on stipulations within designated habitats, but also on a larger strategy of prioritizing development outside of all sage-grouse habitats. Leasing over 13,500 acres of PHMA without adequate consideration of impacts on grouse populations and life history requirements, has the potential to violate of IM 2016-143 and the Greater Sage-Grouse RMP amendments.[16] It is simply impossible to understand how offering leases within sage-grouse habitat is consistent with the IM 2016-143 prioritization sequence and the RMP requirement to prioritize leasing outside such habitat.

It is undisputed that sage-grouse populations in central and eastern Montana are vastly reduced from pre-development levels due to habitat loss, a major source of which is oil and gas development and related disturbance.[17] For Greater Sage-Grouse Management Zone 1, which includes the Billings Field Office and North Central Montana District, BLM has found that "GRSG populations across M[anagement] Z[one] I face pressures from energy development, conversion to agriculture, and such stressors as disease, drought, and fire. These threats are magnified under the stress of habitat fragmentation and the isolation of small populations in the Dakotas, on the eastern edge of the species' range." Miles City Field Office Propopsed Resource Management Plan Amendments FEIS 4-176. In its EIS for that Resource Management Plan amendment, the BLM acknowledges that even if the plan is implemented, sage-grouse populations may continue to decline or may persist at a "reduced level." MCFO PRMP FEIS at 4-176. In considering whether or not to make available for leasing additional sage-grouse habitats in the Billings FO and North Central Montana District, BLM must assess the current state of sage-grouse populations in management zone 1, the individual populations and seasonal habitats that may be affected by the proposed leases, and the implications of development for local and regional grouse survival and recovery.

[16] EA at 2.
[17] *See* BLM Miles City Field Office, Proposed RMP FEIS 4-172 to 4-176.

In the spring, during the breeding season, sage grouse males seek out courtship areas, known as "leks" that are open areas of bare soil, short grass steppe, windswept ridges, or exposed knolls in which to gather and perform their ritualized mating displays and breed with females.[18] An important factor affecting lek location appears to be proximity to, as well as configuration and abundance of, nesting habitat.[19] Leks are normally "traditional", and occur in the same location each year. Some leks studied by early investigators have persisted for 28–67 years since first counted. The presence of broken bird-point arrowheads on some leks suggests that sage-grouse had used those sites for at least 85 years. Leks and the number of attending males are regularly used to monitor the long-term status of populations because of their traditional locations.[20]

In a recent study looking at greater sage-grouse across six western states, it was reported that 90% of the active leks were surrounded by areas having greater than 40% sagebrush cover. Further, 99% of the active leks were in landscapes with less than 3% of the area in human development.[21] Successful leks occurred in areas with low road densities – less than 1 km/km² of secondary roads, less than .05km/km² of highways, and less than .01 km/km² of interstate highways. Another pertinent finding was that habitat suitability was highest when power line densities were less than .06 km/km²; leks were absent where power line densities exceeded .2 km/km². With respect to communication/cellular towers, leks were absent when tower densities exceeded .08 km/km².[22] Wisdom et al. reported that areas extirpated of sage grouse had 27 times the human density, 3 times more area in agriculture, were 60% closer to highways, and had 25% higher density of roads than what was found in occupied habitat. Also, it was found that power lines and cellular towers had significant impacts on whether or not a habitat was occupied.[23]

BLM's own experts recommend a 4-mile No Surface Occupancy ("NSO") buffer for all active leks in Priority Habitats, Focal Areas, Connectivity Areas, and General Habitats for existing oil and gas leases and permitted activities that would potentially disturb breeding, nesting, and broodrearing sage grouse, with exceptions available for mineral leases or claims located entirely within this buffer for a wellsite of minimal size and intrusion to be placed at a location most distal from an active lek or leks. We agree and insist that BLM follow these recommendations.

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[18] Manier, et al., Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, http://dx.doi.org/10.3133/ofr20141239 ("Manier 2013")

[19] Connelly, J. W. et al., Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats, Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming (2004) ("Connelly 2004")

[20] *Ibid.*

[21] Knick, Steven T. et al., Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, U.S.A., 3 Ecology and Evolution 6: 1539 (2013) ("Knick 2013")

[22] *Ibid.*

[23] Wisdom et al. 2011. Factors Associated With Extirpation of Sage-Grouse. Pages 451-472 *in* S. T. Knick and J. W. Connelly (eds). Greater Sage-Grouse: ecology and conservation of a landscape species and its habitats. Studies in Avian Biol. Series, vol. 38, Univ. Calif. Press. Berkeley, CA.

BLM, in its GRSG RMP Amendments, and in the proposed stipulations for these lease sales, implements buffer distances in accordance with the United States geological Survey (USGS) Report as described in Appendix B to the GRSG RMP Amendment. These are set at 3.1 miles for roads and energy infrastructure, 2 miles for tall structures, and 1.2 miles for low structures, and represent the lowest (least protective) end of the protection spectrum described by Manier et al. (2014).[24] These buffer distances are inappropriately small. While they may be adequate to protect breeding grouse on the lek, they will allow these disruptive and damaging features to be located in the midst of prime nesting habitat, which extends 5.3 miles from the lek site (Holloran and Anderson 2005).

Studies published by Braun in 1977 and Connelly in 2000 initially set the standard that leks should be buffered by a 3.2 km or 2 mile radius.[25] However, more recent studies have suggested that the 3.2 km is inadequate for the conditions needed for successful breeding and nesting. Connelly et al. reported in their assessment for the Western Governors' Association that road traffic within 7.6 km had adverse impacts on male grouse attendance at leks.[26] Sage grouse nesting grounds are located typically in a radius of 5.3 miles of the lek (and sometimes farther). Because the nesting period is equally sensitive and equally important to survival of and recruitment to sage grouse populations, larger buffers are necessary. Coates et al. (2013) found that for the Mono Basin sage grouse population, 90% of habitat use occurred within 4.66 miles of a lek.[27] The Coates et al. results are conservative relative to activity patterns found for other sage grouse populations across the West.

The National Technical Team observed, "it should be noted that protecting even 75 to 80% of nesting hens would require a 4 mile radius buffer (Table 1). Even a 4 mile NSO buffer would not be large enough to offset all the impacts reviewed above."[28] Importantly, a 0.6-mile lek buffer covers by area only 2% of the nesting habitat encompassed by a 4-mile lek buffer, which takes in approximately 80% of nesting grouse according to the best available science. BLM's own experts recommended for existing fluid mineral leases that a 4-mile NSO buffer should be applied to leks, with an exception allowed in cases where the entire lease is within 4 miles of a lek, in which case a single wellsite should be permitted in the part of the lease most distal to the lek.[29] This recommendation is reinforced by a similar recommendation from western

[24] Manier 2013.
[25] Connelly, J. W. et al., Guidelines to manage sagegrouse populations and their habitats. Wildl. Soc'y Bull., 28(4): 967-985 (2000)

[26] Connelly 2004.
[27] Coates, P.S. et al., Evaluating greater sage-grouse seasonal space use relative to leks: Implications for surface use designations in sagebrush ecosystems, J. Wildl. Manage. 77: 1598-1609. Doi: 10.1002/jwmg.618 (2013)
[28] Naugle, et al., (NTT) Sage-grouse National Technical Team, A Report on National Greater Sage-grouse Conservation Measures (2011) ("Naugle et al. 2011 NTT Report"), *available at* www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech %20Team%20Report.pdf.
[29] *Id.*

state agency biologists, who also recommended a 4-mile NSO buffer.[30]

Numerous other studies support the NTT's recommendations. It was found in one study that a 3 km buffer encompassed only 45% of the nesting females associated with that lek, while a 5 km buffer accommodated 64% of the nests.[31] It was also reported that nests located within 1 km of another nest tended to have lower nesting success likely due to enhanced prey detection by predators.[32] The same study further suggests that to protect and maintain sage grouse populations residing in relatively contiguous sagebrush habitats, managers should minimize or halt actions that reduce the suitability of nesting habitats within 5 km of a lek until detailed site specific monitoring suggested otherwise.[33] It also noted that a substantial number of females nested distances greater than 5 km from a lek and that this additional increment of individual recruitment could be important for population viability.[34]

Indeed, placing a heavy focus on habitat protection around leks is not suitable for ensuring the viability of sage grouse populations. Studies have shown that both nest and brood rearing habitats are on average 6 km from leks, and it is not until 10 km from leks that one reaches the threshold where 90% of the habitat occurs.[35] Johnsgard indicated that there was no obvious relationship between lek location and nest site. In 5 different studies involving more than 300 nests the average distance between lek and Sage-grouse nest where the females was first seen or captured was 3.5 mi (5.6 km).[36] Nesting distances could be much greater than this average. For example, a majority (~90%) of nesting and brood-rearing habitat was within 10 km (6.2 miles) of active leks in Alberta;[37] 97 percent of nests were found within 6.2 miles of leks where females were marked in the Powder River Basin in Montana and Wyoming.[38] Walker et al. found in another study that the impacts from energy development on lek persistence and nesting were still apparent at a distance of 6.4 km from the disturbance.[39]

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[30] Apa, T. et al., Using the Best Available Science to Coordinate Conservation Actions that Benefit Greater Sage-grouse Across States Affected by Oil & Gas Development in Management Zones I-II (Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming) (2008). Online at http://www.ourpubliclands.org/files/upload/ti-State_ScienceGroupDocument_FINAL_01-28-08.pdf.

[31] Holloran, Matthew J. and Stanley H. Anderson, Spatial distribution of greater sage-grouse nests in relatively contiguous sagebrush habitats. The Condor 107:742-752 (2005)

[32] Ibid.

[33] Ibid.

[34] Ibid.

[35] Aldridge, Cameron L. and Mark S. Boyce, Linking Occurrence and Fitness to Persistence: Habitat-Based Approach for Endangered Greater Sage-Grouse. Ecological Applications 17(2):508-526 (2007). ("Aldridge and Boyce").

[36] Johnsgard, P.A. Grassland grouse and their conservation. Smithsonian Institution Press, Washington and London (2002).

[37] Aldridge and Boyce. 2007.

[38] Doherty, K. E. et al., Greater Sage-grouse nesting habitat: the importance of managing at multiple scales, J. Wildl. Manage. 74(7): 1544-1553 (2010)

[39] Walker, B.L., et al., Greater sage- grouse population response to energy development and habitat loss, 71 Journal of Wildlife Management 2644 (2007).

As previously mentioned, although leks are important focal points for breeding and subsequent nesting in the surrounding region, other seasonal use areas and habitat requirements may be equally limiting to sage grouse populations.[40] Brood occurrence is greater in more heterogeneous sagebrush stands, where patchy cover reduces predator efficiency but still affords necessary forb resources. Sage-grouse are more abundant in patchy habitats containing a mix of mesic, forb-rich foraging areas interspersed within suitable sagebrush escape cover.[41] Broods are typically found in areas near nest sites for the first 2 to 3 weeks after hatching. Such habitat needs to provide adequate cover and areas with sufficient forbs and insects to ensure chick survival in this life stage. [42]

Suitable and diverse winter habitats are critical to the long-term persistence of grouse populations.[43] As summer ends, the diet of sage-grouse shifts from a diet of insects, forbs and sagebrush to one comprised almost entirely of sagebrush.[44] In winter, the grouse depends heavily on sagebrush for cover, habitat selection being driven by snow depth, the availability of sagebrush above the snow, and topographic patterns that favorable mitigate the weather.[45] Abundance of sagebrush at the landscape scale greatly influences the choice of wintering habitat. One study found that the grouse selected for landscapes where sagebrush dominate over 75% of the landscape with little tolerance for other cover types.[46] Because appropriate wintering habitat occurs on a limited basis and because yearly weather conditions influence its availability, impacts to wintering habitat can have large disproportional effects on regional populations. One study in Colorado found that 80% of the wintering use occurred on only 7% of the area of sagebrush available.[47] Additionally, some degree of site fidelity to winter areas is suspected to exist, and wintering areas not utilized in typical years may become critical in severe winters. [48]

Lower elevation sagebrush winter habitat used by sage grouse may also constitute important winter areas for big game and early spring forage areas for domestic livestock. Due to differing vegetative condition requirements, land treatments on lower elevation sagebrush areas to increase big game or livestock forage at the expense of sagebrush cover and density could have long-term negative consequences for the grouse.[49]

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[40] Knick et al. 2013.
[41] Manier et al. 2013. Page 21.
[42] Ibid.
[43] Doherty, Kevin E., et al., Greater Sage-Grouse Winter Habitat Selection and Energy Development, 72 Journal of Wildlife Management 1:172, doi: 10.2193/2006-454 (2008) ("Doherty 2008").
[44] Ibid.
[45] Manier et al. 2013. Page 21.
[46] Doherty et al. 2008.
[47] Ibid.
[48] Caudill, Danny, et al., Winter habitat use by juvenile greater sage-grouse on Parker Mountain, Utah: implications for sagebrush management, 7 Human-Wildlife Interactions 2:250 (2013) ("Caudill 2013").
[49] Caudill et al. 2013.

The EIS must also analyze whether any of the lease areas for sale provide winter concentration areas for sage-grouse, and if so, prohibit disturbance within these areas.[50] BLM should not allow new surface occupancy on federal leases within winter concentration areas[51] during any time of the year. In addition, the RMP's protections for priority habitats are inadequate. After years of deferring oil and gas leases in PHMAs, the BLM throws open Priority Habitats to future mineral leasing, with discretionary language about the priority for leasing being outside Priority Habitats which is completely nonbinding, under stipulations inadequate to protect sage-grouse from further significant population declines in the Priority Habitats. An NSO leasing of fluid minerals in Priority Habitats is insufficient to prevent major impacts even if no exceptions are permitted because it incentivizes leaseholders to line up drilling rigs and industrial infrastructure along the boundary of Priority Habitats to most easily and cheaply drill directionally to tap leased minerals underneath Priority Habitats. Science shows that the impact of a single producing well can extend for 1.9 miles and the disturbance of drilling extends 3 miles[52] or more[53] into surrounding habitats. This would result in a significant loss of habitat function inside Priority Habitats on lands located within several miles of the PHMA boundary. BLM must withdraw all parcels within PHMAs from the lease sale.

BLM's Amendment offers other exceptions to protections on a conditional basis. By creating sage grouse protections that are optional, discretionary, and/or subject to exceptions, the federal agencies place the authority to undermine or cast aside science-based sage-grouse protections into the hands of officials who have been resisting such protections throughout the process.

For example, according to BLM's GRSG RMP Amendments, disturbance caps are subject to exceptions across Montana. This means that these measures have no certainty of implementation. Knick et al. (2013) found that 99% of active leks across the western half of the sage grouse's range were surrounded by lands with 3% or less human development. The vast majority were surrounded by much less disturbance. There is no scientific evidence at all indicating that sage grouse can tolerate a greater percentage of surface disturbances. BLM must take a cautious and prudent approach to the management of development on currently existing mineral leases and claims. The provisions for 3% disturbance cap—including calculating disturbance from valid existing rights— should be applied without exception in the context of leased fluid minerals and valid existing mining claims. At this point, this does not appear to be the case for BLM lands. Any EIS must calculate the base line disturbance to explore whether additional disturbance can be incurred.

Noise limits under the RMP are also inadequate to protect sage grouse. BLM's RMP

[50] Naugle et al. 2011 NTT Report at 23.
[51] Doherty et al. 2008.
[52] Holloran, M. J., Greater sage-grouse (Centrocercus urophasianus) population response to natural gas field development in western Wyoming. PhD Dissertation. University of Wyoming. Laramie, Wyoming (2005)
[53] Manier et al. 2013

Amendments specify that noise limits will be measured within 0.25 mile of the lek, instead of at the periphery of occupied seasonal habitat. In the Wyoming Basins Ecoregional Assessment, the authors pointed out, "Any drilling <6.5 km [approximately 4 miles] from a sage-grouse lek could have indirect (noise disturbance) or direct (mortality) negative effects on sage-grouse populations." WBEA at 131. BLM should therefore consider a limit of 10 dBA above a defined ambient noise level of 15 dBA within 4 miles of leks and in identified wintering habitats, to be applied across all occupied sage grouse habitats. This should apply March 1 – June 30 in breeding and nesting habitats and also November 30 – March 1 on wintering habitats to protect sage grouse during this sensitive season.

Under the Federal Lands Policy and Management Act, BLM must also evaluate the proposed lease parcels to determine whether or not they may affect management objectives for Areas of Critical Environmental Concern ("ACECs", including ACECs designated for the protection of sage-grouse habitat.

III. BLM Must Evaluate Potential Impacts to Water Quality, Including From Hydraulic Fracturing, Waste Disposal, Spills, and Pipeline and Road Construction

NEPA regulations and case law require that BLM evaluate all "reasonably foreseeable" direct and indirect effects of its leasing. 40 C.F.R. § 1508.8; *Davis v. Coleman*, 521 F.2d 661, 676 (9th Cir. 1975)*; Center for Biological Diversity, et al. v. Bureau of Land Management, et al.*, 2013 U.S. Dist. LEXIS 52432; 43 ELR 20076 (N.D. Cal. March 31, 2013) (holding that oil and gas leases were issued in violation of NEPA where BLM failed to prepare an EIS and unreasonably concluded that the leases would have no significant environmental impact because the agency failed to take into account all reasonably foreseeable development under the leases).

BLM must fully disclose and analyze the indirect and cumulative impacts of increased oil and gas leasing and resulting development on water quality, including, in particular, water quality in the Clark Fork of the Yellowstone River. Given the exceptional biological and recreational importance of this waterbody, BLM must give close attention to indirect effects including potential future pipelines that cross the river (the Yellowstone River has already been contaminated downstream from pipeline leaks where pipelines were bored under the river) as well as surface spills potentially affecting the river. On the west side of the Clark Fork, groundwater is very shallow and part of a fluvial aquifer with fast groundwater migration. No leasing should occur without full consideration of potential pathways for contamination of that groundwater, and the health, economic, and other effects on the people and wildlife that rely on ground and surface water in the area.

The proposed leasing action is part of a dramatic recent increase in oil and gas leasing in the areas at issue, and reflects increased industry interest in developing Montana's fossil fuel resources. The entire basis for this surge of interest is the possibility that hydraulic fracturing and other advanced recovery techniques will allow the profitable exploitation of geologic formations previously perceived as insufficiently valuable for development. Hydraulic fracturing brings with it all of the harms to water quality, air quality, the climate, species, and communities associated

with traditional oil and gas development, but also brings increased risks in many areas. An adequate analysis of the consequences of this practice, prior to irrevocable consequences, is therefore required at the leasing stage.

Over the last few years, Montana has seen an explosive growth in oil and gas exploration, such as with the Bakken shale, where the revolution in drilling technology led by hydraulic fracturing has pushed United States oil production to a 24-year high.[54] BLM must therefore disclose and analyze the demonstrated likelihood of use of hydraulic fracturing and/or other unconventional recovery techniques in central and eastern Montana and western North Dakota.[55] Elements of these technologies have been used individually for decades. However, the combination of practices employed by industry recently is new: "Modern formation stimulation practices have become more complex and the process has developed into a sophisticated, engineered process in which production companies strive to design a hydraulic fracturing treatment to emplace fracture networks in specific areas."[56]

Hydraulic fracturing, a dangerous practice in which operators inject toxic fluid underground under extreme pressure to release oil and gas, has greatly increased industry interest in developing tightly held oil and gas deposits such as those in the proposed lease area. The first aspect of this technique is the hydraulic fracturing of the rock. When the rock is fractured, the resulting cracks in the rock serve as passages through which gas and liquids can flow, increasing the permeability of the fractured area. To fracture the rock, the well operator injects hydraulic fracturing fluid at tremendous pressure. The composition of fracturing fluid has changed over time. Halliburton developed the practice of injecting fluids into wells under high pressure in the late 1940s;[57] however, companies now use permutations of "slick-water" fracturing fluid developed in the mid-1990s.[58] The main ingredient in modern fracturing fluid (or "frack fluid") is generally water, although liquefied petroleum has also been used as a base fluid for modern fracking.[59] The second ingredient is a "proppant," typically sand, that becomes wedged in the fractures and holds them open so that passages remain after pressure is relieved.[60] In addition to

[54] *See* Eaton, Joe. Bakken Oil Boom Brings Growing Pains to Small Montana Town, NATIONAL GEOGRAPHIC, July 18, 2014, *available at* http://news.nationalgeographic.com/news/special-features/energy/2014/07/140709-montana-oil-boom-bakken-shale/.

[55] Miles City Field Office Resource Management Plan and Environmental Impact Statement at 4-49 ("The use of hydraulic fracturing for well stimulation occurs in the planning area for oil and gas development. It is estimated that the typical Bakken or Three Forks Formation well requires between 2 and 4 million gallons . . . of freshwater for hydraulic fracturing operations . . ."); *See also* Isidore, Chris, *Natural gas and heating oil prices about half of last winter's cost*, NBC MONTANA, Dec. 14, 2015 *available at* http://www.790business.com/news/natural-gas-and-heating-oil-prices-about-half-of-last-winters-cost/ ("The increase in fracking resulted in record U.S. natural gas production this summer and near record supplies of natural gas.").

[56] Arthur, J. Daniel et al., Hydraulic Fracturing Considerations for Natural Gas Wells of the Marcellus Shale (Sept. 2008) ("Arthur") at 2-9.

[57] Tompkins, How will High-Volume (Slick-water) Hydraulic Fracturing of the Marcellus (or Utica) Shale Differ from Traditional Hydraulic Fracturing? Marcellus Accountability Project at 1 (Feb. 2011).

[58] New York State Department of Environmental Conservation, Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs at 5-5 (Sep. 7, 2011) ("NYDEC SGEIS") at 5-5.

[59] *Id.*; Arthur at 10; Waxman, Henry et al., United States House of Representatives, Committee on Energy and Commerce, Minority Staff, Chemicals Used in Hydraulic Fracturing (Apr. 2011) ("Waxman 2011").

[60] Arthur at 10.

the base fluid and proppant, a mixture of chemicals are used, for purposes such as increasing the viscosity of the fluid, keeping proppants suspended, impeding bacterial growth or mineral deposition.[61]

Frack fluid is hazardous to human health, although industry's resistance to disclosing the full list of ingredients formulation of frack fluid makes it difficult for the public to know exactly how dangerous.[62] A congressional report sampling incomplete industry self-reports found that "[t]he oil and gas service companies used hydraulic fracturing products containing 29 chemicals that are (1) known or possible human carcinogens, (2) regulated under the Safe Drinking Water Act for their risks to human health, or (3) listed as hazardous air pollutants under the Clean Air Act."[63] Recently published scientific papers also describe the harmfulness of the chemicals often in fracking fluid. One study reviewed a list of 944 fracking fluid products containing 632 chemicals, 353 of which could be identified with Chemical Abstract Service numbers.[64] The study concluded that more than 75 percent of the chemicals could affect the skin, eyes, and other sensory organs, and the respiratory and gastrointestinal systems; approximately 40 to 50 percent could affect the brain/nervous system, immune and cardiovascular systems, and the kidneys; 37 percent could affect the endocrine system; and 25 percent could cause cancer and mutations.[65] Another study reviewed exposures to fracking chemicals and noted that trimethylbenzenes are among the largest contributors to non-cancer threats for people living within a half mile of a well, while benzene is the largest contributor to cumulative cancer risk for people, regardless of the distance from the wells.[66]

Separate from hydraulic fracturing, the second technological development underlying the recent shale boom is the use of horizontal drilling. Shale oil and shale gas formations are typically located far below the surface, and as such, the cost of drilling a vertical well to access the layer is high.[67] The shale formation itself is typically a thin layer-such that a vertical well only provides access to a small volume of shale, which is called the cylinder of permeability surrounding the well bore.[68] Although hydraulic fracturing increases the radius of this cylinder of

[61] Arthur at 10.
[62] Waxman 2011; *see also* Colborn, Theo et al., Natural Gas Operations for a Public Health Perspective, 17 Human and Ecological Risk Assessment 1039 (2011) ("Colborn 2011"); McKenzie, Lisa et al., Human Health Risk Assessment of Air Emissions form Development of Unconventional Natural Gas Resources, Sci. Total Environ. (2012), doi:10.1016/j.scitotenv.2012.02.018 ("McKenzie 2012").
[63] Waxman 2011 at 8.
[64] Colborn 2011 at 1.
[65] Colborn 2011 at 1.
[66] McKenzie 2012 at 5.
[67] *See* CITI, Resurging North American Oil Production and the Death of the Peak Oil Hypothesis (Feb. 15, 2012) ("CITI") at 9; United States Energy Information Administration, *Review of Emerging Resources: U.S. Shale Gas and Shale Oil Plays* at 4 (July 2011) ("USEIA 2011"); Orszag, Peter, *Fracking Boom Could Finally Cap Myth of Peak Oil* (Jan. 31, 2011) ("Orszag").
[68] *See Id.,* U.S. EIA 2011 at 5.

shale, this effect is often itself insufficient to allow profitable extraction of shale resources.[69] Horizontal drilling solves this economic problem: by drilling sideways along the shale formation once it is reached, a company can extract resources from a much higher volume of shale for the same amount of drilling through the overburden, drastically increasing the fraction of total well length that passes through producing zones.[70] The practice of combining horizontal drilling with hydraulic fracturing was developed in the early 1990s.[71]

A third technological development is the use of "multi-stage" fracking. In the 1990s industry began drilling longer and longer horizontal well segments. The difficulty of hydraulic fracturing increases with the length of the well bore to be fractured, however, both because longer well segments are more likely to pass through varied conditions in the rock and because it becomes difficult to create the high pressures required in a larger volume.[72] In 2002 industry began to address these problems by employing multi-stage fracking. In multi-stage fracking, the operator treats only part of the wellbore at a time, typically 300 to 500 feet.[73] Each stage "may require 300,000 to 600,000 gallons of water," and consequently, a frack job that is two or more stages can contaminate and pump into the ground over a million gallons of water.[74]

Notwithstanding the grave impacts that these practices have on the environment, this new combination of multi-stage slickwater hydraulic fracturing and horizontal drilling (hereinafter "fracking") has made it possible to profitably extract oil and gas from formations that only a few years ago were generally viewed as uneconomical to develop.[75] The effect of hydraulic fracturing on the oil and gas markets has been tremendous, with many reports documenting the boom in domestic energy production. A recent congressional report notes that "[a]s a result of hydraulic fracturing and advances in horizontal drilling technology, natural gas production in 2010 reached the highest level in decades."[76] A 2011 U.S. EIA report notes how recently these changes have occurred, stating that "only in the past 5 years has shale gas been recognized as a 'game changer' for the U.S. natural gas market."[77] With respect to oil, the EIA notes that oil production has been increasing, with the production of shale oil resources pushing levels even higher over the next decade:

> Domestic crude oil production has increased over the past few years, reversing a decline that began in 1986. U.S. crude oil production increased from 5.0 million barrels per day in 2008 to 5.5 million barrels per day in 2010. Over the next 10 years, continued

[69] *Id.*; Arthur at 8 (Fig. 4).
[70] Venoco, Inc., Monterey Shale Focused Analyst Day Slide Show at 23 (May 26, 2010) ("Venoco Slide Show"), U.S. Energy Information Administration, Annual Energy Outlook 2012 with Projections to 2035, DOE/EIA-0383 (2012) ("USEIA 2012") at 63.
[71] *Id.*
[72] NYDEC SGEIS at 5-93.
[73] *Id.*
[74] *Id.*
[75] CITI; USEIA 2011 at 4; Orszag.
[76] Waxman 2011 at 1.
[77] USEIA 2011 at 4.

development of tight oil, in combination with the ongoing development of offshore resources in the Gulf of Mexico, pushes domestic crude oil production higher.[78]

Thus, it is evident that fracking, including fracking with the most recent techniques that have been associated with serious adverse impacts in other areas of the country, is poised to expand; it is further evident that the oil and gas industry is still exploring new locations to develop, and the nation has not yet seen the full extent of fracking's impact on oil and gas development and production.

In large part through the use of fracking, the oil and gas sector is now producing huge amounts of oil and gas throughout the United States, rapidly transforming the domestic energy outlook. Fracking is occurring in the absence of any adequate federal or state oversight. The current informational and regulatory void on the state level makes it even more critical that the BLM perform its legal obligations to review, analyze, disclose, and avoid and mitigate the impacts of its oil and gas leasing decisions.

In a leasing EIS, BLM must consider the impact of fracking on specific geological formations, surface and ground water resources, seismic potential, or human, animal, and plant health and safety concerns present in the area to be leased.

IV. BLM Must Evaluate Potential Impacts to Air Quality

Oil and gas operations emit numerous air pollutants, including volatile organic compounds ("VOCs"), nitrogen oxides ("NO_X"), particulate matter, hydrogen sulfide, and methane. Hydraulic fracturing ("fracking") operations are particularly harmful, emitting especially large amounts of pollution, including toxic air pollutants. Permitting fracking and other well stimulation techniques will greatly increase the release of harmful air emissions in these and other regions. BLM must analyze air quality impacts from new development in conjunction with the existing air quality landscape for the proposed lease parcels. BLM must analyze increased emissions from foreseeable oil and gas development for these lease parcels in order to prevent further degradation of local air quality, respiratory illnesses, premature death, hospital visits, as well as missed school and work days.

The Clean Air Act requires compliance standards called the National Ambient Air Quality Standards ("NAAQS") for pollutants including ozone and particulate matter. Any leasing EIS must take steps to analyze the impacts of all foreseeable future air emissions from induced oil and gas development and operations on these lease parcels, and cumulatively with future lease parcel sales in the Montana/Dakotas region. Forecasting cumulative air quality impacts from the leasing and resource management of fossil fuel development is required by well-established law. *WildEarth Guardians v. United States Office of Surface Mining Reclamation & Enforcement,* 104 F. Supp. 3d 1208, 1227–1228 (D. Colo. 2015).

[78] USEIA 2012 at 2.

BLM can readily identify oil and gas volume estimates for lease parcels by utilizing their own EPCA Phase III spatial data and overlaying the lease parcel boundary map provided in the lease sale notice. Estimating emissions from production of oil and gas wells per volume produced then can be readily calculated using a number of EPA emissions inventory calculation tools. The type, quantity and future impact of additional air emissions from this new potential development can and must be analyzed in conjunction with the existing air quality landscape in the affected region.

Given the likelihood that fracking and other similarly harmful techniques would be employed in the exploration and development of the parcels, BLM has an obligation to analyze and disclose the potential impacts resulting from such frequently used practices. BLM cannot excuse itself of this obligation on account of the fact that "the types, magnitude and duration of potential impacts cannot be precisely quantified at this time, and would vary according to many factors."[79] The purpose of a NEPA analysis is for BLM to look at the impacts in total, and to take a hard look at all "reasonably foreseeable" impacts now, before leasing the land. NEPA regulations and case law clearly establish that uncertainty about the precise extent and nature of environmental impacts does not relieve an agency of the obligation to disclose and analyze those impacts utilizing the best information available. *See* 40 C.F.R. § 1502.22(a),(b).

BLM's must also identify environmental impact mitigation methods for controlling air pollution emissions, under NEPA's requirement that the agency identify mitigation measures, 40 C.F.R. § 1508.25, and consider all reasonable alternatives. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. Cal. 2008) (citing 40 C.F.R. § 1502.14(a)).

A. Types of Air Emissions

BLM must disclose the type, extent, or source of emissions from unconventional oil and gas extraction methods, such as fracking. The rapid expansion of unconventional oil makes the impacts associated with fracking foreseeable.

Unconventional oil and gas operations emit large amounts of toxic air pollutants,[80] also referred to as Hazardous Air Pollutants, which are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.[81] The reporting requirements recently implemented by the California South Coast Air Quality Management District ("SCAQMD") have shown that at least 44 chemicals known to be

[79] EA at 45.
[80] Sierra Club et al. comments on New Source Performance Standards: Oil and Natural Gas Sector; Review and Proposed Rule for Subpart OOOO (Nov. 30, 2011) ("Sierra Club Comments") at 13.
[81] *See* "Hazardous Air Pollutants" at U.S. Environmental Protection Agency, Hazardous Air Pollutants, https://www.epa.gov/haps (accessed Jan. 5, 2017).

air toxics have been used in fracking and other types of unconventional oil and gas recovery in California.[82] Through the implementation of these new reporting requirements, it is now known that operators have been using several types of air toxics in California, including crystalline silica, methanol, hydrochloric acid, hydrofluoric acid, 2-butoxyethanol, ethyl glycol monobutyl ether, xylene, amorphous silica fume, aluminum oxide, acrylic polymer, acetophenone, and ethylbenzene. Many of these chemicals also appear on the EPA's list of hazardous air pollutants.[83] The EPA has also identified six "criteria" air pollutants that must be regulated under the NAAQS due to their potential to cause primary and secondary health effects. Concentrations of these pollutants—ozone, particulate matter, carbon monoxide, NO_X, sulfur dioxide and lead—will likely increase in regions where unconventional oil and gas recovery techniques are permitted.

VOCs, from car and truck engines as well as the drilling and completion stages of oil and gas production, make up about 3.5 percent of the gases emitted by oil or gas operations.[84] The VOCs emitted include the BTEX compounds—benzene, toluene, ethyl benzene, and xylene—which are listed as Hazardous Air Pollutants.[85] There is substantial evidence showing the grave harm from these pollutants.[86] Recent studies and reports confirm the pervasive and extensive amount of VOCs emitted by unconventional oil and gas extraction.[87] In particular, a study covering sites near oil and gas wells in five different states found that concentrations of eight volatile chemicals, including benzene, formaldehyde and hydrogen sulfide, exceeded risk-based comparison values under several operational circumstances.[88] Another study determined that vehicle traffic and engine exhaust were likely the sources of intermittently high dust and benzene concentrations observed near well pads.[89] Recent studies have found that oil and gas operations are likely responsible for elevated levels of hydrocarbons such as benzene downwind of the

[82] Center for Biological Diversity, Air Toxics One-Year Report 1 (June 2014).
[83] U.S. Environmental Protection Agency, The Clean Air Act Amendments of 1990 List of Hazardous Air Pollutants, Technology Transfer Network Air Toxics Web Site, *available at* http://www.epa.gov/ttnatw01/orig189.html (accessed July 29, 2015).
[84] Brown, Heather, Memorandum to Bruce Moore, U.S.EPA/OAQPS/SPPD re Composition of Natural Gas for use in the Oil and Natural Gas Sector Rulemaking, July 28, 2011 ("Brown Memo") at 3.
[85] 42 U.S.C. § 7412(b).
[86] Colborn 2011; McKenzie 2012; Food and Water Watch, The Case for a Ban on Gas Fracking (June 2011).
[87] McCawley, M., Air, Noise, and Light Monitoring Plan for Assessing Environmental Impacts of Horizontal Gas Well Drilling Operations (ETD-10 Project), West Virginia University School of Public Health, Morgantown, WV (2013) ("McCawley 2013"), *available at* http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/legislativestudies/Documents/WVU Final Air Noise Light Protocol.pdf; Center for Biological Diversity, Dirty Dozen: The 12 Most Commonly Used Air Toxics in Unconventional Oil Development in the Los Angeles Basin (Sept. 2013).
[88] Macey, G.P. et al., (2014). Air Concentrations of Volatile Compounds Near Oil and Gas Production: A Community-Based Exploratory Study, 13 Environmental Health 82 (2014) at 1.

[89] McCawley 2013.

Denver-Julesburg Fossil Fuel Basin, north of Denver.[90] Another study found that oil and gas operations in this area emit approximately 55 percent of the VOCs in northeastern Colorado.[91]

VOCs can form ground-level (tropospheric) ozone when combined with NO_X, from compressor engines, turbines, other engines used in drilling, and flaring,[92] and sunlight. This reaction can diminish visibility and air quality and harm vegetation. Tropospheric ozone can also be caused by methane, which is leaked and vented at various stages of unconventional oil and gas development, as it interacts with nitrogen oxides and sunlight.[93] In addition to its role as a greenhouse gas, methane contributes to increased concentrations of ground-level ozone, the primary component of smog, because it is an ozone precursor.[94] Methane's effect on ozone concentrations can be substantial. One paper modeled reductions in various anthropogenic ozone precursor emissions and found that "[r]educing anthropogenic CH_4 emissions by 50 [percent] nearly halves the incidence of U.S. high-O_3 events . . . ."[95] Like methane, VOCs and NO_X are also ozone precursors; therefore, many regions around the country with substantial oil and gas operations are now suffering from extreme ozone levels due to heavy emissions of these pollutants.[96] Ozone can result in serious health conditions, including heart and lung disease and mortality.[97] A recent study of ozone pollution in the Uintah Basin of northeastern Utah, a rural area that experiences hazardous tropospheric ozone concentrations, found that oil and gas operations were responsible for 98 to 99 percent of VOCs and 57 to 61 percent of NO_X emitted from sources within the Basin considered in the study's inventory.[98]

Oil and gas operations can also emit hydrogen sulfide. The hydrogen sulfide is contained in the natural gas and makes that gas "sour."[99] Hydrogen sulfide may be emitted during all stages

[90] Pétron, G. et al., Hydrocarbon Emissions Characterization in the Colorado Front Range – A Pilot Study, 117 J. Geophysical Research D04304 (2012), at 8, 13 ("Pétron 2012").
[91] Gilman, J.B. et al., Source Signature of Volatile Organic Compounds from Oil and Natural Gas Operations in Northeastern Colorado, 47 Envtl. Sci. and Tech. 1297, 1303 (2013) ("Gilman 2013").
[92] *See, e.g.*, U.S. Environmental Protection Agency, Oil and Gas Sector: Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution: Background Technical Support Document for Proposed Standards at 3-6 (July 2011); Armendariz, Al, Emissions for Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (2009) ("Armendariz") at 24.
[93] Fiore, Arlene et al., Linking Ozone Pollution and Climate Change: The Case for Controlling Methane, 29 Geophys. Res Letters 19 (2002) ("Fiore 2002")
[94] U.S. Environmental Protection Agency, Oil and Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews Proposed Rule, 76 Fed. Reg 52,738 (Aug. 23, 2011).
[95] Fiore 2002; *see also* Martin, Randal et al., Final Report: Uinta Basin Winter Ozone and Air Quality Study Dec. 2010–March 2011 (2011) at 7.
[96] Armendariz, Al, Emissions for Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (2009) at 1, 3, 25–26; Wendy Koch, *Wyoming's Smog Exceeds Los Angeles' Due to Gas Drilling*, USA Today (May 9, 2011); Craft, Elena, Environmental Defense Fund, Do Shale Gas Activities Play a Role in Rising Ozone Levels? (2012); Colorado Dept. of Public Health and Environment, Conservation Commission, Colorado Weekly and Monthly Oil and Gas Statistics (July 6, 2012) at 12.
[97] U.S. Environmental Protection Agency, Integrated Science Assessment (ISA) for Ozone (O3) and Related Photochemical Oxidants (2013).
[98] Lyman, Seth and Howard Shorthill, Final Report: 2012 Uintah Basin Winter Ozone & Air Quality Study, Utah Department of Environmental Quality (2013); *see also* Gilman 2013.
[99] Sierra Club Comments.

of operation, including exploration, extraction, treatment and storage, transportation, and refining. Long-term exposure to hydrogen sulfide is linked to respiratory infections, eye, nose, and throat irritation, breathlessness, nausea, dizziness, confusion, and headaches.[100]

The oil and gas industry is also a major source of particulate matter. The heavy equipment regularly used in the industry burns diesel fuel, generating fine particulate matter[101] that is especially harmful.[102] Vehicles traveling on unpaved roads also kick up fugitive dust, which is particulate matter.[103] Further, both NO_X and VOCs, which as discussed above are heavily emitted by the oil and gas industry, are also particulate matter precursors.[104] Some of the health effects associated with particulate matter exposure are "premature mortality, increased hospital admissions and development of chronic respiratory disease."[105]

Fracking results in additional air pollution that can create a severe threat to human health. One analysis found that 37 percent of the chemicals found at fracked gas wells were volatile, and that of those volatile chemicals, 81 percent can harm the brain and nervous system, 71 percent can harm the cardiovascular system and blood, and 66 percent can harm the kidneys.[106] Also, the SCAQMD has identified three areas of dangerous and unregulated air emissions from fracking: (1) the mixing of the fracking chemicals; (2) the use of the silica, or sand, as a proppant, which causes the deadly disease silicosis; and (3) the storage of fracking fluid once it comes back to the surface.[107] Preparation of the fluids used for well completion often involves onsite mixing of gravel or proppants with fluid, a process that potentially results in major amounts of particulate matter emissions.[108] Further, these proppants often include silica sand, which increases the risk of lung disease and silicosis when inhaled.[109] Finally, as flowback returns to the surface and is deposited in pits or tanks that are open to the atmosphere, there is the potential for organic

[100] U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Report to Congress on Hydrogen Sulfide Air Emissions Associated with the Extraction of Oil and Natural Gas (EPA-453/R-93-045) at i (Oct. 1993) ("USEPA 1993").
[101] Earthworks, Sources of Oil and Gas Pollution (2011).
[102] Bay Area Air Quality Management District, Particulate Matter Overview, Particulate Matter and Human Health (2012).
[103] U.S. Environmental Protection Agency, Regulatory Impact Analysis for the Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter (June 2012), http://www.epa.gov/ttnecas1/regdata/RIAs/PMRIACombinedFile_Bookmarked.pdfat 2-2, ("EPA RIA").
[104] EPA RIA at 2-2.
[105] U.S. Environmental Protection Agency, National Ambient Air Quality Standards for Particulate Matter Proposed Rule, 77 Fed. Reg. 38,890, 38,893 (June 29, 2012).
[106] Colborn 2011 at 8.
[107] South Coast Air Quality Management District, Draft Staff Report on Proposed Rule 1148.2 - Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers (January 2013) at 15 ("SCAQMD Draft Staff Report PR1148-2").
[108] *Id.*
[109] South Coast Air Quality Management District, Response to Questions re Air Quality Risks of Hydraulic Fracturing in California, Submission to Joint Senate Hearing (2013) at 3.

compounds and toxic air pollutants to be emitted, which are harmful to human health as described above.[110]

The EIS should study the potential for oil and gas operations sites in the planning area to emit such air toxics and any other pollutants that may pose a risk to human health, paying particular attention to the impacts of air pollution on environmental justice communities that already bear the burden of disproportionately high levels of air pollution. The EIS should rely on the most up-to-date information regarding the contribution of oil and gas operations to VOC and air toxics levels. Recent studies in Weld County show that existing emissions inventories likely underestimate the contribution of oil and gas operations to VOC levels by a factor of two.[111] Further, researchers have found that existing emissions inventories vastly underestimate the contribution of oil and gas operations to hazardous air pollution concentrations in Weld County, suggesting that the health risk assessments conducted using these inventories are similarly inaccurate and therefore underestimate exposures and health risks.[112] This study estimated benzene emission rates and other VOCs using air quality measurements taken from an airplane over Weld County. Current inventories estimating benzene emissions from oil and gas operators in the study area underestimated emissions by four to nine times. The study suggests that other hazardous air pollutants (such as toluene, ethylbenzene, etc.) could similarly be underestimated and that oil and gas sites could be a bigger source of benzene than vehicle emissions, previously thought to be the largest source in the area.

B. Sources of Air Emissions

Harmful air pollutants are emitted during every stage of unconventional oil and gas recovery, including drilling, completion, well stimulation, production, and disposal. Drilling and casing the wellbore require substantial power from large equipment. The engines used typically run on diesel fuel, which emits particularly harmful types of air pollutants when burned. Similarly, high-powered pump engines are used in the fracturing and completion phase. This too can amount in large volumes of air pollution. Flaring, venting, and fugitive emissions of gas are also a potential source of air emissions. Gas flaring and venting can occur in both oil and gas recovery processes when underground gas rises to the surface and is not captured as part of production. Fugitive emissions can occur at every stage of extraction and production, often leading to high volumes of gas being released into the air. Methane emissions from oil and gas production are as much as 270 percent greater than previously estimated by calculation.[113] Recent studies show that emissions from pneumatic valves (which control routine operations at

[110] SCAQMD Draft Staff Report PR1148-2 at 15.
[111] Pétron 2012 at 1, 18 (noting state and federal inventories likely underestimate hydrocarbon emissions from oil and gas operations by as much as factor of two).
[112] Pétron, G. et al., A New Look at Methane and Non-Methane Hydrocarbon Emissions from Oil and Natural Gas Operations in the Colorado Denver-Julesburg Basin, accepted for publication, online May 7, 2014, J. Geophys. Res: Atmospheres, *available at* http://onlinelibrary.wiley.com/doi/10.1002/2013JD021272/abstract.
[113] Miller, S. M. et al. Anthropogenic Emissions of Methane in the United States, Proc. Natl. Acad. Sci. Early Edition, DOI: 10.1073/pnas.1314392110 (2013) (Miller 2013).

the well pad by venting methane during normal operation) and fugitive emissions are higher than EPA estimates.[114]

Evaporation from pits can also contribute to air pollution. Pits that store drilling waste, produced water, and other waste fluid may be exposed to the open air. Chemicals mixed with the wastewater—including the additives used to make fracking fluids, as well as volatile hydrocarbons, such as benzene and toluene, brought to the surface with the waste—can escape into the air through evaporation. Some pits are equipped with pumps that spray effluents into the air to hasten the evaporation process. Even where waste fluid is stored in so-called "closed loop" storage tanks, fugitive emissions can escape from tanks.

As mentioned above, increased truck traffic will lead to more air emissions. Trucks capable of transporting large volumes of chemicals and waste fluid typically use large engines that run on diesel fuel. Air pollutants from truck engines will be emitted not only at the well site, but also along truck routes to and from the site.

The EIS must provide an adequate analysis and disclosure of the effects the lease sale could have on air quality, including the impacts that would result from fracking. BLM cannot postpone the discussion of air pollution and climate change impacts until site-specific plans are proposed. Because BLM must analyze impacts at "the earliest practicable time," and no benefit would be gained from postponing the analysis, BLM must discuss these cumulative impacts before the lease sale.

c. Impact of Increased Air Pollution

The potential harms resulting from increased exposure to the dangerous air pollutants described above are serious and wide-ranging. The negative effects of criteria pollutants are well-documented and are summarized by the EPA's website:

> *Nitrogen oxides* ("NOx") react with ammonia, moisture, and other compounds to form small particles. These small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and can aggravate existing heart disease, leading to increased hospital admissions and premature death. NOx and VOCs react in the presence of heat and sunlight to form ozone.
>
> *Particulate matter* ("PM")—especially fine particles—contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including: premature death in people with heart or lung disease,

[114] Allen, David et al., Measurements of methane emissions at natural gas production sites in the United States, PNAS Early Edition, doi:10.1073/pnas.1304880110 (2013). (Allen 2013); Harriss, Robert et al. Using Multi-Scale Measurements to Improve Methane Emission Estimates from Oil and Gas Operations in the Barnett Shale Region, Texas, Environ. Sci. Technol., 2015, 49 (13), pp. 7524–7526.

increased mortality, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.[115]

Sulfur Dioxide ("SO_2") has been shown to cause an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms.[116] Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics.[117]

Carbon Monoxide ("CO") can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues. At extremely high levels, CO can cause death.[118] Exposure to CO can reduce the oxygen-carrying capacity of the blood. People with several types of heart disease already have a reduced capacity for pumping oxygenated blood to the heart, which can cause them to experience myocardial ischemia (reduced oxygen to the heart), often accompanied by chest pain (angina), when exercising or under increased stress.[119] For these people, short-term CO exposure further affects their body's already compromised ability to respond to the increased oxygen demands of exercise or exertion.[120]

Ozone ("O_3") can trigger or worsen asthma and other respiratory ailments.[121] Ground-level ozone can have harmful effects on sensitive vegetation and ecosystems. Ozone may also lead to loss of species diversity and changes to habitat quality, water cycles, and nutrient cycles.

Air toxics and hazardous air pollutants, by definition, can result in harm to human health and safety. The full extent of the health effects of exposure is still far from being complete, but already there are numerous studies that have found these chemicals to have serious health consequences for humans exposed to even minimal amounts. The range of illnesses that can

[115] U.S. Environmental Protection Agency, Particulate Matter, (PM) http://www.epa.gov/airquality/particlepollution/health.html (accessed July 30, 2015); Ostro, Bart et al., Long-term Exposure to Constituents of Fine Particulate Air Pollution and Mortality: Results from the California Teachers Study, 118 Environmental Health Perspectives 3 (2010).
[116] U.S. Environmental Protection Agency, Sulfur Dioxide, *available at* http://www.epa.gov/airquality/sulfurdioxide/health html, (accessed July 29, 2015).
[117] *Id.*
[118] U.S. Environmental Protection Agency, Carbon Monoxide, *available at* http://www.epa.gov/airquality/carbonmonoxide/health.html (accessed July 29, 2015).
[119] *Id.*
[120] *Id.*
[121] U.S. Environmental Protection Agency, Ground Level Ozone, *available at* http://www.epa.gov/airquality/ozonepollution/health.html (accessed July 29, 2015).

result are summarized in a study by Dr. Theo Colburn, which charts which chemicals have been shown to be linked to certain illnesses.[122]

Natural gas drilling operations result in the emissions of numerous non-methane hydrocarbons ("NMHCs") that have been linked to numerous adverse health effects. A recent study that analyzed air samples taken during drilling operations near natural gas wells and residential areas in Garfield County, detected 57 chemicals between July 2010 and October 2011, including 44 with reported health effects.[123] For example:

> Thirty-five chemicals were found to affect the brain/nervous system, 33 the liver/metabolism, and 30 the endocrine system, which includes reproductive and developmental effects. The categories with the next highest numbers of effects were the immune system (28), cardiovascular/blood (27), and the sensory and respiratory systems (25 each). Eight chemicals had health effects in all 12 categories. There were also several chemicals for which no health effect data could be found.[124]

The study found extremely high levels of methylene chloride, which may be used as cleaning solvents to remove waxy paraffin that is commonly deposited by raw natural gas in the region. These deposits solidify at ambient temperatures and build up on equipment.[125] While none of the detected chemicals exceeded governmental safety thresholds of exposure, the study noted that such thresholds are typically based on "exposure of a grown man encountering relatively high concentrations of a chemical over a brief time period, for example, during occupational exposure."[126] Consequently, such thresholds may not apply to individuals experiencing "chronic, sporadic, low-level exposure," including sensitive populations such as children, the elderly, and pregnant women.[127] For example, the study detected polycyclic aromatic hydrocarbon ("PAH") levels that could be of "clinical significance," as recent studies have linked low levels of exposure to lower mental development in children who were prenatally exposed.[128] In addition, government safety standards do not take into account "the kinds of effects found from low-level exposure to endocrine disrupting chemicals . . . , which can be particularly harmful during prenatal development and childhood.[129]

The EIS should incorporate a literature review of the harmful effects of each of these chemicals known to be used in fracking and other unconventional oil and gas extraction

[122] Colborn 2011; Colborn, Theo, et al., An Exploratory Study of Air Quality near Natural Gas Operations, 20 Human and Ecological Risk Assessment: An International Journal 1 (2012) ("Colborn 2012").
[123] Colborn 2012 at pp. 21–22 (pages refer to page numbers in attached manuscript and not journal pages).
[124] Colborn 2012, p. 11.
[125] *Id*., p. 10.
[126] *Id*., pp. 11–12.
[127] *Id*. p. 12.
[128] *Id*., p. 10–11.
[129] *Id*., p. 12.

methods. Without knowing the effects of each chemical, the EIS cannot accurately project the true impact of unconventional oil and gas extraction.

d. Air Modeling

BLM must employ readily-available air quality modeling tools to understand what areas and communities will most likely be affected by air pollution in any environmental review of this lease parcel sale. It is crucial to gather independent data rather than relying on industry estimates, which may be inaccurate or biased. Wind and weather patterns, and atmospheric chemistry, determine the fate and transport of air pollution over a region, over time. Any BLM environmental review document should be informed by air modeling to show where the air pollution will flow.

V. BLM Must Disclose Greenhouse Gas Emissions and Impacts to Climate From Oil and Gas Drilling, Processing, Transport, and Combustion

Meaningful consideration of greenhouse gas ("GHG") emissions is clearly within the scope of required NEPA review. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). As the Ninth Circuit has held, in the context of fuel economy standard rules:

> The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct. Any given rule setting a CAFE standard might have an "individually minor" effect on the environment, but these rules are "collectively significant actions taking place over a period of time." *Ctr. for Biological Diversity*, 538 F.3d at 1216 (quoting 40 C.F.R. § 1508.7).

The courts have ruled that federal agencies consider indirect GHG emissions resulting from agency policy, regulatory, and leasing decisions. For example, agencies cannot ignore the indirect air quality and climate change impact of decisions that would open up access to coal reserves. *See Mid States Coal. For Progress v. Surface Transp. Bd.*, 345 F.3d 520, 532, 550 (8th Cir. 2003); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F.Supp. 3d 1174, 1197–98 (D. Colo. 2014).

BLM must analyze the impacts of increased oil and gas development on GHG emissions and climate change based on the proposed Montana and Dakota lease sales. Although BLM's *Climate Change Supplementary Information Report for Montana, North Dakota, and South Dakota* (Climate Change SIR, 2010) provides a useful broad-based analysis of climate impacts to Montana and the Dakotas, because of the readily foreseeable emissions consequences of additional leasing, BLM must provide site-specific emissions analyses for the proposed lease parcels. We note that just last week, the U.S. 10th Circuit Court of Appeals decisively rejected BLM arguments that the net effect of its fossil fuel leasing decisions is zero, under the

(erroneous) assumption that federal fossil fuel leasing is subject to "perfect substitution" and does not effect energy price, consumption, or resulting emssions.[130]

NEPA requires "reasonable forecasting," which includes the consideration of "reasonably foreseeable future actions . . . even if they are not specific proposals." *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1079 (9th Cir. 2011) (citation omitted). That BLM cannot "accurately" calculate the total emissions expected from full development is not a rational basis for cutting off its analysis. "Because speculation is . . . implicit in NEPA," agencies may not "shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry." *Id*. Indeed, the EA for a recent lease sale in Utah undercuts BLM's assertion here that GHGs cannot be quantified at the leasing stage.[131] *See High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1196 (D. Colo. 2014) (decision to forgo calculating mine's reasonably foreseeable GHG emissions was arbitrary "in light of the agencies' apparent ability to perform such calculations").

The final CEQ *Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews* remains persuasive on the issue of federal agency review of greenhouse gas emissions as foreseeable direct and indirect effects of the proposed action. 81 Fed. Reg. 51,866 (Aug. 5, 2016). The CEQ guidance provides clear direction for BLM to conduct a lifecycle GHG analysis because the modeling and tools to conduct this type of analysis are readily available to the agency:

> If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action. Agencies should disclose the information and any assumptions used in the analysis and explain any uncertainties. To compare a project's estimated direct and indirect emissions with GHG emissions from the no-action alternative, agencies should draw on existing, timely, objective, and authoritative analyses, such as those by the Energy Information Administration, the Federal Energy Management Program, or Office of Fossil Energy of the Department of Energy. In the absence of such analyses, agencies should use other available information. 81 Fed. Reg. 51,866 at 16 (Aug. 5, 2016) (citations omitted).

CEQ's guidance even provides an example of where a lifecycle analysis is appropriate in a leasing context at footnote 42:

> The indirect effects of such an action that are reasonably foreseeable at the time would vary with the circumstances of the proposed action. For actions such as a Federal lease

[130] *Wildearth Guardians v. BLM*, No. 15-8109 (10th Cir., Sept. 15, 2017).
[131] U.S. Bureau of Land Management, Environmental Assessment for West Desert District, Fillmore Field Office, August 2015 Oil and Gas Lease Sale, pp. 57–58 (Dec. 2015); U.S. Bureau of Land Management, Greenhouse Gases Estimate (West Desert District Nov 2015 Lease Sale), http://www.blm.gov/style/medialib/blm/ut/natural_resources/airQuality.Par.38.

sale of coal for energy production, the impacts associated with the end-use of the fossil fuel being extracted would be the reasonably foreseeable combustion of that coal. *Id*.

Although the 2016 CEQ guidance has been "withdrawn for further consideration," 82 Fed. Reg. 16,576 (April 5, 2017), the underlying requirement to consider climate change impacts under NEPA, including indirect and cumulative combustion impacts foreseeably resulting from fossil fuels leasing decisions, has not changed. *See Wildearth Guardians*, No. 15-8109; *S. Fork Band*, 588 F.3d at 725; *Ctr. for Biological Diversity*, 538 F.3d at 1214-15; *Mid States Coalition for Progress*, 345 F.3d at 550; *WildEarth Guardians*, 104 F. Supp. 3d at 1230; *Dine Citizens Against Ruining Our Env't*, 82 F. Supp. 3d at 1201; *High Country Conservation Advocates*, 52 F. Supp. 3d at 1174.

The volume of potential oil and gas from these lease parcels is knowable and calculating the direct emissions impact from development of these lease parcels is also quantifiable. Numerous greenhouse gas calculation tools exist to develop lifecycle analyses, particularly for fossil fuel extraction, operations, transport, and end-user emissions.[132] Indeed, the Department of Energy has historically utilized these types of lifecycle emissions analyses in NEPA review of oil and gas infrastructure projects.[133] Other federal agencies have begun to employ upstream, downstream, and lifecycle greenhouse gas emissions analyses for NEPA review of energy-related projects.[134] Courts have upheld the viability and usefulness of lifecycle analyses, and

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[132] *See* Council on Environmental Quality, Revised draft guidance for greenhouse gas emissions and climate change impacts (2014), https://ceq.doe.gov/current_developments/GHG-accounting-tools.html.

[133] U.S. Department of Energy National Energy Technology Laboratory, Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States, DOE/NETL-2014/1649 (May 29, 2014) *available at* http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf. *See also*, U.S. Department of Energy National Renewable Energy Laboratory, Life Cycle Greenhouse Gas Emissions from Electricity Generation Fact Sheet, Pub No. NREL/FS-6A20-57817 (2013) *available at* http://www.nrel.gov/docs/fy13osti/57187.pdf; U.S. Department of Energy National Energy Technology Laboratory Role of Alternative Energy Sources: Natural Gas Technology Assessment, Pub No. DOE/NETL- 2012/1539 (NETL, 2012) *available at* https://www.netl.doe.gov/File%20Library/Research/Energy%20Analysis/Life%20Cycle%20Analysis/LCA-2012-1539.pdf; U.S. Department of Energy National Energy Technology Laboratory, Life Cycle Greenhouse Gas Inventory of Natural Gas Extraction, Delivery and Electricity Production, Pub No. DOE/NETL-2011/1522 (NETL, 2011) *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2013_applications/sierra_club_13-69_venture/exhibits_44_45.pdf; U.S. Department of Energy National Energy Technology Laboratory, Life Cycle Analysis: Natural Gas Combined Cycle (NGCC) Power Plant, Pub No DOE/NETL-403-110509 (Sept. 10, 2012) (NETL, 2010) *available at* https://www.netl.doe.gov/energy-analyses/temp/FY13_LifeCycleAnalysisNaturalGasCombinedCycle(NGCC)PowerPlantFinal_060113.pdf.

[134] U.S. Bureau of Land Management, Final Supplemental Environmental Impact Statement for the Leasing and Underground Mining of the Greens Hollow Federal Coal Leas Tract, UTU-84102, 287 (Feb. 2015) (BLM expressly acknowledged that "the burning of the coal is an indirect impact that is a reasonable progression of the mining activity" and quantified emissions from combustion without any disclaimer about other sources of coal. *Id.* at 286. In that same EIS, BLM also acknowledged that truck traffic to haul coal would be extended as a result of the proposed lease approval, and this would generate additional emissions.) *See also*, U.S. Forest Service, Record of Decision and Final Environmental Impact Statement, Oil and Gas Leasing Analysis, Fishlake National Forest, 169 (Aug. 2013) (Table 3.12-7: shows GHG emissions from transportation, offsite refining and end use; and total direct

adoption of this trend is clearly reflected in the CEQ Guidance on Climate Change. 81 Fed. Reg. 51, 866 at 11 (Aug. 5, 2016) ("This guidance recommends that agencies quantify a proposed agency action's projected direct and indirect GHG emissions. Agencies should be guided by the principle that the extent of the analysis should be commensurate with the quantity of projected GHG emissions and take into account available data and GHG quantification tools that are suitable for and commensurate with the proposed agency action").[135]

Is readily foreseeable, that this lease sale will induce oil and natural gas production, transmission and ultimate end-user climate change impacts. The effects of this induced production must be considered in the EA, and in fact, necessitate a more robust review under an EIS. *See, e.g., N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1081–82 (9th Cir. 2011) (finding that NEPA review must consider induced coal production at mines, which was a reasonably foreseeable effect of a project to expand a railway line that would carry coal, especially where company proposing the railway line anticipated induced coal production in justifying its proposal); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549–50 (8th Cir. 2003) (environmental effects of increased coal consumption due to construction of a new rail line to reach coal mines was reasonably foreseeable and required evaluation under NEPA).

The development of an area for lease and subsequent oil and gas production would certainly result in combustion of the extracted product. As courts have held in similar contexts, combustion emissions resulting from opening up a new area to development are "reasonably foreseeable," and therefore a "proximate cause" of the leasing. See *Mid States Coal. for Progress*

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and indirect emissions. *See also id*., Appendix E/SIR-2 (more detailed calculations of direct and indirect emissions.)) U.S. Army Corps of Engineers, Final Environmental Impact Statement: Alaska Stand Alone Gas Pipeline, Volume 2 Sec. 5.20-70–71 (Oct. 2012). The Corps, in a 2012 EIS for an intrastate natural gas pipeline in Alaska, estimated downstream emissions from combustion of the natural gas that would be transported, and also discussed the potential for natural gas to displace other, dirtier fuel sources such as coal and oil.). U.S. Department of State, Final Supplemental Environmental Impact Statement for the Keystone XL Project, § 4.14.3, Appendix U (Jan. 2014) (The Department of State, as lead agency on the Keystone XL Pipeline Review conducted a relatively comprehensive life-cycle greenhouse gas analysis for the proposed pipeline, alternatives, and baseline scenarios that could occur if the pipeline was not constructed.) U.S. Environmental Protection Agency Region X, Letter from Dennis McLerran, Regional Administrator, to Randel Perry, U.S. Army Corps of Engineers Seattle District, re Gateway Pacific Projects (Jan. 22, 2013). (EPA submitted comments on the scope of impacts that should be evaluated in the coal terminal EIS that the Corps is preparing, in which it urged the Corps to conduct a lifecycle emissions analysis of GHG emissions from the coal that would be transported via the terminal.)

[135] *High Country Conservation Advocates v. United States Forest Serv*., 52 F. Supp. 3d 1174 (D. Colo. 2014) (Court held that the agencies' failure to quantify the effect of greenhouse gas emissions from the mining lease modifications was arbitrary in violation of NEPA because the social cost of carbon protocol tool existed for such analysis under 40 C.F.R. § 1502.23 but the agencies did not provide reasons in the final EIS for not using the tool; and that the agencies' decision to forgo calculating the foreseeable GHG emissions was arbitrary in light of their ability to perform such calculations and their decision to include a detailed economic analysis of the benefits.) *See also, Dine Citizens Against Ruining Our Env't v. United States Office of Surface Mining Reclamation & Enf't*, 82 F. Supp. 3d 1201, 1213–1218 (D. Colo. 2015) (Court held that the agency failed to adequately consider the reasonably foreseeable combustion-related downstream effects of the proposed action. Also held that that combustion emissions associated with a mine that fed a single power plant were reasonably foreseeable because the agency knew where the coal would be consumed).

v. Surface Transp. Bd., 345 F.3d 520, 549 (8th Cir. 2003) (holding that agency violated NEPA when it failed to disclose and analyze the future coal combustion impacts associated with the agency's approval of a railroad line that allowed access to coal deposits); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1197 (D. Colo. 2014) (same with respect to GHG emissions resulting from approval of coal mining exploration project).

In both *Mid States Coalition* and *High Country*, the courts rejected the government's rationale that increased emissions from combustion of coal was not reasonably foreseeable because the same amount of coal would be burned without opening up the areas at issue to new coal mining. Both courts found this argument "illogical at best" and noted that "increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas." *See High Country*, 52 F. Supp. 3d at 1197 (quoting *Mid States Coalition*, 345 F.3d at 549). "On similar grounds, the development of new wells over the proposed areas for lease will increase the supply of [oil and natural gas]. At some point this additional supply will impact the demand for [oil and gas] relative to other fuel sources, and [these minerals] that otherwise would have been left in the ground will be burned. This reasonably foreseeable effect must be analyzed, even if the precise extent of the effect is less certain." *Id. See also WildEarth Guardians v. United States Office of Surface Mining, Reclamation & Enf't*, 104 F. Supp. 3d 1208, 1229–30 (D. Colo. 2015) (coal combustion was indirect effect of agency's approval of mining plan modifications that "increased the area of federal land on which mining has occurred" and "led to an increase in the amount of federal coal available for combustion.").[136]

Even if cannot definitively be estimated with a high degree of accuracy, it is possible for BLM to identify significant sources of GHG emissions and range of emissions scenarios, which would enable the identification of specific measures to reduce emissions and an understanding of the extent to which certain emissions are avoidable. The extreme urgency of the climate crisis requires BLM to pursue all means available to limit the climate change effects of its actions. Any emissions source, no matter how small, is potentially significant, such that BLM should fully explore mitigation and avoidance options for all sources.

BLM often suggests that quantification of GHGs would occur when actual drilling is proposed. But by delaying quantification until after a lease is issued, BLM may prejudice the

[136] *See also*, CEQ's Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51,866 at 14 (Aug. 5, 2016) (For example, NEPA reviews for proposed resource extraction and development projects typically include the reasonably foreseeable effects of various phases in the process, such as clearing land for the project, building access roads, extraction, transport, refining, processing, using the resource, disassembly, disposal, and reclamation. Depending on the relationship between any of the phases, as well as the authority under which they may be carried out, agencies should use the analytical scope that best informs their decision making.).

consideration of alternatives or leasing stipulations that would avoid or reduce greenhouse gas emissions to an extent not otherwise available after leasing. BLM has long (but incorrectly) maintained that leasing stipulations can only be imposed with the issuance of the lease. Thereafter, purportedly, its authority to condition drilling is limited to "reasonable measures" or "conditions of approval" that may not be "[in]consistent with lease rights granted." 43 C.F.R. § 3101.1-2. Cost-prohibitive measures could therefore potentially be barred. Further, measures to "minimize" impacts may be imposed, but those may not necessarily avoid impacts altogether. *Id*. Waiting until the drilling stage could also be too little too late, as various other actions may occur between leasing and drilling, such as the execution of unit agreements, or construction of roads or pipelines, all of which may narrow mitigation options available at the drilling stage. *See William P. Maycock et al.*, 177 I.B.L.A. 1, 20–21 (Dec. Int. 2008) (holding that unit agreements limit drilling-stage alternatives).

BLM must make reasonable efforts to quantify foreseeable GHG emissions that could result from new leasing within the Montana and North Dakota regions proposed for lease—including emissions from construction, operating fossil-fuel powered equipment during production, reclamation, transportation, processing and refining, and combustion of the extracted product. Only by conducting a comprehensive EIS can BLM accurately weigh the climate change costs and benefits of alternatives, and address the following:

1. Sources of Greenhouse Gases

In performing a full analysis of climate impacts, BLM must consider all potential sources of GHG emissions (e.g. GHG emissions generated by transporting large amounts of water for fracking). BLM should also perform a full analysis of all gas emissions that contribute to climate change, including methane and carbon dioxide. The EIS should calculate the amount of GHG that will result on an annual basis from (1) each of the fossil fuels that can be developed within the planning area, (2) each of the well stimulation or other extraction methods that can be used, including, but not limited to, fracking, acidization, acid fracking, and gravel packing, and (3) cumulative GHG emissions expected over the long term (expressed in global warming potential of each greenhouse pollutant as well as CO_2 equivalent), including emissions throughout the entire fossil fuel lifecycle discussed above.

2. Effects of Climate Change

In addition to quantifying the total emissions that would result from the lease sale, an EIS should consider the social costs of these emissions, resulting from climate disruption's ecological and social effects. Although cost-benefit analysis is not necessarily the ideal or exclusive method for assessing contributions to an adverse effect as enormous, uncertain, and potentially catastrophic as climate change, BLM does have tools available to provide one approximation of external costs and has previously performed a "social cost of carbon" analysis in prior

environmental reviews.[137] Its own internal memo identifies one available analytical tool: "For federal agencies the authoritative estimates of [social cost of carbon] are provided by the 2013 technical report of the Interagency Working Group on Social Cost of Carbon, which was convened by the Council of Economic Advisers and the Office of Management and Budget."[138] As explained in that report:

> The purpose of the "social cost of carbon" ("SCC") estimates presented here is to allow agencies to incorporate the social benefits of reducing CO_2 emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions. The SCC is an estimate of the monetized damages associated with an incremental increase in carbon emissions in a given year. It is intended to include (but is not limited to) changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change.[139]

Leasing and development of unconventional wells could exact extraordinary financial costs to communities and future generations, setting aside the immeasurable loss of irreplaceable, natural values that can never be recovered. The EIS must provide an accounting of these potential costs in addition to the social cost of carbon.

Development of the planning area's oil and gas resources will fuel climate disruption and undercut the needed transition to a clean energy economy. A no new leasing alternative is, therefore, not only reasonable but also imperative. As BLM has not yet had a chance to consider

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[137] *See High Country Conservation Advocates v. U.S. Forest Serv.*, 2014 U.S. Dist. Lexis 87820 (D. Colo. 2014) (invalidating environmental assessment ["EA"] for improperly omitting social cost of carbon analysis, where BLM had included it in preliminary analysis); Taylor, P., *BLM crafting guidance on social cost of carbon – internal memo*, Greenwire, April 15, 2015, *available at* http://www.eenews.net/greenwire/stories/1060016810/; U.S. Bureau of Land Management, Internal Memo from Assistant Director of Resources and Planning Ed Roberson ("Roberson Internal Memo"), April 2015, *available at* http://www.eenews.net/assets/2015/04/15/document_gw_01.pdf (noting "some BLM field offices have included estimates of the [social cost of carbon] in project-level NEPA documents") (accessed July 29, 2015); *see also* Council on Environmental Quality, Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts, p. 18, *available at* www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance (accessed Jul 29, 2015) (quantitative analysis required if GHGs > 25k tons/yr).

[138] Roberson Internal Memo.

[139] *See* Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866, May 2013, *available at* https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf (accessed July 29, 2015); *see also* Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Feb. 2010, *available at* http://www.epa.gov/otaq/climate/regulations/scc-tsd.pdf (accessed July 29, 2015).

a no new leasing and no fracking alternative as part of its planning processes, BLM should suspend new leasing until it properly considers this alternative in an updated RMP or in the EIS. BLM would be remiss to continue leasing when it has never stepped back and taken a hard look at this problem at the appropriate scale. Before allowing more oil and gas extraction in the planning area, BLM must: (1) comprehensively analyze the total GHG emissions which result from past, present, and potential future fossil fuel leasing and all other activities within the planning area, (2) consider their cumulative significance in the context of global climate change, carbon budgets, and other GHG pollution sources outside the planning area, and (3) formulate measures that avoid or limit their climate change effects.

VI. BLM Must Ensure That the Federal Land Policy and Management Act and the Mineral Leasing Act Are Not Violated

The MLA requires BLM to demand lessees take all reasonable measures to prevent the waste of natural gas. The MLA states:

> All leases of lands containing oil or gas, made or issued under the provisions of this chapter, shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to prevent waste of oil or gas developed in the land, or the entrance of water through wells drilled by him to the oil sands or oil-bearing strata, to the destruction or injury of the oil deposits.

30 U.S.C. § 225; *see also id.* § 187 (stating that for the assignment or subletting of leases that "[e]ach lease shall contain . . . a provision . . . for the prevention of undue waste"). This statutory mandate is unambiguous and must be enforced. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978) (stating that "[w]hen confronted with a statute which is plain and unambiguous on its face," "it is not necessary to look beyond the words of the statute."). As already discussed in previous sections, oil and gas operations emit significant amounts of natural gases, including methane and carbon dioxide, which can be easily prevented.[140]

Pursuant to FLPMA, BLM must "take any action necessary to prevent unnecessary or undue degradation of the [public] lands." 43 U.S.C. § 1732(b). Written in the disjunctive, BLM must prevent degradation that is "unnecessary" and degradation that is "undue." *Mineral Policy Ctr. v. Norton*, 292 F.Supp.2d 30, 41–43 (D. D.C. 2003). The protective mandate applies to BLM's planning and management decisions. *See Utah Shared Access Alliance v. Carpenter*, 463 F.3d 1125, 1136 (10th Cir. 2006) (finding that BLM's authority to prevent degradation is not limited to the RMP planning process). Greenhouse gas pollution for example causes "undue"

[140] *See* U.S. Government Accountability Office, Federal Oil and Gas Leases, Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases (2010) at 20.

degradation. Even if the activity causing the degradation may be "necessary," where greenhouse gas pollution is avoidable, it is still "unnecessary" degradation. 43 U.S.C. § 1732(b).

VII. Conclusion

Unconventional oil and gas development not only fuels the climate crisis but poses significant potential public health risks and harms to the environment. Accordingly, an EIS must be prepared for the proposed lease sale, with full consideration of impacts to listed and sensitive species, water quality, air quality, climate, recreational and aesthetic uses, and cultural and historic properties.

Thank you for your consideration of these scoping comments.

Sincerely,

/s/ Michael A. Saul

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From: Wiegmann, Theo
To: Theo Wiegmann
Subject: Comment Period for Farmington Oil and Gas Lease Sale, March 2018
Date: Wednesday, September 20, 2017 8:53:30 PM

Dear Interested Parties,

The preliminary Environmental Assessment (EA) and draft unsigned Finding of No Significant Impact (FONSI) for the March 2018 Farmington Oil and Gas Lease Sale have been posted to the National NEPA Register at ePlanning.blm.gov.

Direct link to the project: https://go.usa.gov/xRuMT

The comment period for this EA is September 21, 2017 to October 20, 2017.

Thank you for your interest in oil and gas development in the Farmington Field Office.

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Theo "Max" Wiegmann
NEPA Assistant
Bureau of Land Management -- Farmington Field Office, NM

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From: Adams, John
To: Secretary; connie@cebrooks.com
Cc: BLM Library
Subject: Re: Looking for BLM policy manual, handbooks pre-1995
Date: Thursday, October 12, 2017 11:36:23 AM
Attachments: 4700_WildFreeRoamingHorseAndBurroManagement_19881123_Obsolete.pdf
H-4700-1_WildHorsesAndBurrosManagement_Public_20100707.pdf

Hi Suzanne,

We heard back this morning that we may release the 4700 Manual Section, dated 1988, to you and I have attached it to this email. I have also included the 4700 Handbook, dated 2010, per your request; we do not have an earlier version of this.

Please let us know if there is anything else we can do to assist and have a great day!
John

John J. Adams, MLIS

Librarian - Bureau of Land Management Library
National Operations Center/OC-521 ; Denver Federal Center, Building 50
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Direct 303-236-1169 | Reference 303-236-6650 | Fax 303-236-4810
jjadams@blm.gov
Visit the BLM Library's website
Contractor - Action Staffing Solutions

On Wed, Oct 11, 2017 at 3:06 PM, Harnke, Deborah <dharnke@blm.gov> wrote:

> Hi Suzanne,
>
> I've sent that request in and I'll let you know what I hear. Like I mentioned over the phone sometimes I hear back very quickly if we can release these Manual Sections and Handbooks and sometimes it can take a few weeks. If we can release this item we'll e-mail you a scanned searchable PDF. No need for the trip! Enjoy your evening!
>
> **Deborah Harnke**
> Librarian (Reference)
> Bureau of Land Management Library
> National Operations Center/OC-521
> Denver Federal Center, Building 50
> P.O. Box 25047
> Denver, CO 80225-0047
> 303-236-6648 | F 303-236-4810
> dharnke@blm.gov
> Visit the BLM Library's website

On Wed, Oct 11, 2017 at 2:59 PM, Secretary <clerk@cebrooks.com> wrote:

> Yes, please! Thank you.
>
> If you can release it, would you be able to scan and send that to me over email, or should I plan to come in to the library?
>
> Suzanne Brenimer
>
> Legal Assistant
>
> C.E. Brooks & Associates, P.C.
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> 5445 DTC Parkway #940
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> Greenwood Village, CO 80111
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> **From:** Harnke, Deborah [mailto:dharnke@blm.gov]
> **Sent:** Wednesday, October 11, 2017 2:54 PM
> **To:** Secretary
> **Cc:** blm_library@blm.gov
> **Subject:** Re: Looking for BLM policy manual, handbooks pre-1995
>
> Hello Suzanne,
>
> We do not have a Handbook 4700 prior to the current one from 2010. However, I did find a Manual Section 4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT from 1988. Would you like me to pursue seeing if we can release that one?
>
> **Deborah Harnke**
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> Librarian (Reference)
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Visit the BLM Library's website

On Wed, Oct 11, 2017 at 1:34 PM, Secretary <clerk@cebrooks.com> wrote:

I should have clarified in my earlier email, just to be safe, that I'm looking for manual/handbook material relating to management of Wild Horses and Burros (4700).

Thank you!

From: Secretary
Sent: Wednesday, October 11, 2017 1:20 PM
To: 'blm_library@blm.gov'
Subject: Looking for BLM policy manual, handbooks pre-1995

Hello,

I am looking for access to or a copy of the BLM Department Manual 4700, and its related handbook H-4700, from 1995 or earlier years.

Do you have these types of resources in your collection, or can you point me in the right direction?

Thank you,

Suzanne Brenimer

Legal Assistant

C.E. Brooks & Associates, P.C.

5445 DTC Parkway #940

Greenwood Village, CO 80111

Office: 303-297-9100

Fax: 303-297-9101

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

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4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

.01 Purpose. This manual describes the authorities, objectives, and policies that guide the protection, management, control, and disposition of wild free-roaming horses and burros.

.02 Objectives. The objectives of the Bureau are:

A. To protect wild free-roaming horses and burros from unauthorized capture, branding, harassment, and destruction.

B. To manage herds of wild horses and burros as an integral part of the public lands ecosystem under the principle of multiple use.

C. To manage wild horse and burro habitat to achieve and maintain a thriving natural ecological balance.

D. To ensure humane and efficient disposition of excess wild horses and burros.

.03 Authority.

A. The Act of September 8, 1959 (18 U.S.C. 47), commonly known as the Wild Horse Annie Act.

B. The Act of December 15, 1971 (16 U.S.C. 1331-1340), as amended by the Federal Land Policy and Management Act of 1976 and the Public Rangelands Improvement Act of 1978, commonly known as the Wild Free-Roaming Horse and Burro Act.

C. The Federal Land Policy and Management Act of 1976 (43 U.S.C. 1711, 1712, and 1734).

D. The Act of June 28, 1934, as amended (43 U.S.C. 315), commonly known as the Taylor Grazing Act.

E. The National Environmental Policy Act of 1969 (42 U.S.C. 4321, 4331-4335, and 4341-4347).

.04 Responsibility.

A. The Director exercises the wild horse and burro program authority of the Secretary of the Interior. In doing so, the Director is responsible for formulating wild horse and burro program policy and providing liaison at the national level with other Federal agencies and interest groups.

B. The Deputy Director (Associate) exercises the Director's responsibilities in the Director's absence or at the Director's request.

C. The Assistant Director for Land and Renewable Resources develops and implements policy for the wild horse and burro program.

D. The Chief, Division of Wild Horses and Burros, oversees the wild horse and burro program by developing policies, guidance, procedures, and regulations, and long range and current budget estimates, and by organizing periodic workshops for Bureauwide coordination of the program.

E. The Service Center Director is responsible for providing technical support to the Headquarters Office and Field Offices by:

1. Responding to Field Office requests for training and technical assistance.

2. Developing, testing, evaluating, supervising, and maintaining the Wild Horse and Burro Information System.

3. Making recommendations to the Headquarters Office on procedures for the collection, storage and retrieval, analysis and interpretation, and application of wild horse and burro program data.

4. Making recommendations to the Headquarters Office on techniques for management, handling, and care of free-roaming and captured wild horses and burros.

F. The State Directors are responsible for achieving the Bureau's wild horse and burro program objectives within their respective States by:

1. Implementing Bureauwide wild horse and burro program policies, setting State wild horse and burro program priorities, and preparing supplemental program directives for statewide application.

2. Providing liaison with other Federal agencies, State agencies, user groups and interest groups, and other BLM State Offices, as needed, to ensure a coordinated wild horse and burro program.

3. Approving resource management plans, plan amendments, and associated environmental documents through which decisions are made concerning wild horse and burro management.

4. Evaluating statewide wild horse and burro program effectiveness through periodic analyses of related decisions and products (e.g., resource management plans, herd management area plans, data management).

5. Providing, or making available, training, workshops, and technical support to ensure that wild horse and burro program personnel are professionally equipped to implement program activities in accordance with established policies and guidelines.

6. Providing information requested by the Headquarters Office for developing policy and preparing reports and correspondence for a variety of audiences, including Congress, the courts, other agencies, and the public.

G. District Managers are responsible for achieving wild horse and burro program objectives within their respective District boundaries by:

1. Implementing Bureau and State wild horse and burro program policies, setting District wild horse and burro priorities, and preparing supplemental program directives, guidelines, and necessary environmental analysis documents for Districtwide application, including Herd Management Area Plans for all herd management areas in their Districts.

2. Cooperating with other Federal agencies and with State and local agencies and interest groups to ensure a coordinated wild horse and burro program.

3. Directing preparation of resource management plans and plan amendments through which decisions are made concerning wild horse and burro management.

4. Evaluating Districtwide wild horse and burro program effectiveness by periodically reviewing and evaluating wild horse and burro program accomplishments for compliance with Bureau, State, and District policies.

5. Maintaining sufficient professional expertise, within budgetary limits, in the District and Resource Area organizations to ensure that wild horse and burro program activities are carried out in accordance with established policies and guidelines.

6. Maintaining accurate records on wild horse and burro program activities and providing information requested by the State Office for statewide reports and for responding to Headquarters Office information requests.

.05 References.

A. Code of Federal Regulations Chapter 9 Part 71.3.

B. Code of Federal Regulations Chapter 43 Part 4700.

C. Code of Federal Regulations Chapter 43 Part 4.4.

D. BLM Manual Section 1203 - Delegation of Authority.

E. BLM Manual Sections 1601 - 1632 - Bureau Planning Manual.

F. BLM Manual Section 1734 - Inventory and Monitoring Coordination.

G. BLM Manual Section 1740 - Renewable Resource Improvements and Treatments.

H. BLM Manual Section 1790 - National Environmental Policy Act.

I. BLM Manual Section 9400 - Aviation Management.

J. BLM Handbook 1740-1 - Renewable Resource Improvement and Treatment Guidelines and Procedures.

K. BLM Handbook 1741-1 - Fencing.

L. BLM Handbook 1790-1 - National Environmental Policy Act Handbook.

M. BLM Wild Horse & Burro Information System Users Guide 4700 Series.

.06 Policy. It is the policy of the Bureau of Land Management, in accordance with the Wild Free-Roaming Horse and Burro Act (Public Law 92-195, as amended) and other laws governing the administration of public lands, to:

A. Protect, manage, and control wild horses and burros on public lands as an integral part of the public lands ecosystem. Appropriate management levels shall be determined for wild horses and burros through the resource management planning process. Wild horses and burros shall be considered comparably with other resource values on each herd area in the formulation of resource management plans and managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat. Current inventories of herd management areas shall be maintained. Management of wild horses and burros shall be constrained as necessary to ensure the protection of the habitat of candidate, threatened, or endangered species. Management actions shall be at the minimum feasible level that allows attainment of herd and habitat objectives and protects the range from deterioration associated with overpopulation. Wild horse and burro ranges shall be designated when it is determined to be in the public interest to manage herd management areas principally, but not necessarily exclusively, for wild horses and burros.

B. Remove excess wild horses and burros from public lands to preserve and maintain a thriving ecological balance and multiple-use relationship. Priority shall be given to removing wild horses and burros from private land when the landowner submits a written request to BLM for their removal.

C. Destroy humanely old, sick, or lame wild horses and burros, using methods judged acceptable for euthanasia of large animals by the American Veterinary Medical Association Panel on Euthanasia. Healthy excess wild horses that are not adopted shall be humanely maintained by the BLM or its agents, preferably on sanctuaries on private land, until such time that the BLM is ordered by an appropriate authority to implement the provision in the Wild Free-Roaming Horse and Burro Act for destruction of unadopted excess wild horses and burros in the most humane and cost-efficient manner possible.

D. Ensure that aircraft and motor vehicles used to administer the Act meet appropriate safety standards and are operated in a safe and humane manner and that a public hearing is held prior to the use of helicopters to capture wild horses and burros and motor vehicles to transport captured animals.

E. Place healthy excess wild horses and burros in private maintenance with qualified individuals who pay a fee established by regulation. The Director may reduce the adoption fee for excess wild horses or burros not adopted at the standard fee when the Director determines it is in the public interest to do so. The BLM shall convey title to eligible adopters at the end of 1 year of humane private maintenance.

F. Carry out compliance activities necessary to ensure humane treatment of adopted wild horses and burros.

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

.1 Wild Horse and Burro Information System. A comprehensive computerized wild horse and burro information system is a major component of the official records for the wild horse and burro program. When completed, the wild horse and burro information system will be comprised of four data bases. These data bases are designed to function as the primary record for use by program personnel in operation of the wild horse and burro program. In addition to these four data bases, additional data needed to manage the wild horse and burro program will be included in the BLM's Land Information System. Full utility of the wild horse and burro information system is dependent on timely and accurate entry of data into the data bases. Mandatory timeframes for data entry and other instructions for use of the data are contained in the BLM Wild Horse & Burro Information System Users Guide 4700 Series.

.11 The Disposal Data Base contains information about the disposition of every animal adopted since the start of the program. The data base was expanded on October 1, 1986, and contains considerably more information about animals gathered after that date. As presently structured, the Disposal data base includes data about each animal from the time it is captured until the time it is released back to the range or loses its status under the Wild Free-Roaming Horse and Burro Act through death or titling.

12. The Herd Area Data Base contains information about the wild horse and burro herds on public lands administered by the Bureau of Land Management and Forest Service territories containing BLM-administered public lands. This data base is not yet functional but will contain census information about each herd, land status, and information about planning decisions related to wild horses and burros.

13. The Applicant Data Base, when completed, will contain the names and addresses of individuals that have applied and been approved to adopt wild horses and burros and the types of animals requested.

14. The Events Data Base, when completed, will contain information about wild horse and burro activities such as meetings, roundups, adoption events, and other events open to the public, conducted by or involving BLM.

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

Glossary of Terms

-A-

adoption: see private maintenance.

appropriate management level: the median number of adult wild horses or burros determined through BLM's planning process to be consistent with the objective of achieving and maintaining a thriving natural ecological balance and multiple-use relationship in a particular herd area.

authorized officer: any employee of the Bureau of Land Management to whom has been delegated the authority to perform the duties described in this Manual. (See BLM Manual Section 1203 for an explanation of delegation of authority.)

-B-

band: a group of wild horses or burros running together or a lone wild horse or burro.

-C-

commercial exploitation: using a wild horse or burro because of its characteristics of wildness for direct or indirect financial gain. "Characteristics of wildness" include the rebellious and feisty nature of such animals and their defiance of man as exhibited in their undomesticated and untamed state.

-E-

euthanasia: the act of inducing painless death.

excess wild horses or burros: wild free-roaming horses or burros which have been removed from public lands or which must be removed in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in an area.

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

-F-

freeze mark: identification symbol placed on the left side of the neck of a wild horse or burro by a technique utilizing marking rods chilled in liquid nitrogen to place a code made up of straight lines and angles (Angle System) representing the numerals "0" through "9"; each healthy wild horse or burro removed from the public lands is freeze marked to record an eight-digit identification number, with the first two digits representing the birth year.

-H-

herd: one or more bands using the same general area.

herd area: the geographic area identified as having provided habitat for a herd in 1971.

herd management area: a herd area identified in a management framework or resource management plan for the long-term management of a wild horse or burro herd.

herd management area plan: an action plan that prescribes measures for the protection, management, and control of wild horses and burros and their habitat on one or more herd management areas, in conformance with decisions made in approved management framework or resource management plans.

humane treatment: handling compatible with animal husbandry practices accepted in the veterinary community, without causing unnecessary stress or suffering to a wild horse or burro.

-I-

inhumane treatment: any intentional or negligent action or failure to act that causes injury or undue stress or suffering to a wild horse or burro and which is not compatible with animal husbandry practices accepted in the veterinary community.

-L-

lame wild horse or burro: a wild horse or burro with one or more malfunctioning limbs that permanently impair its freedom of movement.

-M-

minimum feasible level of management: the least amount of habitat improvement and population manipulation necessary to meet stated objectives for a herd management area.

-O-

old wild horse or burro: a wild horse or burro characterized because of age by (1) its physical deterioration and inability to fend for itself, (2) suffering, or (3) closeness to death.

-P-

private maintenance: the provision of proper care and humane treatment to excess wild horses and burros by qualified individuals under the terms and conditions specified in a Private Maintenance and Care Agreement.

public lands: lands or interests in lands administered by the Secretary of the Interior through the Bureau of Land Management.

-S-

sanctuary: a facility where unadopted excess wild horses or burros are maintained for BLM on private land in pastures that allow the animals to exist in an environment similar to their former free-roaming state.

sick wild horse or burro: a wild horse or burro with failing health, infirmity, or disease from which there is little chance of recovery.

signalment key: a code used to supplement the freeze mark for identifying an animal by providing a detailed physical description of the animal, including species, sex, distinctive markings, and color.

-W-

wild horses and burros: unbranded and unclaimed horses and burros that use public lands as all or part of their habitat, or that have been removed from these lands by the Authorized Officer but have not lost their status under section 3 of the Act.

BLM

United States
Department of the Interior
Bureau of Land Management

Wild Horses and Burros Management Handbook





BLM Handbook H-4700-1

NATIONAL SYSTEM OF PUBLIC LANDS

June 2010

BLM/WO

Bureau of Land Management (BLM)
Wild Horse and Burro Program
Office of the Assistant Director, Renewable Resources and Planning (WO-200)
1849 C Street NW, Mail Stop 1050LS
Washington, DC 20240

Email: wildhorse@blm.gov

Cover Photographs – Wild horses in Utah and burros in Nevada.

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ACRONYMS

- ❒ AML – Appropriate Management Level
- ❒ APHIS – Animal Plant Health Inspection Service (Department of Agriculture)
- ❒ AUM – Animal Unit Month
- ❒ AU – Animal Unit
- ❒ BLM – Bureau of Land Management (Department of Interior)
- ❒ CFR – Code of Federal Regulations
- ❒ DNA – Determination of NEPA Adequacy
- ❒ DR – Decision Record
- ❒ EA – Environmental Assessment
- ❒ EIS – Environmental Impact Statement
- ❒ ESI – Ecological Site Inventory
- ❒ FLPMA – Federal Land Policy and Management Act of 1976
- ❒ FONSI – Finding of No Significant Impact
- ❒ HA – Herd Area
- ❒ HMA – Herd Management Area
- ❒ HMAP – Herd Management Area Plan
- ❒ IBLA – Interior Board of Land Appeals
- ❒ IUD – Intrauterine Device
- ❒ LUP – Land Use Plan
- ❒ MFP – Management Framework Plan
- ❒ MLRA – Major Land Resource Area (NRCS Ecological Site Descriptions)
- ❒ MUD – Multiple Use Decision
- ❒ NEPA – National Environmental Policy Act of 1969
- ❒ NPO – National Program Office (Reno, Nevada)
- ❒ NRCS – Natural Resources Conservation Service
- ❒ PZP – Porcine Zona Pellucida
- ❒ RMP – Resource Management Plan
- ❒ ROD – Record of Decision
- ❒ SOPs – Standard Operating Procedures
- ❒ TES – Threatened, Endangered or Sensitive Species
- ❒ TNEB – Thriving Natural Ecological Balance
- ❒ WFRHBA – Wild Free-Roaming Horses and Burros Act of 1971 (as amended)
- ❒ WH&B – Wild Free-Roaming Horses and Burros
- ❒ WHT – U.S. Forest Service Wild Horse Territory
- ❒ WO – Washington Office (Headquarters)
- ❒ WSA – Wilderness Study Area
- ❒ USC – United States Code
- ❒ USFS – United States Forest Service (Department of Agriculture)
- ❒ USGS – United States Geological Service (Department of Interior)

CHAPTER 1—INTRODUCTION

GENERAL

The Bureau of Land Management (BLM) is responsible for the protection, management and control of wild free-roaming horses and burros (WH&B). Under the Wild Free-Roaming Horses and Burros Act (WFRHBA), WH&B are considered an integral part of the national system of public lands in the areas where they were found in 1971. The BLM's goal is to manage healthy WH&B populations on healthy rangelands. To achieve this goal, the BLM designates Herd Management Areas (HMAs) for the long-term maintenance of WH&B herds and collects data about the animals and their habitat. The BLM also prescribes management to assure WH&B populations are in balance with other uses of the public lands and that a thriving natural ecological balance (TNEB) is achieved and maintained. Activities are carried out with the objective of maintaining free-roaming behavior and at the minimum feasible level of management necessary to attain the objectives identified in approved land use plans (LUPs) and Herd Management Area Plans (HMAPs).

1.1 PURPOSE

This handbook describes the authorities, objectives, policies and procedures that guide the management of WH&B on the public lands administered by the BLM.

1.2 OBJECTIVE

The objective of this handbook is to provide guidance for the protection, management and control of WH&B in accordance with the 1971 WFRHBA, as amended, and the implementing regulations in 43 Code of Federal Regulations (CFR) 4700.

CHAPTER 2—LAND USE PLANNING

GENERAL

Section 202(a) of the 1976 Federal Land Policy and Management Act (FLPMA) requires the Secretary to develop, maintain, and when appropriate revise LUPs that provide (by tracts or areas) for the use of the public lands. The responsible BLM official shall follow the established LUP procedures in 43 CFR 1600, associated BLM manual sections and policy for fulfilling the planning requirements prescribed in the statute.

LUPs are the basis for every on-the-ground management decision that the BLM makes. LUPs establish goals and objectives (desired outcomes), identify the management actions needed to achieve the desired outcomes, and identify allowable uses of the public lands.

2.1 LAND USE PLAN DECISIONS

LUP planning requirements for the WH&B program are applicable to all BLM LUP documents, including Management Framework Plans (MFPs) and Resource Management Plans (RMPs).

2.1.1 Comparability Consideration

Under 43 CFR 4700.0-6(b), WH&B shall be considered comparably with other resource values in the formulation of LUPs. This means WH&B are to be considered in the same manner as other resource values (e.g., cultural, historic, scenic, rangelands, timber, and minerals). WH&B are a resource value, as opposed to a land use (e.g., livestock grazing or timber harvest).

2.1.2 Herd Areas

Herd areas (HAs) are limited to areas of the public lands identified as habitat used by WH&B at the time that the WFRHBA passed (December 15, 1971). When preparing a LUP, identify the HAs (in whole or in part) which will not be managed as HMAs and explain the reasons they will not be managed for WH&B.

HA boundaries can be adjusted through a LUP when the current boundary does not correctly portray where WH&B were found in 1971 based on well-documented historical data. Existing herd areas where all animals were privately-owned (claimed during the claiming period) shall be dropped from HA status in a LUP.

Under 43 CFR 4710.2 and to assure transparency regarding the disposition of HAs, the authorized officer shall permanently maintain a record regarding the location of all HA boundaries and explanations of any changes in field office (FO) files.

2.1.3 Herd Management Areas

HMAs shall be designated in those HAs within which WH&B can be maintained over the long term in LUPs. For each HMA designated within the planning area, the LUP should identify the following:

- The HA(s) that contain the HMA.

- The initial and estimated herd size that could be managed while still preserving and maintaining a TNEB and multiple-use relationships for that area.

- The guidelines and criteria for adjusting herd size.

LUPs should also identify:

- The HMAs to be managed for non-reproducing wild horses to aid in controlling on the range population numbers and the criteria for their selection (16 United States Code (USC) § 1333(b)(1)). See Chapter 4 (Population Management). Examples of criteria that could be used to select HMAs for management of non-reproducing wild horses include: no special or unique herd characteristics, low ecologic condition, limited public land water, and reliance on private water.

- The management tools to control population size within AML and to extend (reduce) gather frequency.

2.1.4 Herd Areas Not Designated as HMAs

Where appropriate, the LUP may include decisions not to manage WH&B in all or a part of an HA. An example is intermingled and unfenced private lands within HAs where the landowners are unwilling to make them available for WH&B use, or the animals present at that time were later found to be claimed domestic horses (or burros). Another example would be where essential habitat components (forage, water, cover and space) are unavailable or insufficient to sustain healthy WH&B and healthy rangelands over the long term.

2.1.5 Changes to HA or HMA Boundaries

Decisions to change HA boundaries, to designate HMAs for the maintenance of WH&B, or to remove all or a portion of an area's designation as an HMA must be made through a LUP amendment, revision or new RMP (43 CFR 4710.1 and H-1601-1: Land Use Planning Handbook).

HMA boundaries may be changed within HAs through the LUP process to facilitate WH&B management or mitigate unacceptable impacts to other resources.

An area may lose its designation as an HMA when WH&B cause unacceptable impacts to other resource values, or conditions change and one or more of the four essential habitat components are not present in sufficient quantities to sustain WH&B use over the long term. Similarly, if conditions change, all or part of an HA may be reconsidered for designation as an HMA through LUP. See Chapter 3 (Habitat Management).

2.1.6 Wild Horse and/or Burro Ranges

An HMA may be considered for designation as a WH&B Range to be managed principally, but not necessarily exclusively, for WH&B. Criteria for consideration as a WH&B Range should include the presence of one or more of the following: unique herd characteristics, outstanding viewing opportunities, unique landscape, or significant historical or cultural features (H-1601-1: Appendix D). The authorized officer, currently only the Director or Assistant Director (AD) (refer to BLM Manual 1203: Delegation of Authority), may establish a WH&B Range after a full assessment of the impact on other resources through the LUP process.

2.2 GRAZING AUTHORIZATIONS WITHIN HMAs

Domestic horses and burros may not graze under permits or leases within HMA boundaries (43 CFR 4710.5(b)). If necessary to provide habitat for WH&B, to implement herd management actions, or to protect WH&B from disease, harassment or injury, the authorized officer may close areas of the public lands to grazing use by all or a particular kind of livestock (43 CFR 4710.5(a)).

Closure to livestock grazing may be temporary or permanent (43 CFR 4710.5(c)). Prior to issuing a final decision to permanently close an area to livestock grazing use, a LUP amendment should be completed. Completion of site-specific environmental analysis and issuance of a proposed and final decision pursuant to 43 CFR 4160 (2005) is also required.

2.3 OTHER PERMITTED ACTIVITIES

2.3.1 Commercial Recreation Use

Proposals for commercial recreational use of the public lands should be evaluated through the appropriate BLM permitting process. Permits should stipulate the safeguards necessary to protect the health and welfare of WH&B, particularly before, during and immediately following the peak foaling period (e.g., generally March – June). See Chapter 4 (4.4.4).

Proposals for motor vehicle racing, air racing, or other potentially intrusive activities have potential to harass or harm WH&B. Permit authorizations should contain provisions to minimize impacts to WH&B from these activities. Should adequate safeguards prove impractical, permits should not be approved (refer to BLM Manual Section 2930 and H-2930-1: Recreation Permit Administration).

2.3.2 Energy and Minerals Exploration and Development

The health and welfare of WH&B should be considered during project planning for hard-rock mining or oil and gas exploration and development; non-mineral sales such as gravel; or wind or solar energy development proposals. Specific mitigation measures will be identified through a site-specific environmental analysis and decision process in accordance with the 1969 National Environmental Policy Act (NEPA). Mitigation measures will be implemented through applicable permits.

2.4 LAND USE PLAN GOALS AND OBJECTIVES

LUPs normally contain general habitat and population management goals and objectives. LUPs may also include the management requirements or actions necessary to make progress toward attainment of Land Health Standards and to preserve and maintain a TNEB and multiple-use relationship on the public lands.

2.4.1 Habitat and Population Management

Habitat or population management and monitoring objectives regarding the management of a specific HMA or complex of HMAs are normally identified in a Herd Management Area Plan (HMAP) rather than a LUP.

2.5 IMPLEMENTATION DECISIONS

Implementation decisions make progress toward achieving LUP goals and objectives and may include:

- Establishing or adjusting appropriate management levels (AMLs) based on monitoring and evaluation, including the population range within which the herd size will be allowed to fluctuate.
- Identifying and setting objectives for herd composition, animal characteristics and habitat development needs (e.g., HMAPs).
- Specific habitat improvement projects (e.g., construction, modification, or removal of fences; water development construction/reconstruction or removal; or re-vegetation projects).
- Site-specific population management actions (e.g., decisions to gather/remove excess WH&B, apply fertility control, or adjust age or sex ratios).

2.5.1 Appropriate Management Level (AML) Adjustments

AML may be adjusted (either up or down) through a site-specific environmental analysis and decision process (NEPA). An analysis under NEPA is also required to establish a population range (upper and lower limit) for AMLs initially established as a single number. Development of a LUP amendment or revision is not generally required.

2.5.1.1 AMLs Established in LUPs

- When AML is established in a LUP, follow the process outlined in the LUP to adjust AML.

- When the LUP does not outline a process for AML adjustment, the LUP may need to be amended or revised to adjust AML.

2.5.1.2 AMLs Established through Implementation Decisions

See Chapter 4 (4.2.2).

2.5.2 Herd Management Area Plans

Herd Management Area Plans (HMAPs) are prepared under 43 CFR 4710.3-1. HMAPs establish short- and long-term management and monitoring objectives for a specific WH&B herd and its habitat. HMAPs also identify the actions to be taken to accomplish herd and habitat management objectives. An HMAP assists the authorized officer in tracking progress toward achieving LUP goals.

HMAPs tier to and must be in conformance with the applicable LUP. If the proposed management strategy is not consistent with the LUP, then the LUP should be amended, or the proposal should be modified or rejected.

HMAPs may be prepared for a single HMA or a complex of adjacent HMAs where animal interchange occurs. When two or more jurisdictions have management responsibility for portions of a single HMA or an HMA complex, BLM will designate one field office with the lead responsibility for development of the HMAP and management of the HMA or complex. When a WH&B herd is dependent on the habitat within a BLM HMA and an adjacent U.S. Forest Service (USFS) Wild Horse Territory (WHT), the agencies should jointly determine lead responsibility for development of the HMAP and management of the herd and habitat.

2.6 NOTICES, CONSULTATIONS AND HEARINGS

2.6.1 Agency Consultation and Public Involvement

See BLM Manual Section 4710.25.

2.6.2 Hearings

See BLM Manual Section 4740.3.

CHAPTER 3—HABITAT MANAGEMENT

GENERAL

Habitat for WH&B is composed of four essential components: forage, water, cover, and space. These components must be present within the HMA in sufficient amounts to sustain healthy WH&B populations and healthy rangelands over the long term. If they are not present in sufficient amounts, the authorized officer should consider amending or revising the LUP to remove the area's designation as an HMA. If the decision is made to return a designated HMA to HA status, the total population of WH&B should then be gathered and removed. See BLM Manual Section 4710.3.

A recurring pattern of WH&B movement out of the HMA to access forage, water, or thermal or hiding cover is an indication that year-long WH&B use cannot be sustained. If one or more of the key habitat components is missing, the HMA should be considered as unsuitable for year-long use. In these situations, the authorized officer should consider removing the area's designation as an HMA through LUP. An exception would be two or more HMAs which adjoin and are managed as a complex of HMAs, or HMAs which adjoin USFS WHTs that can be managed as a complex.

3.1 FORAGE (VEGETATION)

Forage (vegetation) is one of the essential components of WH&B habitat. The authorized officer should determine whether vegetation provides sustainable forage (and cover) for the animals. Vegetation should be managed within each HMA in a manner that achieves and maintains a TNEB and assures significant progress is made toward achieving the Standards for Land Health and other site-specific or landscape-level objectives.

3.2 WATER

An adequate year-round quantity and quality of water must be present in the HMA to sustain WH&B numbers within AML. If baseline information concerning access to and availability of water does not exist, then a public land water inventory should be conducted.

If privately-owned water is essential to sustaining WH&B populations within HMAs, cooperative agreements with the owners or acquisition of water rights should be considered. If agreement cannot be achieved with private water owners, or if public land water cannot be developed and maintained, one of the following should occur:

- AML should be adjusted based on the available public land water within the HMA boundary.

- The authorized officer should amend or revise the LUP to remove the area's designation as an HMA.

3.3 COVER (VEGETATION) AND SPACE

The terrain and vegetation are needed to provide WH&B with escape (hiding) cover and shelter from the prevailing weather. (Vegetation also provides sustainable forage. See 3.1 above). WH&B require sufficient space to allow the herd to move freely between water and forage within seasonal habitats. Cover and space are interrelated. If the HMA has barriers preventing free movement of WH&B throughout the HMA or between forage and water, it would not have sufficient cover and space. Barriers can be natural (e.g., rock rims, rivers) or human-induced (e.g., fences, highways).

3.4 HABITAT IMPROVEMENT PROJECTS

3.4.1 Nonstructural Improvements

Nonstructural improvement projects such as seeding, prescribed fire, emergency fire rehabilitation or shrub and tree removal have potential to increase the forage available for WH&B use and to improve habitat conditions. They may also cause grazing animals to concentrate their use within the project area. As a result, it may be necessary to close these areas to grazing until vegetation management objectives are achieved.

Before making the decision to exclude an area from grazing use, the authorized officer should first take a hard look at alternatives to fencing. These alternatives could include:

- Reduce WH&B populations to the AML lower limit.
- Reduce WH&B to a number below the AML lower limit (based on the available forage and water).
- One of the above, in combination with closing the area to domestic livestock use (in whole or in part).
- Use of mineral supplements to modify distribution.
- Restrict or eliminate access to selected water sources.

If the authorized officer determines fence construction is necessary, the fences should be designed to maintain WH&B access to critical water sources. Fences should then be removed once objectives have been achieved.

3.4.2 Structural Improvements

Construct and maintain structural improvement projects (e.g., fences, cattle guards, or water developments) in a manner that protects the wild, free-roaming nature of WH&B and provides for normal herd distribution and movement as well as genetic interchange.

While some projects might increase the forage, cover, or water available for WH&B, others might negatively impact individual animals or entire populations:

- Fences and cattle guards might restrict seasonal WH&B movement or use of critical escape (hiding) or thermal cover, key spring-summer-fall-winter use areas, or critical water sources.

- Water development projects might encourage use outside the HMA or concentrate use in sensitive areas.

Existing projects that negatively impact WH&B should be considered for removal or modification through coordinated activity plans. Proposed projects should be analyzed and mitigation proposed to minimize adverse impacts to WH&B where possible.

3.4.2.1 Existing Fences and Cattle Guards

Existing fences and cattle guards with negative impacts to WH&B should be reviewed to determine:

- If the project is still needed; or
- Whether the project can be modified to minimize impacts to WH&B.

Possible fence or cattle guard modifications could include:

- Make fences open-ended allowing WH&B movement around the ends.
- Construct large gates or sections of "let-down" fence, or consider the use of electric take-down fence where feasible, to allow movement when fences are not needed for livestock control.
- Weld rebar strips between cattle guard grates; or
- Replace the cattle guard with a gate, if possible.

3.4.2.2 Proposed Fences and Cattle Guards

Fencing within an HMA should be done only after the impacts are carefully analyzed through the NEPA process. If fences and cattle guards are essential for proper resource management, they should be constructed with particular attention to location and design. Avoid locating fences across migration routes, to prevent WH&B (or livestock) concentration, or the unintended trapping or death of WH&B.

3.4.1.3 Existing Water Developments

Consistent with resource management objectives, existing projects may be modified to provide WH&B with access to water through one or more of the following methods:

- Piping water to a trough away from the source.
- Piping water to a trough outside an exclosure.
- Retaining a portion of the source outside the exclosure.

3.4.1.4 Proposed Water Developments

Water sources may be excluded from use by WH&B to protect the water source, the associated riparian area, and to maintain or improve the quality and quantity of water. Where possible, projects should be designed to provide WH&B with access to water as described in 3.4.1.3 above.

Fences constructed in proximity to major WH&B water sources and smaller riparian pastures or exclosures should be constructed with a top rail composed of pipe or wooden poles. The top rails provide a visual barrier to prevent WH&B from entering the exclosure and becoming trapped. Project design may also consider the use of specialized gates (e.g., finger gates) to allow any WH&B entering an exclosure to exit safely.

Reservoirs and similar water sources should be designed and maintained with gently sloping (rather than steep) sides to avoid trapping foals.

Where WH&B are, or may become, dependent upon mechanically provided water, the authorized officer shall assure that alternative sources of known and accessible water are available to WH&B in the event of a system failure of a well, storage tank, pipeline, trough, or float device.

Actions to assure water is available to WH&B may include:

- Entering into Cooperative Range Improvement Agreements (Form 4120-6) whose terms and conditions require water to be made available to WH&B and wildlife.

- Using WH&B program funding (in whole or part) for construction and/or maintenance of a well, spring development, catchment, pond, or other permanent water improvement providing WH&B with access to water on public land.

- Acquiring the necessary water rights in order to provide and maintain access to water sources. Refer to BLM Manual 7250 (Water Rights).

CHAPTER 4—POPULATION MANAGEMENT

GENERAL

Under the 1971 WFRHBA, WH&B are to be managed in a manner designed to achieve and maintain a thriving natural ecological balance and protect the range from the deterioration associated with WH&B overpopulation.

4.1 MANAGEMENT REQUIREMENTS

4.1.1 Self-Sustaining

WH&B shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat. Some selected HMAs may be managed for non-reproducing wild horses to aid in controlling on-the-range population numbers (see 4.5.4).

4.1.2 Free-Roaming Behavior

In accordance with 43 CFR 4700.0-6(c), management activities affecting WH&B shall be undertaken with the goal of maintaining free-roaming behavior.

4.1.3 Constraints on Management

Management of WH&B on the public lands is limited to herd areas (HAs), consistent with the WFRHBA (16 USC § 1339) which states: “Nothing in this Act shall be construed to authorize the Secretary to relocate wild free-roaming horses or burros to areas of the public lands where they do not presently exist.”

Consistent with 43 CFR 4710.3-1, herd management areas (HMAs) shall be established for the maintenance of WH&B herds. In delineating each HMA, the authorized officer shall consider the appropriate management level for the herd, the habitat requirements of the animals, and the relationships with other uses of the public and adjacent private lands, and the constraints contained in § 4710.4.

4.1.4 Minimum Feasible Level of Management

As required in 43 CFR 4710.4, management shall be at the minimum level necessary to attain the objectives identified in approved LUPs and HMAPs.

1. Limit population management actions by:

    a. Establishing AML as a population range within which herd size will be allowed to fluctuate.

    b. Evaluating HMAs that require frequent emergency or nuisance removals due to inadequate habitat (e.g., limited availability of forage or water) for the possible removal of the area’s designation as an HMA through LUP.

2. It is not consistent with management at the minimal level to provide supplemental feed or rely on water developments that require frequent maintenance. It may, however, be appropriate to provide water in temporary emergency situations.

4.1.5 Thriving Natural Ecological Balance (TNEB)

Consistent with 43 CFR 4700.0-6, WH&B shall be managed in balance with other uses and the productive capacity of their habitat (i.e., WH&B will be managed to achieve and maintain a thriving natural ecological balance (TNEB) and multiple use relationships on the public lands).

The WFRHBA requires the BLM to manage horses in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands (16 USC § 1333(a)). *See also Animal Protection Institute of America*, 109 IBLA 112, 115 (1989) ("…the 'benchmark test' for determining the suitable number of wild horses on the public range is 'thriving natural ecological balance'…") (*Dahl v. Clark*, 600 F. Supp. 585, 594 (D. Nev. 1984)).

To achieve a TNEB on the public lands, WH&B should be managed in a manner that assures significant progress is made toward achieving the Land Health Standards for upland vegetation and riparian plant communities, watershed function, and habitat quality for animal populations, as well as other site-specific or landscape-level objectives, including those necessary to protect and manage Threatened, Endangered, and Sensitive Species (TES). WH&B herd health is promoted by achieving and maintaining TNEB.

4.2 ESTABLISHING THE APPROPRIATE MANAGEMENT LEVEL

4.2.1 AML Definition

The appropriate management level (AML) shall be expressed as a population range within which WH&B can be managed for the long term. AMLs previously established as a single number will be modified to include an upper and lower limit. For reporting purposes, the upper limit of the AML range will be used.

AML applies to the number of adult wild horses or burros to be managed within the population and does not include current year's foals. All WH&B one year of age and older are considered adults (a foal is considered one year of age on January 1 of the year following its birth).

The AML upper limit shall be established as the maximum number of WH&B which results in a TNEB and avoids a deterioration of the range. This number should be below the number that would cause rangeland damage (refer to *Animal Protection Institute of America v. Nevada BLM*, 118 IBLA 63, 75, (1991)).

The AML lower limit shall normally be established at a number that allows the population to grow (at the annual population growth rate) to the upper limit over a 4-5 year period, without any interim gathers to remove excess WH&B. Some HMAs may require more frequent removals to maintain population size within AML. For HMAs that require more frequent gathers, the authorized officer should consider management options which would either extend the gather

cycle or broaden the AML range; amend or revise the LUP to remove the area's designation as an HMA; or manage the HMA for non-reproducing wild horses.

4.2.2 Establishing or Adjusting AML

An interdisciplinary and site-specific environmental analysis and decision process (NEPA) with public involvement is required to establish or adjust AML.

4.2.2.1 Establishing AML

When establishing AML, the analysis shall include an in-depth evaluation of intensive monitoring data or land health assessment. Intensive monitoring data shall include studies of grazing utilization, range ecological condition and trend, actual use, and climate (weather) data. Population inventory, use patterns and animal distribution should also be considered. A minimum of three to five years of data is preferred. Progress toward attainment of other site-specific and landscape-level management objectives should also be considered. See Appendix 3 (AML Establishment and Adjustment).

4.2.2.2 Evaluation and Adjustment of AML

In-depth AML evaluations should be completed when review of resource monitoring and population inventory data indicates the AML may no longer be appropriate. The following should be considered when evaluating AML:

- Changes in environmental conditions which may have occurred since the AML was established. Changing environmental conditions could include drought, wildfires, noxious weed infestations, effect of varying numbers of WH&B on forage utilization or range ecological condition/trend, an increase or decrease in the available forage, changes in livestock management, etc.

- The presence of any newly listed Threatened, Endangered or Sensitive Species (TES).

- Any additional resource monitoring, population inventory or other relevant data collected since AML was established.

For additional information refer to Appendix 3 (AML Establishment and Adjustment) and BLM Manual Section 4720.3.

4.2.3 WH&B Animal Unit and Animal Unit Month

Wild horses, one year of age or older, count as one (1) Animal Unit (AU) and burros one year of age and older count as 0.5 AU. One Animal Unit Month (AUM) is the amount of forage necessary to sustain one adult horse or two adult burros for one month (or approximately 800 pounds of air dried forage).

4.2.4 Forage Allocations for WHB

The amount of forage available to allocate to WH&B shall be determined through in-depth evaluation of resource monitoring data and following a site-specific environmental analysis and decision process. Forage for WH&B (AUMs) is allocated based on the AML upper limit.

4.3 DETERMINATION OF EXCESS

Before issuing a decision to gather and remove animals, the authorized officer shall first determine whether excess WH&B are present and require immediate removal. In making this determination, the authorized officer shall analyze grazing utilization and distribution, trend in range ecological condition, actual use, climate (weather) data, current population inventory, wild horses and burros located outside the HMA in areas not designated for their long-term maintenance and other factors such as the results of land health assessments which demonstrate removal is needed to restore or maintain the range in a TNEB.

The term "excess animals" is defined as those animals which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area (16 USC § 1332(f)(2)). This definition underscores the need to remove excess animals before damage to the range begins to occur.

4.4 PARAMETERS FOR POPULATION MANAGEMENT

4.4.1 Age Structure and Sex Ratio

Age structure and sex ratio influence herd health, social interactions, and population growth rates of reproducing WH&B herds. A herd's age structure and sex ratio may have been altered by previous selective removal policies or natural mortality and should be estimated from the best available data (e.g., capture records, preparation records, and final gather reports). Most populations will have representatives from each age class, and rapidly growing populations will have a greater proportion of younger WH&B. WH&B populations will produce roughly equal numbers of males and females over time.

In order to maintain the desired age structure and sex ratios, consider retaining male and female animals from each age group (0-4, 5-9, 10-15, 15+ years of age) following a removal operation. If specific age structure and sex ratio objectives are not established for an HMA or complex of HMAs, a desired post-gather age structure and sex ratio should be established during the pre-gather planning and analysis process. These objectives should be consistent with the selective removal criteria outlined in BLM Manual Section 4720.33 and the AML lower limit.

The authorized officer should consider alternatives which would manage WH&B herds for a sex ratio with a female component of less than or equal to 50 percent, to reduce population growth rates and extend the gather cycle. Opportunities to manage sex ratios as a tool to slow population growth rates are discussed later in this chapter.

4.4.2 Selective Removal

Selective removal and release of animals back to the range should be conducted to achieve AML, and the age structure and sex ratio objectives established for the specific HMA or complex of HMAs. In the absence of specific age structure or sex ratio objectives for the HMA or complex, see BLM Manual Section 4720.33.

4.4.3 Population Growth Rates

Population growth rates represent the net difference between births and deaths over time. Population growth rates can be highly variable and influenced by habitat quality, forage production, water availability and other factors. Data from recent gathers and population estimates derived from aerial surveys are used to determine population growth rates. The annual growth rate from Year 1 to Year 2 is calculated as follows:

Population on 2/28 (Year 2) – Population on 2/28 (Year 1)
÷ Population on 2/28 (Year 1) ×100 = Percent Annual Growth Rate

The same formula can be used to calculate growth over a period of several years (e.g., between aerial population surveys which are normally conducted at 3-4 year intervals).

Significant variation from historical growth rates may indicate that either immigration into the HMA or migration out of the HMA is occurring.

4.4.4 Foaling Period

Foaling period can be documented for each population (individual HMA or HMA complex) through direct observation. The capture of wild horses by using a helicopter to herd the animals is prohibited during the foaling period, which is defined as six weeks on either side of the peak of foaling to assure that young foals are mature enough to be able to remain with their band during gather activities. This period is generally March 1 to June 30 for most wild horse herds. Helicopters may be used year-round in the removal of burros. See BLM Manual Section 4740.1.

The capture of wild horses and burros by using bait (e.g., food, water, salt or sexual attraction) to lure animals into a trap may be used year-round.

Population surveys or distribution flights involving fixed-wing aircraft may be conducted during the foaling period. The use of helicopters for these activities during this time should be evaluated on a case-by-case basis.

4.4.5 Gathers and Gather Cycles

The gather cycle is the interval between gathers. Gather frequency is a function of the AML range, population growth rates and other environmental factors. Once AML is achieved, gathers to remove excess WH&B should be planned to occur at intervals of approximately 4 to 5 years to maintain population size within AML.

4.4.6 Genetic Diversity

Reproducing WH&B herd health is dependent, in part, on maintaining desirable genetic diversity (avoiding inbreeding depression).

4.4.6.1 Baseline Genetic Diversity

Baseline genetic diversity will be determined for all WH&B herds. Once a baseline is established, additional samples will be collected to reassess genetic diversity every other gather (e.g., every 6-10 years). If testing indicates diversity is less than desired, the herd should be reassessed more frequently (e.g., every gather).

In the past, genetic diversity was assessed by evaluating blood samples from the herd. Hair samples are now used to assess genetic diversity. Procedures for collecting and processing WH&B hair samples are described in Appendix 1 (Genetics Data and Hair Sample Collection Instructions). A report assessing genetic diversity is developed for each set of samples from an HMA.

Baseline data can be compared between adjacent HMAs to determine if the WH&B herd is isolated, or if genetic material is being exchanged between reproducing herds as part of a larger population of WH&B. Movement of WH&B from one HMA to another may enhance genetic diversity.

4.4.6.2 Interpreting Genetics Data

Measures of individual animal and population-wide genetic diversity are based on the number of individuals sampled within each HMA or complex. The most important measure of genetic diversity is Observed Heterozygosity (Ho). The observed heterozygosity is a measure of how much diversity is found, on average, within individual animals in a WH&B herd and is insensitive to sample size, although the larger the sample, the more robust the estimate.

Population-wide measures for the presence of genetic variants and the effective number of alleles provide information about changes in a herd's diversity, now and in the future. Other measures provide a comparison of the herd's genetic similarity to domestic horse breed types. All measures are compared to values derived from domestic horse breeds and to WH&B herds which have already been sampled.

Values below the mean for feral populations are an indication that the WH&B herd may have diversity issues. Herds with observed heterozygosity values that are one standard deviation below the mean are considered at critical risk. For DNA-based (hair) samples this value is 0.66, and the value is 0.31 for blood samples.

Few herds sampled to date show values below the feral mean. Those with values below the feral mean tend to be herds with small population size, which are the most at-risk for inbreeding. There is no specific diversity value that is a clear indicator of imminent inbreeding risk. The lower the genetic variation, the greater the risks for inbreeding-related impacts to the WH&B

herd. Mitigation to address or resolve genetic diversity concerns should be considered using the recommendations in the genetics report as a starting point.

4.4.6.3 Herd Size

A minimum population size of 50 effective breeding animals (i.e., a total population size of about 150-200 animals) is currently recommended to maintain an acceptable level of genetic diversity within reproducing WH&B populations (Cothran, 2009). This number is required to keep the rate of loss of genetic variation at 1 percent per generation. Animal interchange between adjacent HMAs with smaller population sizes may reduce the need for maintaining populations of this size within each individual HMA. Research has not yet established a recommended minimum breeding herd size for burros.

4.4.6.4 Management Actions

If the recommended minimum wild horse herd size cannot be maintained due to habitat limitations (e.g., insufficient forage, water, cover and/or space) or other resource management considerations (e.g., T&E species), a number of options may be considered as part of an appropriate site-specific NEPA analysis to mitigate genetic concerns:

- Maximize the number of breeding age wild horses (6-10 years) within the herd.
- Adjust the sex ratio in favor of males to increase the number of harems and effective breeding males.
- Introduce 1-2 young mares every generation (about 10 years), from other herds living in similar environments.

If wild horse herd size in small, isolated HMAs is so low that mitigation is not feasible, consideration should be given to managing the HMA for non-reproducing wild horses or to removing the area's designation as an HMA through LUP.

4.4.7 Herd Social Structure

Some management actions (e.g., sex ratio adjustments to favor stallions) may affect social structure and herd interactions (e.g., band size).

4.4.7.1 Wild Horses

The social structure of most wild horse herds consists of breeding and bachelor bands. Breeding bands or harems usually consist of a dominant stallion, lead or dominant mare(s), a group of breeding mares, and associated foals and yearlings. Most wild horses breed and foal in the spring of the year. Bachelor bands consist of various aged males that either have not yet established their own harem or have lost their mares. The composition of bachelor bands varies considerably throughout the year. In most breeding bands, male foals leave the band at 1 or 2 years of age and generally join bachelor bands.

Although wild horse bands tend to use the same habitat areas (home ranges) from year to year, they are not territorial and do not defend preferred habitat areas. As a result, bands often graze

and water near each other, and there may be movement of mares between bands. This, in combination with the periodic displacement of the dominant stallion and removal or death of other horses, results in a very fluid social structure in most herds. These factors are beneficial in enhancing genetic diversity.

4.4.7.2 Wild Burros

Wild burros do not form breeding bands. There are no strong individual bonds other than jenny-foal relationships. Wild burros present themselves as single animals, all-male groups, all-female groups, jenny-foal groups, or mixed groups. All of the groups are variable and their composition may change at any time. This loose social structure, where all animals are potential breeding partners, maximizes genetic diversity in small or dispersed burro populations.

Some of the older jacks establish a breeding territory but do not prevent other males from entering this area unless there is an estrous female present. It is common for males to roam freely throughout their habitat and breed upon encountering an estrous female. Large male groups may form in the vicinity of an estrous female, and it is normal for the jenny to have multiple breeding partners.

In dispersed populations in a desert environment, breeding efficiency increases as the population densities increase. As daily temperatures increase and water availability decreases, more and more animals will gather around the remaining available water sources. These areas become important areas for maximizing breeding efficiency. This temporary or seasonal increase in population density increases the chance for males to encounter estrous females. Thus, although breeding occurs year-round, increased breeding and foaling may occur during this period of time.

4.5 POPULATION CONTROLS

The authorized officer may consider a number of population control methods to achieve and maintain WH&B population size within AML.

4.5.1 Natural Population Controls

The rate at which WH&B herd sizes naturally increase or decrease is affected by a number of factors, including the nutritional value of the forage consumed, weather, disease, and predation. Experience gained in managing WH&B and other large herbivores indicates that soil, vegetation, and water resources are almost always severely damaged before these factors negatively affect population growth rates. Human intervention may be necessary when these factors, acting alone or in combination, do not exert sufficient influence to maintain WH&B population size within AML.

4.5.2 Gather and Removal

When the authorized officer has determined that excess WH&B exist, gathers to capture and remove the animals immediately or as soon as possible are required. For additional information, refer to BLM Manual Section 4720 (Removal) and 43 CFR 4720.1, 4740.1 and 2.

4.5.3 Reduce Population Growth Rates

During gather or herd management area planning, the authorized officer should consider a range of alternatives to reduce population growth rates and extend the gather cycle for all wild horse herds with annual growth rates greater than or equal to 5 percent. Alternatives may include but are not limited to: use of fertility control, adjustments in the sex ratio in favor of males, a combination of fertility control and sex ratio adjustment, and management of selected HMAs for non-reproducing wild horses. Additional management alternatives (tools) may be considered in the future, pending further research (see Chapter 8).

4.5.3.1 Use of Fertility Control as a Tool to Slow Population Growth Rates

a. Use of Porcine Zona Pellucida (PZP). There are two forms of the conventional PZP agent:

- The 1-year agent, delivered as a liquid primer injection and follow-up booster one month later; additional boosters must be injected annually by hand or by darting to continue treatment.

- The 22-month agent that includes the same primer shot as the one-year agent as well as a second injection of three time-release pellets (1-, 3- and 12-month pellets) to booster the vaccine over a 12-month period of time.

Foaling rates of 6 percent in Year One, 14 percent in Year Two and 32 percent in Year Three following treatment compared with 54 percent foaling in untreated controls have been reported for PZP-22 (Turner, 2007). Maximum effectiveness is not achieved unless mares are treated during a 3-4 month window prior to foaling. Research has shown that the best time to apply PZP is during the winter gather season (i.e., November-February).

The use of PZP, under an investigational exemption held by the Humane Society of the United States, requires treated mares to be physically marked (freeze branded) or readily identifiable in order to be compliant with FDA requirements. Application is limited to individuals specifically trained to handle, mix, and administer the product. Post-treatment monitoring in accordance with the Standard Operating Procedures (SOPs) is required.

As part of an appropriate environmental analysis, the authorized officer will analyze the use of the 22-month PZP vaccine in all wild horse herds, particularly those where: (1) the annual herd growth rate is greater than 5 percent and (2) the post-gather herd size is 50 animals or greater. Fertility control will be most effective when treatment of 50-90 percent of all breeding-age mares within the herd is possible using application in conjunction with gathers or remote delivery (darting). Our current understanding is that to maximize treatment effects, at least 90 percent of all mares should be treated.

The authorized officer should apply the 22-month PZP vaccine to all release mares when the NEPA analysis supports its use. In herds where sex ratio adjustments are made, fertility control may be implemented in combination with sex ratio adjustments to further reduce population growth rates.

b. Increased Use of PZP. One option to slow population growth rates (and reduce the number of excess wild horses removed) would be to gather selected HMAs and apply PZP-22 every 2 years. Because PZP does not totally eliminate reproduction, some excess horses may need to be removed from treated herds over time. Implementation should generally be limited to HMAs that have had high gather efficiencies (i.e., a high percentage of the actual population is captured). Because 70-90 percent of the breeding-age mares may need to be treated to effectively reduce population growth rates, 80-100 percent of the actual population may need to be captured.

c. Remote Application of PZP. Remote application of the 1-year formulation of PZP is problematic, as it is very difficult to approach most wild horses closely enough to allow darting (i.e., follow-up treatment). Remote application of PZP-22 is not possible at the present time since the pellets must be administered by hand injection.

   Remote application of the 1-year PZP agent may be considered for herds where individual horses can be identified (consistent with FDA requirements) and are approachable. Remote application is limited to individuals specifically trained to administer the product by darting.

4.5.3.2 Adjust Male/Female Sex Ratios

The authorized officer should consider alternatives which would manage WH&B herds for a sex ratio with a female component of less than or equal to 50 percent, as this reduces the population growth rate and extends the gather cycle. See Chapter 4 (4.4.1).

Adjusting sex ratios to favor males is another possible management tool which should be considered when the suppression of herd growth rate is desired. This management option should be considered in HMAs and complexes where the low end of AML is greater than 150 animals. Implementation of sex ratio adjustments is most feasible during maintenance gathers (4-5 years after AML is achieved). Sex ratio adjustments may be accomplished by shifting the overall sex ratio to favor males by (1) releasing greater numbers of stallions post-gather or (2) releasing geldings back to their home range following castration. Adjusting the sex ratio so that males comprise 60-70 percent of the adult herd could be considered.

Herd dynamics may change somewhat with adjustments in sex ratios. An increase in the proportion of stallions may have a greater impact when water resources are limited and bands are more concentrated.

Though additional information is needed, geldings are likely to have fewer impacts on the herd's social structure than would an increase in the proportion of stallions. Based on anecdotal observations, geldings released back to their home range: (1) tend to remain near where they were released (with adequate forage and water), (2) form small bachelor groups rather than join

with a reproducing band, (3) maintain better body condition than the herd average because they are sexually inactive, (4) live longer in comparison to sexually active horses, and (5) were easy to recapture (many have been recaptured and released several times).

Post-treatment monitoring should be conducted to observe behavior of individual animals and the herd during the first breeding season following treatment. Monitoring should be designed to determine whether bachelor stallions or geldings interfere with breeding harems, and whether there is increased competition for forage or water. Monitoring should also be designed to determine if the bachelor geldings form bands or intermix with the breeding population and whether band size changes with a greater proportion of stallions. This monitoring information will be used to determine if sex ratio adjustment is an effective population management technique that should be continued.

If post-treatment monitoring indicates that initial introductions of geldings or a greater proportion of stallions have resulted in negative impacts to breeding harems, mitigation could include removal of the additional stallions or geldings in whole or in part, no further introductions of stallions or geldings during future gathers, or release of a larger proportion of mares during the next gather. The need for post-treatment monitoring will decrease as the effectiveness of sex ratio adjustments as a tool to slow population growth rates is determined.

4.5.4 Manage Selected HMAs for Non-Reproducing Wild Horses

Under the WFRHBA (16 USC § 1333(b)(1)), the authorized officer may determine whether AML should be achieved by removal of excess animals, or if options such as sterilization or natural population controls should be implemented. Consistent with this authority, some selected HMAs may be managed for non-reproducing wild horses to aid in controlling on the range population numbers.

4.5.4.1 Manage HMAs for Non-Reproducing Wild Horses

LUPs should identify the HMAs to be managed for non-reproducing wild horses and the criteria for their selection. Completion of additional site-specific environmental analysis, issuance of a decision, and providing opportunity for administrative review under 43 CFR Part 4.21 may also be necessary.

Actual on-the-ground implementation would be influenced by gather efficiency and it may take several gathers to work toward an HMA with non-reproducing wild horses. Animals would be gathered to the extent possible and sterilized for return to the range, or removed. A safe, effective and humane means to sterilize stallions is castration, but a safe, effective and humane means to sterilize females has not yet been perfected. Therefore, initial efforts should focus on returning sterilized males to the HMA of origin. Sterilized males from HMAs with similar environments may be added as long as population size remains within AML. Care should be taken to ensure they are introduced and located near other animals in areas with good water and forage.

4.5.4.2 Manage Reproducing and Non-Reproducing Wild Horses in Selected HMAs

In selected HMAs with large AMLs, management of both reproducing and non-reproducing wild horses could be considered. As an example, non-reproducing wild horses could be geldings released back to their home range HMA following castration. Post-treatment monitoring and/or mitigation would be conducted as discussed in 4.5.3.2 above.

4.6 PRIORITIES FOR GATHER AND REMOVAL

When removal of excess WH&B from the range is necessary, gathers shall be prioritized in the following order:

- Emergencies
- Court Orders
- Nuisance animals (public health and safety)
- Impacts to threatened, endangered, or sensitive species (TES)
- WH&B located outside the HMA in areas not designated for their long-term maintenance
- Landowner request
- To achieve and maintain population size within AML
- Coordinate gathers across State, District and/ or Field Office boundaries and conduct gathers jointly whenever possible to improve gather efficiency and implementation of other population control measures such as application of fertility control and sex ratio adjustments.

4.7 NATIONAL GATHER SCHEDULE

A National Gather Schedule is developed annually based on the need to remove excess WH&B to achieve or maintain AML and the available funding and facility space. Situations that may require adjustments to the National Gather Schedule are: (1) Emergencies and (2) Escalating Problems.

4.7.1 Escalating Problems

Escalating problems are defined as conditions that deteriorate over time. The key indicator is a decline in the amount of forage or water available for WH&B use, which result in negative impacts to animal condition and rangeland health. Causal factors are normally drought or animal numbers in excess of AML. These situations can be detected in advance and are managed through the normal planning process. See BLM Manual Section 4720.21.

4.7.2 Emergencies

Emergencies generally are unexpected events that threaten the health and welfare of a WH&B population and/or their habitat. Examples of emergencies include fire, insect infestation, disease, or other events of a catastrophic and unanticipated nature. Immediate action is normally required. For some emergency actions, it may be appropriate to use alternative means or

procedures to comply with NEPA (see BLM NEPA Handbook, H-1790-1: National Environmental Policy Act Handbook, Chapter 2.3 Emergency Actions). If timeframes permit, a gather plan environmental assessment should be prepared prior to WH&B removal. If this is not possible, emergency actions should be documented and a report prepared after resolution of the problem. Public notification can be addressed through a press release. See BLM Manual Section 4720.22.

4.8 POPULATION MODELING

Version 3.2 of the Winn Equus population model developed by Dr. Steven Jenkins will be used during gather or herd management area planning to analyze and compare the effects of proposed wild horse management. The model is not designed for use on burros.

The model's primary purpose is to analyze and compare the effects of the proposed action (and alternatives) on population size, average population growth rate, and average removal number. Possible management alternatives or strategies may include, but are not limited to:

- Proposals to gather/remove excess animals, with or without fertility control.
- Proposals involving various gather cycles.
- Proposals to make adjustments in sex ratios.
- Proposals to manage all or a portion of a herd as a non-reproducing population.
- Proposals for gate-cut or selective removal gather.
- No Action.

Another objective of the modeling is to identify whether any of the alternatives would be likely to "crash" the population based on a number of stochastic factors (varying environmental conditions).

Use of the Win Equus population model requires the following:

- **Gather Planning:** Run the model for 10 years and 100 trials; select and display the most typical trial.
- **Herd Management Area Planning:** Run the model for 20 years and 100 trials; select and display the most typical trial.
- **Adjustment of Sex Ratios:** Select 100 percent gather for mares and adjust (decrease) the gather percentage for studs to achieve the desired post-gather sex ratio.
- **Results Analysis:** Drop the highest trial and the lowest trial and analyze and compare the remaining trials.

4.9 HUMANE DESTRUCTION

The BLM authorized officer will euthanize or authorize the euthanasia of a wild horse or burro when any of the following conditions exist:

1. Displays a hopeless prognosis for life.

2. Is affected by a chronic or incurable disease, injury, lameness or serious physical defect (includes severe tooth loss or wear, club feet, and other severe acquired or congenital abnormalities).

3. Would require continuous treatment for the relief of pain and suffering in a domestic setting.

4. Is incapable of maintaining a Henneke body condition score greater than or equal to 3, in its present environment.

5. Has an acute or chronic illness, injury, physical condition or lameness that would not allow the animal to live and interact with other horses, keep up with its peers or maintain an acceptable quality of life consistently or for the foreseeable future.

6. A State or Federal animal health official orders the humane destruction of the animal(s) as a disease control measure.

7. Exhibits dangerous characteristics beyond those inherently associated with the wild characteristics of wild horses and burros.

    a. Dangerous animals are defined as those horses or burros that are unusually aggressive and pose an unacceptable risk of injury to humans or other animals.

    b. Unusually dangerous horses or burros possess characteristics that are not desirable to breed into the wild herd.

    c. It is also reasonable to conclude that an average adopter could not humanely care for the animal.

CHAPTER 5—INVENTORY AND MONITORING

GENERAL

The authorized officer is required to identify, plan, collect and analyze the resource monitoring data necessary to prepare resource management plans, plan amendments, gather plans, herd management area plans or other associated environmental documents through which WH&B management decisions are made.

Inventory (monitoring) shall be completed in order to determine:

- If an overpopulation of WH&B exists and action is needed to remove the excess animals.
- WH&B AMLs; and,
- If AMLs should be achieved by removal of the excess animals or other appropriate means.

Monitoring data is needed to support AML establishment and decisions to remove excess WH&B. Various rulings from the Interior Board of Land Appeals (IBLA) underscore the need to base WH&B management decisions on the results of monitoring.

5.1 HABITAT MONITORING

The primary purpose of habitat monitoring is to collect the resource data necessary to:

- Make a determination of excess animals (i.e., support the need to gather and remove excess wild horses or burros).
- Establish or adjust AML.
- Develop or revise HMAPs.
- Evaluate conformance with Land Health Standards, LUP goals and objectives, or other site-specific or landscape-level objectives.

Collection of habitat monitoring data should be coordinated with other resource programs (e.g., range, watershed, wildlife) to maximize efficiency and minimize duplication.

Appendix 2 (Habitat Monitoring References) provides a list of BLM Technical References that can assist in planning for, and collection and evaluation of monitoring data. BLM Technical References can be found at: http://www.blm.gov/nstc/library/techref.htm

5.1.1 Annual Monitoring

Annual monitoring objectives include:

- Determine whether or not forage and water is adequate to support the animals in a healthy condition through the remainder of the year.
- Assess and evaluate animal condition.

To achieve these objectives, monitoring efforts should focus on the following:

- Evaluate current year's forage production and water flows.
- Evaluate/measure use, map patterns of use and monitor seasonal distribution/movement.
- Evaluate WH&B body condition.

Data collection to accomplish the above could include:

1. Photographs and Field Inspection Notes. Document observations on current year's growing conditions (average, below average or above average precipitation and soil moisture); plant phenology (are plants maturing earlier or later than normal); and forage production and water flows (average, below normal, above normal). When taking photographs, label each photograph with the date and the location to facilitate re-photographing the area in the future.

2. Use Mapping. Map utilization of current year's growth. Where possible, document forage utilization by WH&B in rest pastures or prior to livestock use. Where separation of use by type of animal is not possible, map total utilization at the end of the season. Use the information collected to identify and establish key areas, determine distribution, and seasonal use areas. If mapping utilization of the HMA on an annual basis isn't possible, focus monitoring on measuring utilization at key areas used by WH&B within the HMA on an annual and continuing basis.

3. Utilization. Estimate the proportion of annual forage production used by herbivores (WH&B, domestic livestock, wildlife, and insects).

4. Residual Vegetation or Stubble Height, Woody Species Use or Streambank Alteration. Measuring stubble height, use on woody species, and the degree of streambank utilization occurring annually (especially in rest pastures or prior to livestock use) may also be helpful in documenting resource impacts associated with WH&B use.

5. Grazing Use Records. Summarize the actual grazing use (animal unit months of forage) by livestock, WH&B, and wildlife by unit or pasture for the year.

6. Weather Data. Document information on temperature, precipitation, and growing conditions.

7. Animal Condition. Using the Henneke Body Condition Scoring (BCS) system, document the number of animals seen, where they were observed, and their BCS class. Document average group size (e.g., animals are concentrating in large groups or scattered, small groups, evidence of lameness, or other possible animal health concerns). This information may be used to assist in the evaluation of TNEB within the HMA.

When collected, data should be filed in the 4710-Herd Management case file and cross-referenced to the applicable rangeland management or other resource monitoring files.

5.1.2 Long-Term Monitoring

The objective of long-term monitoring is to determine whether management is resulting in significant progress toward attaining Land Health Standards, other applicable site-specific or landscape-level objectives, or changes in range ecological condition and trend (up, stable or downward). Data are typically collected by an interdisciplinary team of resource specialists in preparation for a formal and detailed evaluation of current management and its effect on resource conditions.

5.1.2.1 Ecological Sites

Rangeland landscapes are divided into ecological sites for the purposes of inventory, evaluation and management. Each site is defined and described by the Natural Resources Conservation Service (NRCS) based on climate, geology, soils, vegetation and other environmental factors. An ecological site is also described based on its ability to produce and support a characteristic plant community (i.e., kind, amount, and proportion of natural vegetation). Ecological site descriptions can be used to evaluate current management and to identify the potential effects in range ecological conditions or trends that could be expected from proposed changes in WH&B management. Ecological site descriptions for each Major Land Resource Area (MLRA) are available from NRCS. If an area has not yet been inventoried by NRCS, an interdisciplinary team of resource specialists will use the best available data to identify the ecological sites in the HMA.

5.1.2.2 Riparian Areas

Properly functioning riparian areas produce abundant forage, important habitats for fish and wildlife, and improve water quality and quantity. Functional-at-risk riparian areas have one or more attributes which place them at risk of deterioration, while nonfunctional riparian areas are unable to capture sediment, enhance infiltration, recharge aquifers or dissipate high energy flows. Assessments of proper functioning condition can be used to identify issues, establish objectives, and propose and evaluate changes in WH&B management.

5.1.2.3 Key Areas

Key areas are selected to monitor changes in range ecological condition or trend across representative areas within the HMA or complex which may result from current WH&B management. Key areas may be selected to represent a particular plant community or a specific ecological site. They should also be selected to represent ecological conditions and trends, utilization or use patterns, seasonal distribution, and resource production within the HMA or complex.

Long-term monitoring within key areas may include measurements of frequency, production, and cover (canopy cover, foliar cover, ground cover and basal cover). Plots are generally read at intervals of 5-10 to 15-20 years.

5.1.2.4 Key Species

Key plant species are selected for forage utilization studies. Key species are important forage species within plant communities that can indicate changes in resource conditions resulting from WH&B management. More than one key species may be selected, depending on management objectives.

Key forage species are used to indicate the allowable degree of forage utilization on a key area which promotes attainment of attaining vegetation management objectives. They may be identified during land use planning, or result from habitat management objectives established during site-specific planning efforts such as herd management area planning.

5.1.3 Integrated (Interdisciplinary) Resource Monitoring Plans

Development of integrated (interdisciplinary) resource monitoring plans can help assure that the data needed to support WH&B management decisions is collected in an effective and efficient manner. Resource monitoring plans should identify the following:

- **Who** (The resource specialty responsible for data collection, i.e., WH&B specialist, range specialist, etc.).
- **What** (Data to be collected).
- **When** (Time of year data should be collected and how often).
- **Where** (Location(s) for data collection, i.e., location and documentation of key areas).
- **Why (**The specific monitoring objective).
- **How** (Methods to be used).

Also refer to Appendix 4 (Table 4.2).

5.2 POPULATION MONITORING

An accurate and current assessment of WH&B health and condition, as well as population size, growth rate, and distribution, is needed for proper WH&B management. At a minimum, population surveys should be conducted every 2 years whenever possible, and within 6-12 months prior to establishing the need to gather and remove excess WH&B.

5.2.1 Population Estimation

WH&B population size should be estimated primarily by aerial survey. See BLM Manual Section 4710.45.

1. Aerial surveys will be conducted and documented using standardized sampling methods and procedures. Survey methods (types of aircraft and techniques) should utilize the most effective and cost-efficient techniques for the specific HMA or complex.

2. To permit comparison with prior data and detect population trends, aerial surveys should be conducted during the same time of the year, using the same or similar type of equipment, methodology, and personnel.

3. The following data should be should be recorded during aerial surveys:

   - HMA name and number
   - State/District or Field Office
   - Survey date
   - Observer(s) name
   - Weather conditions
   - Type of aircraft used
   - Altitude
   - Flight time
   - Time of day
   - Survey method (direct count, simultaneous double-count, mark-resight, etc.)
   - Flight path, number and location of animals seen in GPS/GIS data format
   - Number of adults, number of foals
   - Basic herd health and condition information
   - Basic information about range, forage or water conditions, wildlife, or livestock use, etc.

4. In areas where gather efficiencies have been historically low or WH&B range widely, a post-gather survey should be conducted in the 6-12 months following gather completion to obtain a more accurate estimate of the number of WH&B left on the range.

5. Monitoring WH&B distribution is critical in identifying seasonal use areas, determining movement patterns and identifying areas for habitat monitoring. While seasonal distribution may vary over the years, movement is normally related to the abundance and quality of the forage, climate, weather patterns, and availability of water.

6. The HMA monitoring file shall contain a permanent record of data collected during the aerial surveys and the results should be entered into the Wild Horse and Burro Program System (WHBPS) and the local GIS data base.

5.2.2 Herd Condition and Health Monitoring During Gathers

The condition class of individual horses should be evaluated and documented during gathers using the Henneke Body Condition Scoring System (refer to H-4760-1: Compliance Handbook).

1. Data should also be collected on age structure and sex ratio. This information can be used to evaluate the effects of the management actions on herd health and condition.

2. Estimate the number of WH&B left on the range (number remaining ungathered) following each gather.

3. Other data that may be collected during gather operations include: parasite load, disease (from blood samples), percentage of pregnant mares (through analysis of blood or fecal samples), and/or the effects of fertility control.

4. The incidence of albinism, parrot mouth, club feet, severely crooked legs or other physical deformities should also be documented and the subject animals removed from the population when possible. The incidence of these traits should be minimized within individual herds over time.

CHAPTER 6—HERD MANAGEMENT AREA PLANNING

GENERAL

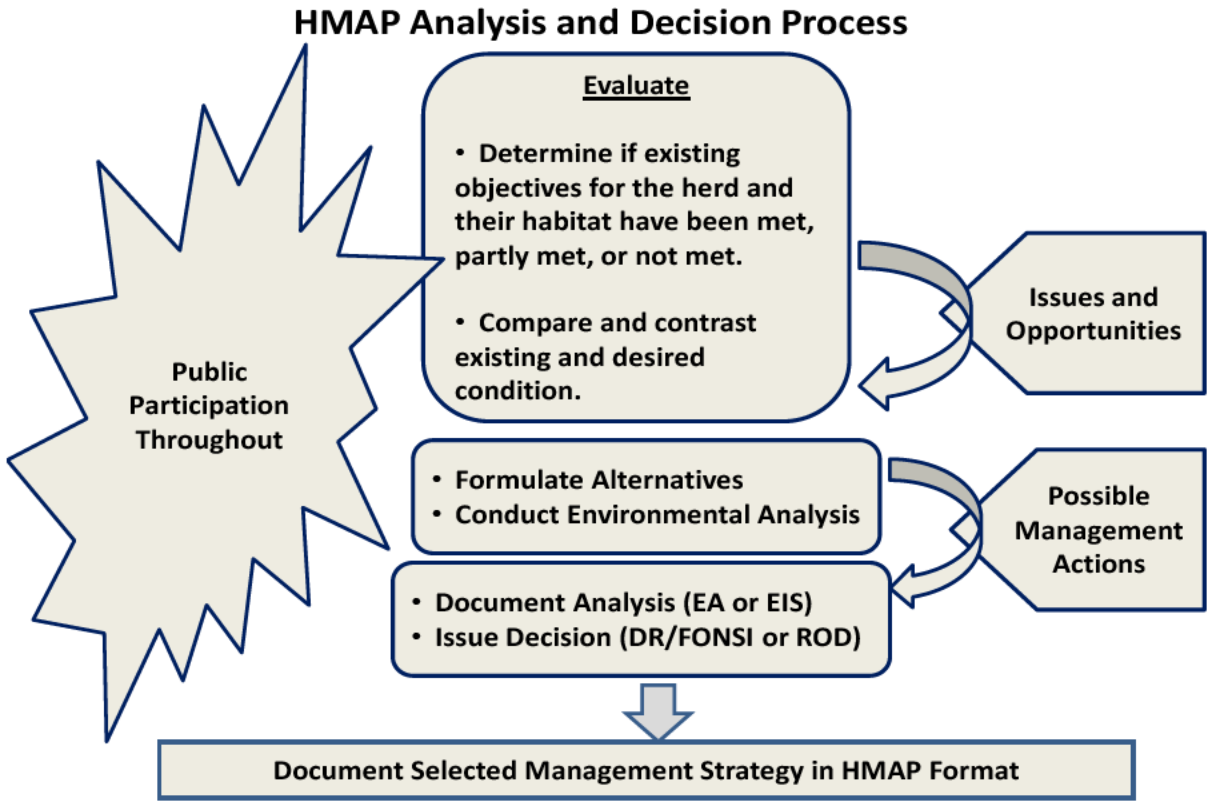
Herd Management Area Plans (HMAPs) identify and set objectives for WH&B herds and their habitat. HMAPs are prepared with public involvement through a site-specific environmental analysis and decision process (NEPA). During the NEPA process, the environmental impacts associated with a range of alternative management strategies for the WH&B herd and its habitat is analyzed.

The approved HMAP outlines the selected management actions, together with the management and monitoring objectives which, when implemented, would make progress toward achieving land health standards, LUP goals/objectives, and other relevant objectives.

6.1 HMAP ANALYSIS AND DECISION PROCESS

An overview of the HMAP analysis process is provided in Figure 6.1. Also refer to Appendix 4 (Herd Management Area Planning) for additional information.

Figure 6.1
Overview of the HMAP Analysis and Decision Process



6.1.1 Evaluate Current Management

The first step in the HMAP analysis process should generally be to evaluate existing management. At the conclusion of the management evaluation, a report will be prepared and made available to the public for a 30-day review and comment period (public scoping). To facilitate public review, the document will be posted on the state, district or field office web page.[1] The management evaluation report is not a decision subject to administrative appeal.[2] Rather, the report documents the key issues identified as a result of the management evaluation. A range of the possible management alternatives (Proposed Action and Alternatives) that would address or resolve the identified issues may also be identified. The range of alternative may be expanded as a result of scoping comments.

Key steps in the management evaluation process include:

1. Review existing goals and objectives for the herd and its habitat and determine whether these have been met, partly met, or not met. Incorporate a summary of the rationale supporting BLM's determination in the evaluation report.

2. Compare and contrast the existing and desired condition for the herd and its habitat. Refer to the information in Chapter 3 (Habitat Management) and Chapter 4 (Population Management) as a starting point for the analysis.

3. Document the gaps (or differences) between the current and desired conditions. These differences represent the issues to be addressed and resolved (i.e., the purpose and need for action).

4. Identify the possible management actions that could be implemented in response to the identified issues.

5. Formulate a range of alternative management strategies for the herd and its habitat from the list of possible management actions (Proposed Action and Alternatives). Each alternative considered should meet the purpose and need for action and respond to the identified issues in whole or in part.

6. Finalize the management evaluation report and provide it to the public for a 30-day review and comment period (i.e., public scoping).

6.1.2 Conduct and Document the Site-Specific Environmental Analysis

As a next step, conduct and document the interdisciplinary, site-specific analysis of potential impacts that could result from implementation of the No Action (generally defined as "Continue

[1] If an Environmental Impact Statement (EIS) is prepared, scoping will be conducted following issuance of a Federal Register Notice.

[2] Once the HMAP decision is made, the Evaluation Report is part of the administrative record for that decision.

Existing Management" for HMAP development and analysis), the Proposed Action, and other action alternatives. Refer to H-1790-1: National Environmental Policy Act Handbook.

Though it may be appropriate in some instances to prepare an Environmental Impact Statement (EIS), normally an environmental assessment (EA) is prepared to document and analyze an HMAP decision. The section below provides guidance about how an HMAP EA may be structured.

6.1.2.1 Preparing the HMAP Environmental Assessment (EA)

1. Introduction. Limit the information included in the "Introduction" section of the EA to the minimum needed to allow the reader to understand the existing situation. Include a brief description of the HMA and its location, and the AML (and when/how it was established). Describe the purpose and need for the Proposed HMAP. Identify the relevant issues, summarize the results of public scoping, and document how the BLM used the comments in preparing the preliminary environmental assessment. Tier the analysis to applicable decisions in the LUP.

2. Proposed Action and Alternatives. Each alternative considered in detail in the EA shall meet the purpose and need for action and respond to the identified issues to varying degrees. The range of alternatives considered will include a No Action Alternative (i.e., Continue Existing Management) and the Proposed Action (Proposed HMAP). Other alternatives should be developed in response to the purpose and need and the identified issues, as appropriate.

   Each alternative will describe the strategy to be used to manage the herd and its habitat over the long-term, together with the associated management, monitoring and implementation objectives. In formulating the alternative management strategies, various management tools may be considered to protect, control and manage WH&B populations and their habitat. For example, consider differing gather seasons or methods, various tools to slow population growth, or various habitat improvement tools, projects or techniques.

3. Management Objectives and Actions. Management objectives and actions may differ by alternative. This section of the EA would summarize the objectives and actions specific to each alternative.

   For each alternative specify: (a) the proposed habitat and population management objectives, (b) the associated management actions (e.g. implementation objectives), and (c) the proposed monitoring objectives. These objectives and actions should conform to and be consistent with LUP goals.

   a. SMART Objectives. Well-written objectives should be specific, measurable, achievable/attainable, reasonable/relevant and trackable within a specified timeframe (SMART):

1) Specific: Specifies what and where.
2) Measurable: Identifies the amount of change expected; desired change can be measured or observed.
3) Achievable/Attainable: Realistic for the specific site conditions.
4) Reasonable/Relevant: Limited in scope, within the BLM's control and influence, measures results (not activities).
5) Trackable/Timeframe: Identifies where the activity will occur, short- and long-range targets, as well as interim steps and a plan to monitor progress.

b. Habitat Objectives. Habitat objectives may involve vegetation, trend or key area objectives for upland vegetation or riparian plant communities within the HMA or complex or objectives to maintain or improve the wild, free-roaming behavior of the population. Site-specific objectives to improve habitat conditions (e.g., forage or water) may also be established.

Examples of SMART Objective(s)

- ❒ Improve riparian condition from functioning at-risk (FAR) in 1998 to properly functioning condition (PFC) by decreasing utilization from heavy to moderate within a ½ mile circumference of Bird Spring.
- ❒ Adjust sex ratios from 40 percent studs and 60 percent mares in 2010 to 60 percent studs and 40 percent mares by 2014.

c. Population Objectives. These objectives would establish a framework for management of the WH&B herd over the longer term. Objectives could include when and how AML would be adjusted in the future, or when and how the population within the HMA would be gathered. Among other population management parameters, objectives may be identified for desired age structure and sex ratio, animal condition, phenotype, genetic diversity, population growth rate, or selective removal criteria. These objectives may be based on historical attributes or other management considerations.

d. Monitoring Objectives. As necessary, identify a monitoring objective that would measure the progress made toward achieving proposed habitat or population management objectives.

e. Implementation Objectives (Management Actions). Implementation objectives are management actions that, when implemented, are expected to make progress toward attaining the proposed habitat or population management objectives. These could include application of fertility control, adjustment of sex ratios to favor males, or other actions to slow population growth, management actions to assure genetic diversity or achieve the desired sex ratio or age structure for the WH&B herd, or range improvement projects.

4. Description of the Affected Environment and Environmental Impacts

   a. General Description of the Affected Environment. This section of the EA should include a concise general description of the HMA or HMA complex. Voluminous material may be included in the EA appendix. Maps, tables, charts or graphs may also be useful in summarizing or displaying relevant information. Information could include:

      1) General information about the HMA or complex's size, location, acres of public land or other land ownership, general description of topography, elevation, climate, and dominant vegetation.

      2) A summary of the WH&B herd's history using best available data. This could include the probable origin of the WH&B population, identification of the general type of WH&B historically occupying the HMA, any interchange between this herd and adjacent HMAs, known genetic diversity (observed heterozygosity or Ho) and any introductions of WH&B from another HMA.

      3) A brief discussion of any historic adjustments that have been made in the HA/HMA boundary, and the name and date of the decision document(s) used to initiate those adjustments. Maps or descriptions of HA/HMA boundaries may also be included.

      4) Initial forage allocations together with the existing AML range. The name and date of any decision document(s) used to establish or adjust AML along with a brief description of the causal factors leading to the change.

      5) Any population and habitat management actions or events that have impacted herd size including scheduled, emergency or nuisance animal gathers, application of fertility control, and the occurrence of catastrophic events such as extended drought or wildfire.

      6) A concise list of applicable LUP decisions that affect the HA/HMA, including any constraints on WH&B distribution and management (voluminous information can be included in an appendix to the EA).

      7) A list of applicable Land Health Standards (these may be included in an appendix to the EA or an internet address can be provided if they are available on the internet).

      8) Brief descriptions of other resource values and uses relative to the management of WH&B, as appropriate. This could include: authorized and/or actual livestock use, TES species and their habitat, Wilderness, Wilderness Study Areas (WSAs), etc.

b. Description of the Affected Environment and Environmental Impacts. For each element of the human environment that has the potential to be affected by the Proposed Action or alternatives, describe the existing situation (affected environment). Also describe the direct and indirect impacts to these resources that could result from implementation of the Proposed Action and Alternatives.

5. Cumulative Impacts. The National Environmental Policy Act (NEPA) regulations define cumulative impacts as impacts on the environment that result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

   In assessing the cumulative impacts associated with preparation of a proposed HMAP, first define the area of potential effect—cumulative impacts will be evaluated within the area of potential effect.

   Next define the issues and resource values identified during scoping that are of major importance (in accordance with the 1994 BLM *Guidelines for Assessing and Documenting Cumulative Impacts*, the cumulative impacts analysis should be focused on only those issues and resource values identified during scoping that are of major importance).

6. Public Review and Comment. The HMAP environmental assessment shall be made available to the public for a 30-day review and comment period by posting on the state/district or field office web page. See H-1790-1 for instructions if an EIS has been prepared.

7. Finalize the HMAP EA. Soliciting public comments obligates reviewers to give fair consideration to the input received. Summarize the results of public review and comment and document how the BLM used the comments in finalizing the environmental assessment.

6.1.2.2 Prepare the Decision Record and Finding of No Significant Impact (FONSI) or an EIS and Record of Decision (ROD)

Based on the analysis of potential environmental consequences, the authorized officer will determine whether to prepare an EIS or issue a Decision Record (DR) and "Finding of No Significant Impact" (FONSI). A FONSI documents why implementation of the selected alternative will not result in environmental impacts that significantly affect the quality of the human environment. The DR identifies the authorized officer's final decision and is a separate and subsequent document to the FONSI. See H-1790-1 for additional information.

If an EIS has been prepared, due to the potential for significant environmental impacts, the authorized officer's final decision will be documented in a Record of Decision (ROD).

6.1.2.3 Prepare the HMAP

As a final step and to facilitate on-the-ground implementation, document the selected management strategy, together with the habitat and population management, monitoring and implementation objectives in HMAP format. The HMAP shall be included as an attachment to the authorized officer's final decision.

The approved HMAP should include the following components:

- **Introduction.** Briefly introduce or summarize the relevant background information (repetition of detailed information incorporated in the NEPA document is not required in the approved HMAP).

- **Management Strategy.** Summarize the selected management strategy as outlined in the EA together with the site-specific habitat and population objectives and management actions established to accomplish the objectives.

- **Monitoring and Evaluation Plan** (refer to 6.1.2.3.1).

- **Tracking Log/Project Implementation Schedule** (refer to 6.1.2.3.2).

6.1.2.3.1 Resource Monitoring Plan/Schedule

The HMAP shall include a resource monitoring plan and schedule that will be used to facilitate the timely and effective completion of habitat and population monitoring. The plan should identify the specific monitoring item, the methodology to be used, the resource specialty needed to complete the monitoring (e.g., field office WH&B specialist, rangeland management specialist, wildlife biologist, etc.), where and when monitoring should occur, as well as any actions to be taken to adjust or adapt management as needed and appropriate pending monitoring results. The plan should include both habitat and population monitoring components. See Appendix 4 (Table 4.2).

6.1.2.3.2 Tracking Log/Project Implementation Schedule

The HMAP will include a tracking log and project implementation schedule to facilitate and monitor plan implementation. The tracking log may be developed in a tabular format, and will list the selected habitat and population management actions (what), the entity responsible for implementation (e.g. who -- BLM, USFS, volunteer groups, etc), and define where, when, and how often the action is to be completed. Columns to document the date the action was completed and/or implemented and for any remarks (e.g. project numbers from BLM's Rangeland Improvement Project system, etc) should also be included. See Appendix 4 (Table 4.3).

6.2 HMAP MONITORING AND EVALUATION

Resource (habitat and population) monitoring data should be analyzed periodically to determine whether minor adjustments in management are needed (adaptive management). Periodic evaluations are conducted to assure HMAP implementation is on track and to gauge progress toward achieving the selected habitat and population management and other relevant objectives. Refer to the process outlined in 6.1.1.

The goals for HMAP monitoring and evaluation are twofold: (1) to track implementation of the management actions/decisions outlined in the HMAP (implementation monitoring); and (2) to collect the data/information necessary to evaluate the effectiveness of those decisions (effectiveness monitoring).

1. Implementation Monitoring. Implementation monitoring tracks implementation of the selected management actions. It answers the question "Did we do it?" To assure selected management actions are being implemented in a timely manner, annual review is recommended.

2. Effectiveness Monitoring/HMAP Evaluation. Plan evaluation is the process of periodically reviewing the HMAP to determine if it is effective in making progress toward or accomplishing the approved habitat and population management objectives (plan evaluation typically occurs at intervals of 5, 10 or 15-20 years). Effectiveness monitoring answers the question "Did it work?"

   The HMAP shall also be evaluated to determine: (1) whether management goals and objectives are still appropriate or need to be revised, and (2) whether progress is being made toward achieving the goals and objectives, or additional management actions are needed (adaptive management). Evaluation of the HMAP could also be completed in conjunction with land health assessment.

   Evaluations that highlight the need for substantial changes may require consultation with interested public as well as appropriate NEPA analysis and documentation prior to implementation.

6.3 4710 CASE FILE

A 4710-Herd Management Area file shall be established for individual HMAs or complexes. The case file should include (but is not limited to) the following:

- A copy of the HMAP.
- HMA and HA maps.
- The associated NEPA and BLM decision documents (or a cross-reference to those documents).
- Any correspondence pertaining to HMA management.
- Aerial survey results.

- Field inspection reports and monitoring data (or a cross-reference to the applicable rangeland management or other case files).
- Information on habitat improvement projects (or a cross-reference to the applicable rangeland management or other case files).
- Final gather reports.
- Fertility control reports, if applicable.
- Results from periodic HMAP evaluations.

Additional 4710 case files may be created if the number and type of monitoring studies is large and varied (e.g. 4710-1, 4710-2, etc).

Relevant data and information should also be entered in a timely manner into WHBPS, as appropriate.

HA/HMA maps and a record of the HA/HMA history should be included in the 4710 HMA file. However, the HA and HMA boundaries delineated in the State GIS data base and provided to the National Coordinator for upload into the National Data Set serve as the official record. Any future changes to HA or HMA boundaries should be documented in the State GIS data base as well as in the HMAP file.

CHAPTER 7—DECISIONS AND APPEALS

7.1 DECISIONS

Implementation decisions form the basis for approval of on-the-ground management actions. When implemented, these actions further the incremental progress toward achieving LUP goals and objectives, Standards for Land Health, or other site-specific habitat or population management objectives. If proposed management is not in conformance with the LUP, the proposal shall be modified or rejected, or the LUP shall be amended or revised.

WH&B implementation decisions can include:

- Establishing or adjusting AML
- Developing HMAPs
- Population management actions
- Habitat improvement projects

Program-specific procedures must be followed when issuing a decision. WH&B implementation decisions can be made in a variety of ways and administrative review (appeal) requirements may vary based on the decisions made (Figure 7.1).

Figure 7.1
Decisions and Appeals Process

An Overview

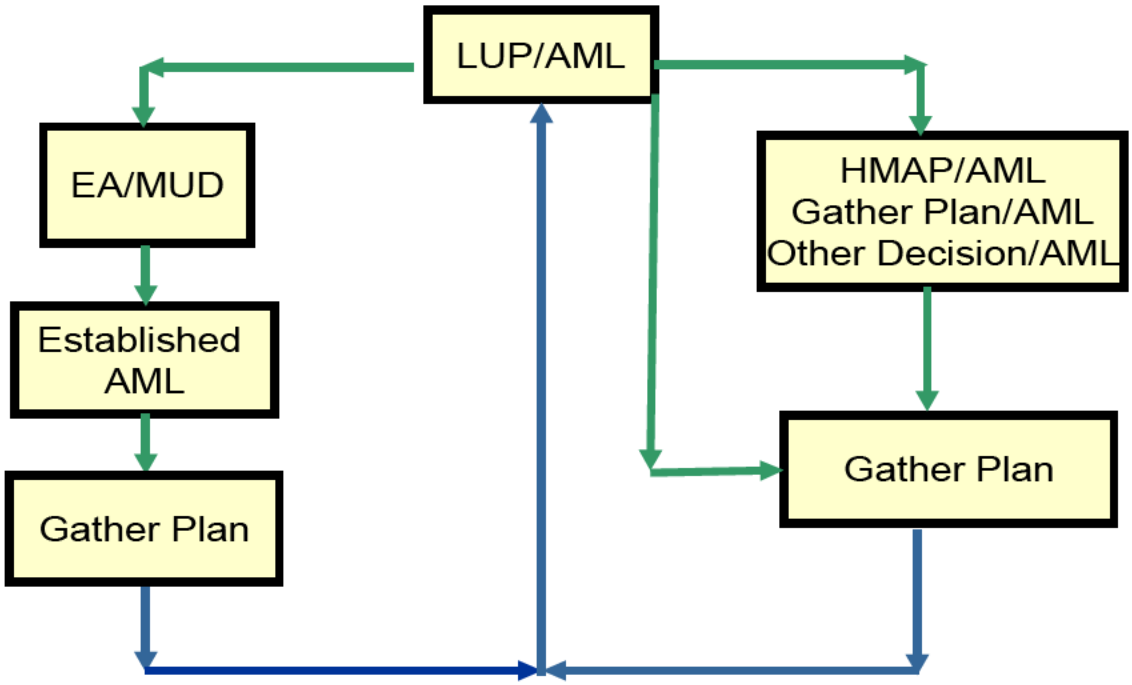
Authority	43 CFR 4770.3(c)	43 CFR Part 4.21
Decision Type	Decisions to Gather/Remove Excess WH&B	AML, HMAP or Project Decisions
Effective Date	• *Emergency Removal Decisions:* make effective upon issuance. • *TNEB Removal Decisions:* make effective on a date specified in the decision *(*e.g., 31-76 days prior to proposed gather start).	Effective the day after the appeal period expires (i.e., 31 days) unless a petition for stay is filed.
Administrative Review Timeframe	Appeals and petitions for stay must be filed within 30 days of the date of the decision.	
Implementation Timeframe	Unless a petition for stay is granted, the gather and removal may proceed as outlined in the authorized officer's decision.	The authorized officer's decision may be implemented immediately if the Appeals Board either denies the petition for stay or fails to act on it within 45 calendar days of the expiration of the time for filing a notice of appeal.

* AML decisions issued as MUDs are heard by a OHA/ALJ and are not implementable until OHA has ruled.

7.1.1 AML Decisions

AML decisions determine the maximum number of WH&B to be managed in the HMA that results in a TNEB and avoids a deterioration of the range. Decisions to establish or adjust AML or establish a population range if the AML was initially set as a single number, can be made in a number of ways (refer to Figure 7.2).

Figure 7.2
AML Decisions



AML decisions are generally implementation decisions as compared to LUP decisions. All AML decisions must meet the following criteria:

1. AML is set based on in-depth analysis of site-specific resource monitoring data including grazing utilization, trend in range condition, actual use and climatic factors (i.e., AML is not set based on administrative convenience or single surveys); and

2. Guidelines and criteria for adjusting herd size are included. Refer to *Dahl v. Clark*, 600 F. Supp. 585 (D. Nev. 1984); *Animal Protection Institute*, 117 IBLA, 208, 219 (1990); and *Animal Protection Institute*, 109 IBLA 112, 118 (1989).

AML decisions may also be made through:

- Issuance of WH&B (single-use) decisions.

- Issuance of multiple-use decisions (MUDs, which allocate forage for domestic livestock, wildlife and WH&B).
- As a part of HMAP decisions.
- As part of gather/removal plan decisions.

AML is not generally established or adjusted as part of the gather planning (NEPA) process due to the in-depth and complex nature of the analysis required. Complexity also increases if allocation of the available forage for use by wildlife, livestock and WH&B will be made concurrently (e.g., MUDs).

If the authorized officer elects to formally review AML as part of the same environmental document which evaluates the proposed removal, the AML decision should be separated from the gather/removal decision. This may be accomplished by issuing separate Decision Records:

1. Gather/removal decision.
2. AML decision.

Separation of the two decisions is desirable because there are different rules governing the timing and appeals process for those decisions:

- Under 43 CFR 4770.3(c), the authorized officer can make decisions to remove wild horses or burros from public or private lands effective upon issuance or on a date specified in the decision, where removal is needed to preserve or maintain a thriving ecological balance and maintain a multiple use relationship.

- The authorized officer does not have similar authority with respect to issuing AML decisions, which, if no petition for stay is filed, become effective on the day after the expiration of the appeals period. See 43 CFR § 4.21(a)(2).

7.1.2 Gather/Removal Decisions

Prior to removing WH&B from public lands, the authorized officer must make a determination, based on current information, that excess animals are present and their removal is necessary to restore a TNEB and multiple-use relationship. BLM's authority to remove excess animals from public lands is found in 16 USC § 1333(b)(2) of the WFRHBA (as amended). This provision requires the BLM to immediately remove the animals upon determination that excess WH&B exist, so as to achieve appropriate management levels, restore a thriving natural ecological balance, and protect the range from the deterioration associated with the overpopulation.

In making the determination that excess WH&B are present and require immediate removal, the authorized officer will analyze current information including grazing utilization and distribution, trend in range ecological condition, actual use, climate (weather) data, current population inventory, WH&B located outside the HMA in areas not designated for their long-term maintenance and other factors which demonstrate removal is needed to restore or maintain the range. Justifying a removal based on nothing more than the established AML is not acceptable.

7.1.2.1 Environmental Analysis (Gather Plans)

The following tools can be used to focus the discussion during the site-specific environmental analysis conducted for Gather Plans:

1. Limit the analysis to that needed to determine the potential impacts associated with the Proposed Action and Alternatives, including No Action. Refer to H-1790-1 for a detailed discussion of the appropriate components of a NEPA analysis.

2. Tier the analysis to LUPs, HMAPs, or other relevant decision documents, as appropriate.

3. Incorporate previous analysis or decisions by reference (e.g., reference to previous AML decisions, HA/HMA boundary decisions, etc), as appropriate.

These tools allow reference to the information without the need to either include the documents in whole or in part, or to restate the information in voluminous detail.

7.1.2.2 Decision Record (Gather Plan)

Unless an emergency situation exists, gather/removal decisions shall be issued 31-76 days prior to the proposed gather start to provide an opportunity for administrative review of the authorized officer's decision to be completed. The Decision Record (DR) for Gather Plans that are documented in an environmental assessment should:

1. Summarize the substantive comments received and describe how BLM used these comments to finalize the environmental assessment. See 7.2 for additional information.

2. In accordance with 43 CFR 4770.3(c):

   - The authorized officer will issue gather decisions effective upon a date established in the decision in situations where removal is required by applicable law, or is necessary to preserve or maintain a thriving natural ecological balance and multiple use relationship.

   - When an emergency situation exists, and timeframes permit, a Gather Plan EA should be prepared and the decision should be made effective upon issuance. See BLM Manual Section 4720.36.

3. Cite the regulatory authority upon which the decision is based.

4. Explain the timeframe and procedures for filing an appeal.

5. Describe the procedures for requesting a stay of the action under 43 CFR 4.21.

7.1.3 Other Management Decisions

Other management decisions may include:

- Approval of HMAPs that establish site-specific population or habitat objectives or actions.
- Project-specific decisions (i.e., water development construction or reconstruction, etc.).

These decisions are made following site-specific environmental analysis (NEPA) with public involvement and are subject to administrative review (appeal) under 43 CFR 4.21.

7.1.4 Actions Excluded from Further NEPA Documentation

Certain actions may be categorically excluded from NEPA analysis (refer to H-1790-1, Chapter 4, Categorical Exclusions). Other actions may have already been adequately analyzed through NEPA and a Determination of NEPA Adequacy (DNA) may be prepared.

Before conducting a new NEPA analysis for a proposed Gather Plan, existing NEPA documentation should be reviewed to determine if it is adequate (i.e., review previous Gather Plan EAs together with the associated Decision Records and Findings of No Significant Impact). Changes in numbers of WH&B since the previous gather that result in changes in forage utilization, use patterns, and/or ecological conditions and trends, or changing environmental conditions such as drought, wildfire, noxious weed infestations, and others, may require that a new NEPA analysis be conducted.

If the existing NEPA documentation appears to be adequate, consult with the Office of the Solicitor to determine whether the issuance of a DNA may be appropriate.

7.2 PUBLIC INVOLVEMENT

The authorized officer may conduct public scoping. See H-1790-1, Chapter 6.3.

The authorized officer will provide the public 30 days to review and comment on the NEPA document, typically an Environmental Assessment that documents and analyzes the environmental effects of the BLM's Proposed Action.

The authorized officer shall make Gather Plan EAs and DNAs available to interested individuals, groups, and agencies for a 30-day review and comment period, except when an emergency situation exists. The NEPA document(s) identified in the DNA (e.g., the EA and Finding of No Significant Impact (FONSI)) will also be made available to the public for information.

The authorized officer should consider substantive comments and summarize how they were addressed in the NEPA document or DNA for the Gather Plan. This summary should be presented in the NEPA document, the DNA, or the decision document. See H-1790-1, Chapter 6.9 for additional information.

Possible options for responding to substantive comments include:

- Modifying one or more of the alternatives.
- Developing and evaluating additional alternatives.
- Supplementing, improving, or modifying the analysis.
- Making factual corrections.
- Explaining why the comments do not warrant further agency response, citing cases, authorities or reasons to support the BLM's position.

When an EIS has been prepared, follow the guidance provided in H-1790-1, Chapter 9.

7.3 APPEALS (ADMINISTRATIVE REVIEW)

Any party who is adversely affected by a final decision of the authorized officer may file an appeal and request a stay of the action. WH&B decisions are subject to administrative review (appeal) and remedies under the provisions of 43 CFR 4.21, 4.410, and 4770.3.

As a general matter, WH&B decisions will not become effective during the time in which a person adversely affected may file a notice of appeal. Unless a petition for a stay pending appeal is filed together with a timely notice of appeal, these decisions will become effective on the day after the expiration of the time during which a person adversely affected may file a notice of appeal (generally 31 days from the decision date). If a petition for stay pending appeal is filed together with a timely notice of appeal, a decision will become effective immediately if:

- The stay request is denied; or,
- The Interior Board of Land Appeals fails to act on the petition for a stay within 45 days from the date of the decision.

Under certain circumstances, however, the authorized officer may make decisions to gather/remove excess wild horses or burros effective upon issuance or on a date specified in the decision. See 43 CFR 4770.3(c).

Under the authority provided in 43 CFR 4770.3 (c), the authorized officer may make decisions to gather/remove excess wild horses or burros effective upon issuance or on a date specified in the decision.

When issued under this authority, the gather may be implemented unless a stay is granted or a Federal Court enjoins the gather.

7.3.1 AML Decisions

AML decisions are subject to administrative review:

1. When administrative review of multiple-use decisions (MUD) is requested, BLM may ask to combine the wild horse decision with the grazing decision for review by an administrative law judge (ALJ) in the Office of Hearings and Appeals (OHA).

2. Wild horse decisions are subject to administrative review by the Interior Board of Land Appeals (IBLA) in accordance with 43 CFR 4.21 and 4.410.

7.3.2 Gather/Removal Decisions

The authorized officer has the authority to make decisions to gather and remove excess WH&B effective upon issuance or on a date specified in the decision when removal is court ordered or is needed to preserve a thriving natural ecological balance and multiple use relationship.

Any party who is adversely affected by the authorized officer's final decision may file an appeal and/or request a stay of the action with the Interior Board of Land Appeals (IBLA). The appeal and/or request for stay must be filed within 30 days from the date of the decision and in accordance with the regulations found at 43 CFR 4.411(a).

7.3.3 HMAP or Other Management Decisions

AML, HMAP, or other management decisions are subject to administrative review through the IBLA under provisions of 43 CFR 4.21 and 4.410. Under this authority, decisions **cannot** be implemented effective upon issuance or on a date specified in the decision.

A notice of appeal must be filed in the office of the authorized officer within 30 days from the date of the decision. See 43 CFR 4.411.

CHAPTER 8—RESEARCH

GENERAL

Direction to conduct research is contained in the WFRHBA, 16 U.S.C. § 1333(b)(2)(C)(3), and the Strategic Plan for Management of Wild Horses and Burros on Public Lands (1992). In late 2000, the Midcontinent Ecological Science Center of the U. S. Geological Survey (USGS) was charged with developing a strategic research plan for the management of WH&B. The purpose of the strategic planning process was to:

- Review past progress and identify problems that could be addressed with research.
- Set broad research goals central to the BLM's mission for WH&B management.
- Establish specific, time-bound, measurable research goals, and strategies to achieve them.
- Evaluate the progress towards those goals at set time periods, and to readjust the planning as needed.

There had been no previous prioritization of the BLM's WH&B research and management needs, and no effort to develop a strategy for fulfilling those needs within a specified time period. The strategic planning process was designed to fill this void.

8.1 STRATEGIC RESEARCH PLAN

The Strategic Research Plan for Wild Horse and Burro Management identified research priorities to include health and handling, fertility control, population estimation and modeling, genetic conservation, habitat assessment and setting population goals. The components of fertility control and population estimation have been implemented and research is being conducted. Genetic diversity of WH&B herds is being evaluated. Other research projects may be initiated as needed to support the management of WH&B. Research results will be used to improve management practices within the WH&B program.

8.1.1 Development

The Strategic Research Plan was a joint effort between the USGS, the BLM, the Animal and Plant Health Inspection Service (APHIS), and the U.S. Department of Agriculture (USDA). The plan was developed over a period of 2 years with input from 39 subject area experts representing 11 universities, 3 Federal agencies (BLM, USGS, APHIS), and two State wildlife agencies.

The USGS took the lead role in planning and coordinating meetings of the expert committees and in drafting the Strategic Plan based on committee and agency input. Assisting in this effort were the BLM's National WH&B Research Coordinator and equine health experts from APHIS.

Principal input from the USGS was focused on topics of contraception, aerial population estimation, population modeling, and genetics. Principal input from APHIS was focused on topics of disease and animal health monitoring and surveillance.

Advice and input has also come from BLM including managers and specialists assigned to the WH&B program, the National WH&B Advisory Board, and WH&B staff in the Washington Office. Advice and input was also provided by the BLM Director's Science Advisory Committee, and from seven topic-specific advisory panels that were convened by the USGS.

8.2 RESEARCH REQUESTS

A National Research Advisory Team exists to review research proposals, monitor research project progress, update the Strategy as necessary, and provide recommendations to the WH&B Division Chief. The Research Advisory Team has been formed with equal participation by the BLM (BLM's National WH&B Research Coordinator), the USGS, and APHIS.

All requests for research and/or research proposals pertaining to the Wild Horse and Burro program, whether generated from the field or through field-related contacts, are to be directed to the Research Advisory Team for review. This Team is also available to assist field offices with the development of research proposals. Proposal format and submission should be coordinated through the National WH&B Research Coordinator. Proposals will be reviewed on an as-needed basis and recommendations for funding will be made directly to the WH&B Division Chief.

8.3 RESEARCH PROJECTS

8.3.1 Fertility Control

An effective, safe, and cost-effective fertility control agent is an essential tool in the management of wild horses. A Fertility Control Field Trial Plan has been developed and field research is underway for two components of the Plan: (1) Individual-Based Trials and (2) Population-Based Trials. Over the last decade, BLM research efforts in fertility control have been focused on PZP (Porcine zona pellucida) and the development of time-release pellets to extend the effectiveness of PZP. PZP has proven effective in reducing foaling rates, the population impacts of which are presently being determined.

8.3.2 Other Possible Fertility Control Tools

Other possible fertility control tools that could potentially be considered in the future include:

- Spaying mares.
- Vasectomizing studs.
- Use of IUDs.
- Use of GonaCon™.
- Use of SpayVac™.
- Use of other fertility control agents or sterilants.

8.3.2.1 Spaying (Mares)

Spaying mares involves major abdominal surgery, is risky, and requires good post-operative care. Spaying mares could be considered in the future if safe, effective and humane surgical methods and post-operative care procedures can be perfected for use on wild horses.

8.3.2.2 Vasectomies (Stallions)

Performing vasectomies on stallions is not a widely practiced procedure within veterinary medicine. Post-vasectomy, it is expected that studs would retain their stud-like behavior. By contrast, gelding studs (castration) is a routine veterinary procedure in both domestic and wild horses. However, geldings lose their stud-like behavior after a few months.

Vasectomized studs would be expected to continue to cover mares and keep them in a harem, but eventually most mares would be bred by an intact stallion. If this continued over several estrous cycles it could lead to extended foaling seasons and potentially an increase in foal mortality. Research shows that at 15-33 percent of foals are sired by non-harem stallions, making it unlikely that fertility control focused on males would be effective in slowing population growth (Bowling and Touchberry 1990, Kaseda and Kahlil 1996, Asa 1999). Further research is needed to perfect a safe technique for performing vasectomies in stallions and demonstrate whether this approach will reduce population growth rates.

8.3.2.3 Use of IUDs

Pilot studies using coil-type intrauterine devices (IUDs) and glass balls or marbles as IUDs have failed to demonstrate a long-lasting effect on conception in mares. In both instances, mares "slipped" the devices and became pregnant soon thereafter. The application of IUDs is further complicated by the difficulties associated with identifying a time window for application when mares are not pregnant.

8.3.2.4 Use of GonaCon™

GonaCon™ is an experimental fertility control vaccine that is being developed for potential use as a management tool for deer. Tests of the GnRH vaccine are ongoing in several States and countries, involving a wide range of wildlife and feral species, including horses. A research study conducted with estray horses in Nevada suggests GonaCon™ will reduce foaling rates for 1 year following treatment. At present, the effectiveness of GonaCon™ as a fertility control agent beyond one year appears similar to or less than that of PZP-22, suggesting limited potential for use of the product to reduce population growth rates over a longer period of time.

8.3.2.5 Use of SpayVac™

SpayVac™ is an experimental fertility control vaccine using PZP antigens and a novel liposome technology. It is easy to handle and administer. A single vaccination with SpayVac™ has maintained a high level of contraception throughout a 4-year study with estray horses in Nevada. However, there is currently no regulatory approval for the management or investigational use of

SpayVac™ through the EPA or FDA, and the product is not currently commercially available. SpayVac™ may have potential for use as an effective, longer-lasting fertility control agent in the future and could offer an alternative to spaying mares. However, additional research would be needed before it could be used on a population-management basis.

8.3.3 Population Estimation and Setting Population Goals

Aerial surveys rarely detect all WH&B within an HMA. As a result, population estimates must be developed using correction factors to account for WH&B not identified during the census. At present, research is being conducted on two techniques (simultaneous double-count and photo mark-resight) that will allow use of such correction factors.

8.3.4 Other Research

In the future, research may be conducted in other areas identified as research priorities, depending on need and funding. When other research needs are identified or research projects are proposed, they will be reviewed and evaluated by the National WH&B Research Advisory Team and recommendations will be made to the WH&B Division Chief.

GLOSSARY OF TERMS

Activity Plan – Examples of activity plans include Herd Management Area Plans (HMAPs) and Allotment Management Plans (AMPs). These plans lead to implementation decisions that usually describe multiple projects or management actions and apply best management practices to make progress toward attainment of Land Use Plan (LUP), Land Health Standards, or other resource objectives.

Adaptive Management – WH&B management is adjusted as indicated based on the results of monitoring and evaluation.

Adult Wild Horse – WH&B 1 year of age and older are considered adults. A foal is considered 1 year of age on January 1 of the year following its birth.

Adult Breeding Population - Wild horses within a population that are 1 year of age and older.

Aerial Survey – A method of counting WH&B using an aircraft. Aerial survey allows the BLM to obtain estimates of WH&B population size with associated confidence intervals.

Animal Unit (AU) - Wild horses 1 year of age and older count as 1 AU and burros 1 year of age and older count as 0.5 AU.

Animal Unit Month (AUM) – The amount of forage (approximately 800 pounds of air dried forage) necessary to sustain one adult horse or two burros for one month.

Appropriate Management Level (AML) - The number of adult horses or burros (expressed as a range with an upper and lower limit) to be managed within an HMA. Forage for WH&B (AUMs) is allocated based on the AML upper limit.

AML Range – The number of adult WH&B within which herd size will be allowed to fluctuate.

AML Upper Limit – The maximum number of WH&B that results in a thriving natural ecological balance (TNEB) and avoids a deterioration of the range. This number should be somewhere below the number that would cause damage to the range (refer to 118 IBLA 75).

AML Lower Limit – The number that allows the population to grow to the AML upper limit over 4-5 years, without the need for gathers to remove excess WH&B in the interim.

Authorized Officer – Any employee of the BLM to whom authority has been delegated to perform the duties described in this Handbook (refer to BLM Manual 1203 for a further explanation of delegation of authority).

Census – A complete count of the total WH&B population within an area. Because aerial surveys do not usually detect all WH&B within an HMA, a true census is usually not possible. Better population estimates are developed using correction factors to account for WH&B not seen during the survey (i.e., sightability correction factors).

Considered Comparably - During the LUP process, WH&B are considered in the same manner as other resource values (e.g., cultural, historic, scenic, rangelands, timber, and minerals).

Emergency – An unexpected event that threatens the health and welfare of a WH&B population and/or its habitat. Examples include fire, insect infestation, disease or other events of a catastrophic and unanticipated nature.

Escalating Problems - Conditions that deteriorate over time. The key indicators are a decline in the amount of forage or water available for WH&B use, with negative impacts to rangeland health and, ultimately, animal condition. Causal factors are normally drought and/or animal numbers in excess of AML. These situations can be detected in advance and are managed through the normal planning process.

Evaluation (LUP Evaluation) – The process of reviewing the land use plan and periodic plan monitoring reports to determine whether the decisions and NEPA analysis are still valid and whether the plan is being implemented.

Evaluation (HMAP Evaluation) – Periodic review of herd management area plans (HMAPs) to determine if the selected management practices were implemented as planned (answers the question "Did we do it?") and whether or not the plan is effective in making progress toward established habitat and population management objectives (answers the question "Did it work?").

Excess Animals – Wild, free-roaming horses or burros which have been removed or which must be removed from in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in an area.

Fertility Control – A tool to decrease fertility and which, when implemented, reduces (slows) population growth rates and extends the gather cycle.

Free-Roaming – WH&B are able to move without restriction by fences or other barriers within a HMA.

Goal – A broad statement of a desired outcome.

Genetic Diversity – The absence of inbreeding depression as monitored through an established baseline and periodic reassessment. This represents an expression of the genetic health of an individual animal or the population.

Herd (Reproducing) – One or more stallions and their mares and foals.

Herd Area (HA) - Geographic areas of the public lands identified as habitat used by WH&B at the time the WFRHBA was enacted (12/15/1971).

Herd Management Area (HMA) – May be established in those HAs within which WH&B can be managed for the long term. HMAs are designated through the LUP process for the

maintenance of WH&B herds. In delineating each HMA, the authorized officer shall consider the appropriate management level (AML) for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the constraints contained in 43 CFR 4710.4.

Herd Management Area Plan (HMAP) – An HMAP establishes management actions and short- and long-term management and monitoring objectives for a specific WH&B herd and its habitat. HMAPs assist the authorized officer in tracking progress toward achieving LUP goals. They are prepared under authority of 43 CFR 4710.3-1. An HMAP can be prepared for an individual HMA or a complex of HMAs.

Implementation Decision – Decisions that make progress or take action toward achieving LUP goals and objectives.

Implementation Plan – Refer to Activity Plan above.

Land Use Plan (LUP) – LUPs provide (by tracts or areas) for the use of public lands. LUPs are prepared in accordance with established land use planning procedures in 43 CFR 1600 and pursuant to FLPMA. They establish goals and objectives (desired outcomes), identify the management actions needed to achieve the desired outcomes, and identify the allowable uses of the public lands.

Manage Principally but not Exclusively – An HMA may be considered for designation as a wild horse or burro range when there is significant public value present, such as unique characteristics in a herd or an outstanding opportunity for public viewing. These HMAs may be managed principally, but not exclusively, for wild horse or burro herds.

Minimal Feasible Level of Management - The minimum number of habitat or population management tools or actions necessary to attain the objectives identified in approved LUPs and HMAPs for a HMA or HMA complex.

Monitoring – The process of collecting and analyzing the data necessary to evaluate existing management and determine whether progress is being made toward attaining established habitat and population management goals and objectives.

Non-Reproducing Wild Horses – An HMA composed, in whole or in part, of sterilized wild horses (either stallions or mares) to aid in controlling on the range population numbers.

Objective(s) – A description of the desired outcome of a management decision. Objectives are specific, measurable, achievable/attainable, reasonable/relevant, and progress can be quantified within established timeframes for achievement (SMART).

Plan Monitoring – The process of tracking land use plan implementation, including collecting and assessing the data or information necessary to evaluate the effectiveness of land use planning decisions.

Population Growth Rates – Represent the net effect of births and deaths in any given year. The BLM reports annual population numbers as of February 28th.

Range – The amount of land necessary to sustain an existing herd or herds of wild free-roaming horses and burros, which does not exceed their known territorial limits.

Resource Management Plan – see LUP above.

Self-Sustaining – The ability of reproducing herds of wild horses and burros to maintain themselves in a healthy condition and to produce healthy foals.

Standards for Land Health – Standards are statements of physical and biological condition or degree of function required for healthy sustainable rangelands. Achieving or making significant progress towards these functions and conditions is required of all uses of public lands. Historical data, when available, should be utilized when assessing standards.

Standard Operating Procedures – The Bureau follows standardized methods of operation which have been developed over time to assure the safe, effective, and humane handling and treatment of WH&B.

Thriving Natural Ecological Balance (TNEB) – WH&B are managed in a manner that assures significant progress is made toward achieving the Land Health Standards for upland vegetation and riparian plant communities, watershed function, and habitat quality for animal populations, as well as other site-specific or landscape-level objectives, including those necessary to protect and manage Threatened, Endangered, and Sensitive Species.

Utilization – The portion of annual forage production that has been consumed by herbivores (WH&B, domestic livestock, wildlife, and insects). The term is also used to refer to the pattern of such use.

WH&B Range – A HMA which meets the special criteria defined in H-1601-1, Land Use Planning Handbook. These include unique herd characteristics, viewing opportunities, unique landscape, significant public demand or other reasons. WH&B Ranges are managed principally, but not necessarily exclusively, for WH&B.

Wild Free-Roaming Horses and Burros – All unbranded and unclaimed horses and burros that use public lands within 10 contiguous Western States as all or part of their habitat, or that have been removed from these lands by the authorized officer, or have been born of wild horses or burros in authorized BLM facilities, but have not lost their status under the WFRHBA (16 USC § 1332 (f)).

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Bowling, A.T., and R.W. Touchberry.1990. Parentage of Great Basin feral horses. Journal of Wildlife Management 54(3):424–429.

Cothran, Gus, 2009. Letter dated July 16, 2009. Effective population size to keep the rate of loss of genetic variation at 1 percent per generation.

Jenkins, S.H. 1996. Wild Horse Population Model. Version 3.2.

Kaseda, Y., and A.M. Khalil. 1996. Harem size and reproductive success of stallions in Misaki feral horses. Applied Animal Behaviour Science 47:163–173.

Singer, F.J., L. Zeigenfuss, L. Coates-Markle, and Rev. F. Schwieger. 2000. A demographic analysis, group dynamics, and genetic effective number in the Pryor Mountain wild horse population. Pages 73–89 in F.J. Singer and K.A. Schoenecker (compilers), Managers' summary—ecological studies of the Pryor Mountain Wild Horse Range, 1992–1997. U.S. Geological Survey, Midcontinent Ecological Science Center, Fort Collins, Colo.

Turner, J.W., Jr., I.K.M. Liu, D.R. Flanagan, A.T. Rutberg, and J.K. Kirkpatrick. 2007. Immunocontraception in wild horses: one inoculation provides two years of infertility. Journal of Wildlife Management 71(2):662–667.

APPENDIX 1 - Genetics Data and Hair Sample Collection Instructions

Analysis of DNA to determine genetic diversity of wild horse and burro (WH&B) herds is currently being done using hair samples rather than blood samples. Unless there is a previously recognized concern regarding low genetic diversity in a particular herd, it is not necessary to collect genetic information at every gather. Typical herds should be sampled every other gather. A new baseline does not need to be established through hair analysis if blood analysis has already been completed. Please follow the instructions below for collecting hair samples. Call BLM's National WH&B Research Coordinator if you have any questions.

While it is preferable to sample release horses, you may sample removed horses if necessary. In complexes or HMAs where separate breeding populations are suspected, WH&B in each distinct population should be sampled separately. Do not mix samples from different horses or different breeding populations. The minimum sample size is 25 animals or 25 percent of the post-gather population, not to exceed 100 animals per population. Samples should be collected from males and females in the same approximate ratio as the population. Animals of any age class may be sampled. Burros should be sampled in the same manner as horses.

1. You will need one plain white paper envelope (a white #10 business envelope works best) for each horse. DO NOT use plastic or zip-lock bags and DO NOT use plastic coated envelopes or envelopes with windows in them.



2. Hair samples must be obtained by pulling the hair out by the root NOT cutting or shaving it off the horse. This is because the DNA is in the root follicle not the hair itself. Mane hair will work, but for foals or young horses you may need to obtain tail hair. Please submit about 30 hairs per animal. A bundle of 30 hairs is about the diameter of a pencil.



The easiest way to pull a good sample is to grasp a bundle of hair and wrap it around a clean mane comb or hoof pick. Holding the bundle close to the neck, pull **straight out** firmly. Foal hair is more brittle and tends to break off. If you are having trouble getting hair with the root attached try obtaining a tail hair sample instead.



3. Check that you have the hair roots or hair bulbs attached to the hair at the base. They look, and feel like little bumps on the end of each hair.

(James Sturdivant – The Jockey Club, modified with permission)

Keep the hair in a loose bundle pointed in one direction or twist it together and place it in an envelope. You can cut off excess hair and leave only a few inches with the hair root attached to put in the envelope if that is easier.

4. Seal the envelope and **write the sample number on the envelope.**

Also write the sample number, color, sex and age of the horse on the data collection sheet. If animals cannot be aged in years, at a minimum record adult, yearling or foal. Be sure to keep stray hairs out of the comb and off your clothes so they don't contaminate the next sample.

Please NOTE: it is best to sample when the hair is dry. If you need to sample when it is raining or the horses are wet, then DO use zip-lock bags for each sample AND keep the samples cool not frozen (refrigerate, then ship the samples with cold packs).

Please fill out the top of the form completely, including the HMA name, HMA number and the date the sample was collected.

Within 3 days after hair collection, send a copy of the data collection form to:

Attn: Research Coordinator, National Program Office-Reno

FEDEX the samples, to arrive on a weekday not the weekend **with the Data Collection Sheet to Dr. Gus Cothran, address below:**

Dr. E. Gus Cothran
VIBS, CVM
TAMU4458
Texas A&M University
College Station, TX 77843
Phone (979) 845-0229

For questions or comments, contact: **National Program Office @ 775-861-6583**.

HAIR SAMPLE GENETICS DATA COLLECTION SHEET
WILD HORSE AND BURRO HERD GENETICS EVALUATION

PAGE _____ OF _____

HMA: _____ HMA #: _____

DATE: _____

TRAP/SUBGROUP: _____

Field Office:_____ STATE:_____

BLM CONTACT PERSON: _____

PHONE: _____

ADDRESS:
_____

EMAIL: _____

SAMPLED HORSES WERE (circle) RELEASED or REMOVED

	SAMPLE #	COLOR	SEX	AGE	COMMENTS
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

APPENDIX 2 - Habitat Monitoring References

BLM Technical References can be found at http://www.blm.gov/nstc/library/techref.htm
A list of references which may be helpful follows:

1. Biological Soil Crusts: Ecology and Management, TR-1730-2, Interagency, 2001.

2. Inventory and Monitoring, Ecological Site Inventory, TR-1737-7, BLM, 2001.

3. Measuring and Monitoring Plant Populations, TR-1730-1, 1998

4. National Range Handbook, Handbook, H-4410-01, 1990.

5. Rangeland Inventory and Monitoring: Selected Bibliography of remote Sensing Applications, TR-4400-9, BLM, 1986)

6. Rangeland Health Standards, Handbook 4180, BLM, 2001.

7. Interpreting Indicators for Rangeland Health, Version 4, TR 1734-6, Interagency, 2005.

8. Rangeland Monitoring and Evaluation, TR-4400-1, BLM 1988.

9. Rangeland Monitoring and Evaluation Handbook, BLM Handbook H-4400-01, 1990.

10. Rangeland Monitoring: Actual Use Studies, TR-4400-2, BLM, 1984).

11. Rangeland Inventory and Monitoring: Supplemental Studies, TR-4400-5, BLM, 1992.

12. Rangeland Monitoring: Analysis, Interpretation, and Evaluation, TR-4400-7, BLM, 1984.

13. Riparian Area Management, Grazing Management for Riparian Areas, TR-1337-4, BLM, 1989.

14. Riparian Area Management, Management Techniques for Riparian Areas, TR-1737-6, BLM, 1992

15. Riparian Area Management, Process for Assessing Proper Functioning Condition, TR-1737-9, Interagency, 1990.

16. Riparian Area Management, Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas, TR-1737-11, Interagency, 1990.

17. Riparian Area Management, Grazing for Riparian-Wetland Areas, TR-1737-14, BLM, 1997.

18. Riparian Area management, A Guide to Managing, Restoring, and Conserving Springs in the Western Unites States, TR-1737-17, BLM, 2001.

19. Riparian Area Management, Riparian Wetland Soils, TR-1737-19, Interagency, 2003.

20. Statistical Considerations in Rangeland Monitoring. (See TR 4700-8, 1986)

21. Sampling Vegetation Attributes, TR-1734-4, 1996.

22. Utilization Studies and Residual Measurements, TR-1734-3, Interagency, 1996.

APPENDIX 3 - AML Establishment and Adjustment Process

AML decisions determine the number of WH&B to be managed within an HMA or complex of HMAs. AML is expressed as a population range with an upper and lower limit. The AML upper limit is the number of WH&B which results in a TNEB and avoids a deterioration of the range. The AML lower limit is normally set at a number that allows the population to grow to the upper limit over a 4-5 year period, without any interim gathers to remove excess WH&B. See Chapter 4.

A multi-tiered analysis process should be used to establish and adjust the appropriate management level (AML) of WH&B.

- ❒ **Tier One**: determine whether the four essential habitat components (forage, water, cover and space) are present in sufficient amounts to sustain healthy WH&B populations and healthy rangelands over the long-term.

- ❒ **Tier Two**: determine the amount of sustainable forage available for WH&B use.

- ❒ **Tier Three**: determine whether or not the projected WH&B herd size is sufficient to maintain genetically diverse WH&B populations (i.e., avoid inbreeding depression).

Should the Tier One analysis determine that one or more of the essential habitat components is insufficient to maintain a healthy WH&B population and healthy rangelands; the authorized officer should consider amending or revising the LUP to remove the area's designation as an HMA.

Tier 1

Determine if the four essential habitat components (forage, water, cover, and space) are present in sufficient amounts to sustain healthy WH&B populations and healthy rangelands over the long-term. In making this determination, the most limiting factor(s) within the HMA should be considered. In some HMAs, the most limiting factor may be:

- The water available for WH&B use.
- The limited habitat available for WH&B use on either the summer or winter range, in HMAs with seasonal ranges.
- The naturally occurring, low productive capability of the dominant ecological sites.
- The low ecological status of key WH&B use areas.
- Low annual rainfall or extended periods of drought.

The essential habitat components must be located on public lands within the HMA boundary. If forage or water located on private lands within the HMA is needed to maintain healthy WH&B populations, a written agreement with the private landowner allowing use by WH&B is required. In the absence of private landowner agreement, the forage and water on private lands is not available for use by WH&B and may not be included when establishing or adjusting AML.

Forage

The amount of forage available for WH&B use is expressed in animal unit months (AUMs). One AUM is defined as the amount of forage necessary to sustain one adult horse or two adult burros for one month (or approximately 800 pounds of air dry forage). Twelve AUMs of forage are needed to support one wild horse or two adult burros for one year.

As a **starting point**, the amount of sustainable forage available for WH&B use may be determined based on the results of utilization monitoring and use pattern mapping for the years evaluated. A determination of forage availability should not be based on the results of only one year's monitoring data. A minimum of three to five years of monitoring data is preferred. This is because forage production can vary substantially from year to year based on the timing and amount of precipitation received, among other factors. Under the same level of grazing, use pattern mapping may indicate light to moderate utilization during above normal precipitation years, yet indicate heavy or severe utilization during below normal precipitation years.

The nature of the forage (i.e., perennial vs. annual) should also be considered. While annual forage may be available to support WH&B use during years with normal or above normal precipitation, it may be greatly reduced during below average precipitation years. As a result, annual forage is not typically used to support or justify WH&B numbers within a HMA. Within perennial ranges, the production of perennial species may also be greatly reduced during drought, and the production of annual grasses and forbs may be largely absent.

The flexibility to remove WH&B in below average forage years, or to move the animals to another area, can be constrained by funding, contractor capability, facility space, or animal behavior. To prevent range damage or adverse impacts to animal health, the upper limit of AML for WH&B should be established in consideration of the most limiting forage (or water) production years.

Other Considerations

1. Situations in which the Land Health Standards are achieved but population inventory indicates more WH&B are present than expected. These situations may indicate additional forage is present to support use by higher numbers of WH&B, wildlife, or livestock, consistent with LUP guidance.

2. Situations in which deteriorated land health conditions exist but population inventory indicates the number of WH&B is the same or lower than expected. These situations may indicate there is less forage available to support the existing use by WH&B, wildlife, or livestock, and that a reduction in the allowable use may be needed, consistent with LUP guidance.

The number of WH&B which can be sustained based on the available forage is determined in **Tier Two.** To determine if there is sufficient forage to sustain long-term WH&B:

- Analyze utilization data, use pattern mapping, and/or production, ecological site condition (ESI), trend, frequency, precipitation (weather), and indicators of land health.

- Determine the AUMs of actual use by WH&B for each of the evaluation years. (Calculate the AUMs of actual WH&B use based on population estimates derived from aerial surveys. You can also project actual use by WH&B using previous population estimates together with herd's average annual population growth rate.)
- Identify key WH&B use areas (distribution). Calculate carrying capacity on the basis of the key use areas (primary range).

Water

The amount of water available for WH&B use is generally based on public, natural waters (i.e., water occurring on private lands is not considered unless a written agreement with the private landowner is obtained). Water availability during drought conditions is also considered. Sufficient water for WH&B must be available during drought to achieve and maintain a thriving natural ecological balance and multiple use relationship on the public lands.

In determining the amount of water available for WH&B use, a thorough inventory of the available public, natural water resources is needed. Developed and man-made waters should also be inventoried if they are available for WH&B use (i.e., BLM holds the necessary water rights and WH&B access to the water can be depended upon over the long-term). The water resources inventory should include the name, location, and flow (in gallons per minute or cubic feet per second). Wild horses require a minimum of 10 gallons of available water per animal per day (15 gallons per day is not unusual during the hot, dry summer months) while burros require about 5 gallons available per animal per day. The analysis of available water should also be based on the most limiting season of the year (i.e., generally summer when flows are reduced).

Cover and Space

A recurring pattern of WH&B movement out of the HMA to access forage, water, or thermal or hiding cover is an indication the HMA cannot sustain year-long WH&B use. If one or more of the key habitat components is missing, the HMA should be considered as unsuitable for year-long use by WH&B. In these situations, the authorized officer should consider amending or revising the LUP to remove the area's designation as an HMA. An exception would be two or more HMAs which adjoin and are managed as a complex of HMAs, or HMAs which adjoin Forest Service wild horse territories (WHT) that can be managed as a complex.

The results of the **Tier One** analysis may be summarized in a simple table (see example Table 3.1 below). The table should be followed by a detailed description of the analysis and the rationale used in making the determination that a key habitat component either is (or is not) sufficient to support healthy WH&B populations and healthy rangelands over the long-term.

Table 3.1
Sufficient Forage, Water, Cover and Space

HMA	Forage		Water		Cover		Space	
	Sufficient	Insufficient	Sufficient	Insufficient	Sufficient	Insufficient	Sufficient	Insufficient
HMA 1	X			X	X		X	
HMA 2		X		X	X		X	
HMA 3	X			X	X		X	

Tier 2

Determine the AUMs of sustainable forage available for WH&B use. Based on the desired level of utilization, propose an AML for WH&B (expressed as a range with an upper and lower limit).

Forage availability should be determined based on in-depth analysis of rangeland monitoring data. As a first step, monitoring data should be reviewed to determine if Land Health Standards or other site-specific vegetation management objectives are being met. If standards and objectives are being met, WH&B population estimates are then examined to determine the range in number of WH&B using the HMA during the evaluation years. The upper values are used to establish AML when no land health issues occur.

In HMAs where Land Health Standards or other objectives are not being achieved, WH&B use should be examined to determine if this level of use has contributed to or is the causal factor for the standards or objectives not being met (or only partly met). When standards or objectives are not being met and WH&B use is a contributing (or causal) factor, AML is proposed based on the estimated number of WH&B present relative to the level of forage utilization that is occurring (i.e., AML would be established at a number below that which has contributed to the standards or objectives not being met). The need for frequent emergency removals of WH&B due to lack of forage and/or water or the emigration of WH&B out of the HMA due to population size or concentration levels may also be a consideration in proposing AML for WH&B.

The sustainable forage (carrying capacity) available for WH&B use within a HMA is determined pending detailed analysis of utilization data and use pattern mapping for all users. For each evaluation year, determine the following: (1) weighted average utilization, (2) potential carrying capacity, and (3) the proposed carrying capacity. An example for the Mojave Desert ecosystem follows.

Example – Determining Sustainable Forage Available for WH&B Use (Mojave Desert Ecosystem)

The following example can be used to assist with establishing and/or adjusting AML for WH&B use. To determine if there is sufficient forage to sustain long-term WH&B use, analysis of utilization data, use pattern mapping, and/or production, ecological site condition, trend, frequency or other indicators of rangeland health is necessary.

Selection of Allowable Use Criteria

The recommended allowable utilization by all herbivores under year-round use within the Mojave Desert ecosystem is 25-35 percent of the current year's forage production.

WH&B use will be limited to 25 percent of current year's production on key vegetation species as measured at seed dissemination for these species.

Rationale: Within the Mojave Desert ecosystem, allowable use levels of 25 percent are recommended for areas in poor ecological condition or for areas grazed during the growing season. Allowable use levels of 35 percent are recommended for areas in good ecological condition or for areas grazed during the dormant season. Allowable use is established at 25 percent for this HMA due to year-round grazing by WH&B as well as a number of areas in poor ecological condition.

Determine Weighted Average Forage Utilization

Deriving a weighted average utilization from use pattern maps generally provides a more representative picture of the forage use that has occurred throughout the HMA and leads to a more accurate estimate of carrying capacity. To derive a weighted average utilization for the HMA, determine the number of acres within the HMA which received moderate, heavy or severe utilization for each evaluation year.[3] Refer to BLM Technical Reference 4400-7 for additional information.

The weighted average use is calculated by multiplying the number of acres by the mid-point of the utilization category (example: moderate use is classified as 41-60 percent, therefore, 50 percent is the mid-point used in the calculation).

Data used in the example carrying capacity analysis outlined below includes: utilization data, use pattern mapping data, actual livestock use information, and WH&B population estimates.

[3] To protect rangeland health over the long-term, consider WH&B use only on the primary range when deriving a weighted average utilization. Primary range is defined as the areas which animals (WH&B) prefer to use when management is limited (refer to Glossary of Terms Used in Range Management, 4th Edition, Published by Society for Range Management, 1998). Secondary range is defined as range which is not ordinarily used until the primary range has been overused. Therefore, areas receiving slight or light use or that are unused should not be considered when deriving a weighted average utilization.

Weighted Average Utilization =

(Moderate use acres*50 percent) + (Heavy use acres*70 percent) + (Severe use acres*90 percent)

Analyze the total acres of moderate, heavy, and severe use.

1995 $\frac{(19639*50\text{ percent}) + (34351*70\text{ percent})}{53{,}990}$ = 63 percent

1996 $\frac{(8023*50\text{ percent}) + (48957*70\text{ percent}) + (9885*90\text{ percent})}{66{,}865}$ = 71 percent

1997 $\frac{(3081*50\text{ percent}) + (22888*70\text{ percent})}{25{,}969}$ = 68 percent

1999 $\frac{(5627*50\text{ percent}) + (3696*70\text{ percent})}{9{,}323}$ = 58 percent

2000 $\frac{(4344*50\text{ percent}) + (4386*70\text{ percent})}{8{,}730}$ = 60 percent

2002 $\frac{(5627*50\text{ percent}) + (3696*70\text{ percent})}{9{,}323}$ = 58 percent

2004 $\frac{(4395*50\text{ percent}) + (7933*70\text{ percent})}{12{,}328}$ = 63 percent

The example below demonstrates the impact of variable precipitation (and forage production) on actual forage utilization and the desired carrying capacity.

Potential Carrying Capacity =

Average use in AUMs (of cattle or horse use)*25 percent Allowable Use Objective
Weighted Average Utilization

Year	Average Use (AUMs)		Effective Precipitation
1995	3000 AUMs*25 percent / 63 percent	= 1190 AUMs	Above Average
1996	600 AUMs*25 percent / 71 percent	= 211 AUMs	Severe Drought
1997	444 AUMs*25 percent / 68 percent	= 163 AUMs	Severe Drought
1999	600 AUMs*25 percent / 58 percent	= 259 AUMs	Severe Drought
2000	1440 AUMs*25 percent / 60 percent	= 600 AUMs	Slightly Below Average
2002	1632 AUMs*25 percent / 58 percent	= 703 AUMs	Average
2004	3576 AUMs*25 percent / 63 percent	= 1419 AUMs	Well Above Average

Proposed Carrying Capacity =

In the example above, the carrying capacity would be set in consideration of the driest years in order to prevent damage to the range or adverse impacts to animal health.

211 (1996) +163 (1997) +259 (1999) +600 (2000) +703AUMs (2002) = 387 AUMs
5 (# years of data)

Proposed AML =

387 AUMs (Desired Carrying Capacity) = 32 cattle or wild horses
12 months

Or:

$$\frac{\text{387 AUMs (Desired Carrying Capacity)}}{\text{6 months}} = 65 \text{ burros}$$

***Discussion*:**

- Allocation of the forage between WH&B, wildlife and domestic livestock would be made after site-specific NEPA analysis is completed.

- In the example above, the upper limit of the AML range for wild horses was calculated by dividing the proposed carrying capacity for the HMA (expressed in AUMs) by 12 months.

- The upper limit of the AML range for burros was calculated by dividing the proposed carrying capacity for the HMA by 6 months (an adult burro is equivalent to only 0.5 AU).

- The lower limit of the AML range would be determined based on the herd's average annual growth rate (i.e., the lower limit will normally be set at a number that allows the herd to grow to the upper limit over a 4-5 year period without the need for gathers to remove excess WH&B in the interim).

Tier 3

Determine whether or not the WH&B herd size proposed in Tier Two is sufficient to maintain genetically diverse WH&B populations (i.e., avoid inbreeding depression). To avoid inbreeding depression in wild horse populations, a minimum herd size of 50 effective breeding animals (a total population size of about 150-200 animals) is recommended. An effective breeding size for burro herds has not yet been determined.

If the herd size proposed in Tier Two is not sufficient to maintain genetically diverse WH&B populations, determine if there is WH&B interchange between the HMA and other adjacent HMAs or WHTs and whether this interchange would be sufficient to maintain genetic diversity (avoid inbreeding depression). Genetic diversity baseline or monitoring information can be used to evaluate whether WH&B interchange between HMAs is occurring.

If the proposed herd size is less than 150 animals and the HMA is isolated with limited potential for WH&B egress/ingress, possible management actions which could be considered as part of an appropriate site-specific NEPA analysis could include:

1. Removing the area's designation as an HMA through LUP and returning it to HA status.
2. Maximizing the number of breeding age WH&B in the herd (animals age 6-10 years).
3. Adjusting the sex ratio to favor males to encourage formation of additional breeding harems.
4. Introducing 1-2 young mares from outside the HMA every generation (about every 10 years). Introduced animals should come from herds living in similar environmental conditions.

Documentation

The results of the multi-tiered analysis should be documented in an HMA (AML) Evaluation Report. The completed report should be provided to the affected and interested public for a 30-day review and comment period (e.g., public scoping). The management evaluation report is not a decision subject to administrative appeal. However, once the decision is made, the Evaluation Report is part of the administrative record for that decision.

Following public scoping, a site-specific environmental analysis should be completed to analyze the environmental impacts associated with the Proposed AML and any alternatives. As part of the environmental analysis, summarize the results of public scoping and document how BLM used the comments in preparing the environmental assessment (or EIS).

Based on the analysis of potential environmental impacts, the authorized officer will determine whether to prepare an Environmental Impact Statement (EIS) or issue a Decision Record and Finding of No Significant Impact (FONSI). A FONSI documents why implementation of the selected AML will not result in environmental impacts that significantly affect the quality of the human environment. Or, if an EIS has been prepared, the authorized officer's decision will be documented in a Record of Decision.

Administrative Review

AML decisions are subject to administrative review (appeal) pursuant to 43 CFR Part 4.

APPENDIX 4 - Herd Management Area Planning

Herd management area plans (HMAPs) establish the management actions and the short and long-term management and monitoring objectives for WH&B herds and their habitat. Once established with public involvement through site-specific NEPA analysis and decision, the objectives guide management of the HMA or complex over the life of the plan.

Management Evaluation

Typically, the first step in the HMAP analysis process should be to evaluate existing management. The existing vs. the desired condition of the both the herd and its habitat are examined during the evaluation. Refer to Figures 4.1 and 4.2.

Figure 4.1
Habitat Management Evaluation

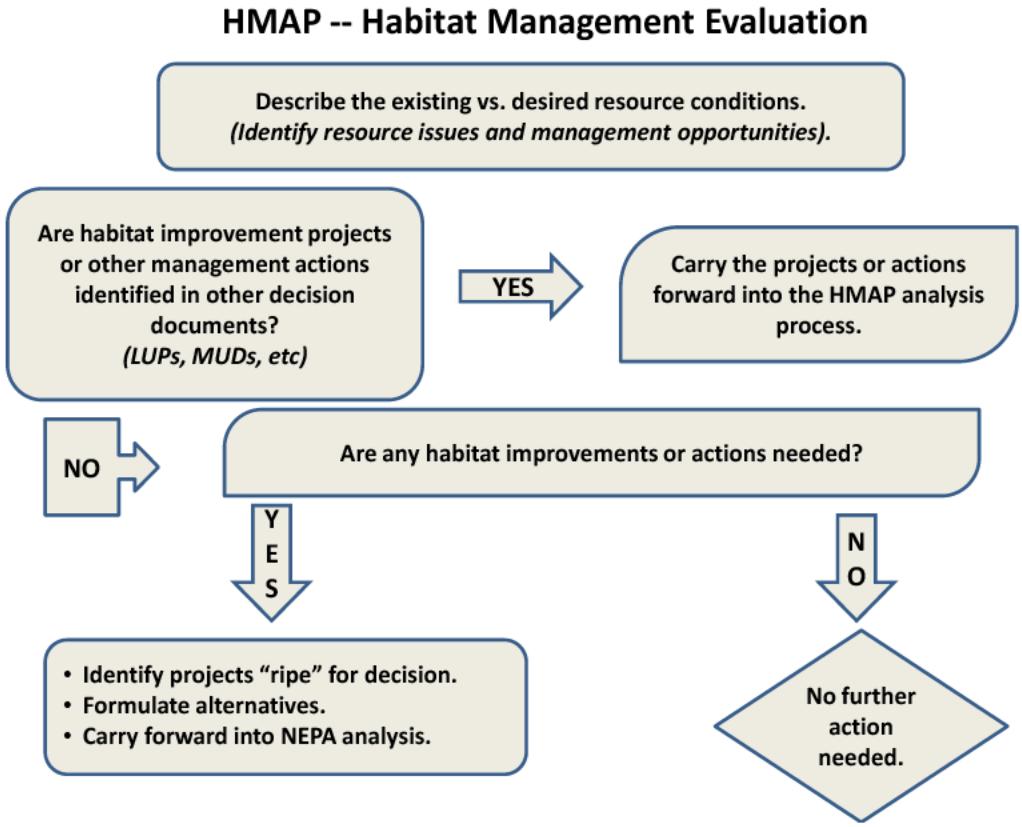
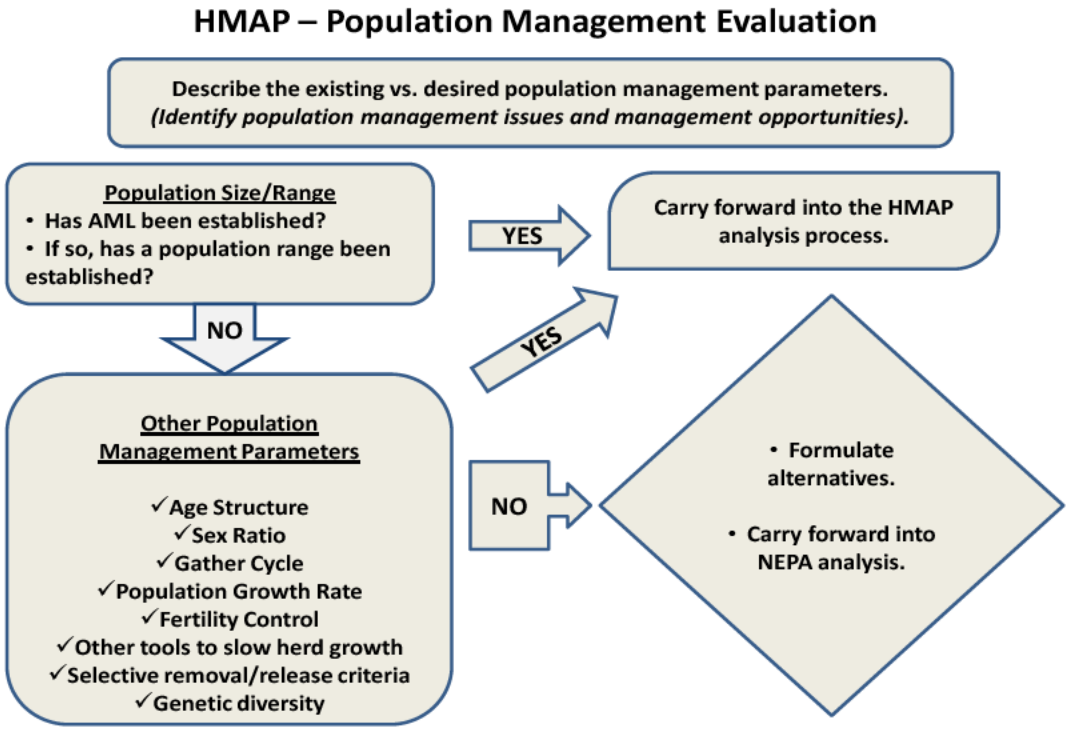


Figure 4.2
Population Management Evaluation



At the conclusion of the management evaluation, a report is prepared and provided to the public for a 30-day review and comment period (public scoping). The management evaluation report is not a decision subject to administrative appeal. Rather, the report documents the key issues identified as a result of the management evaluation. A range of the possible management alternatives (Proposed Action and Alternatives) which could address/resolve the identified issues may also be identified.

NEPA Analysis and Decision
The next step in the HMAP analysis process would be to analyze the potential environmental consequences which could result from implementation of the Proposed Action or Alternatives through completion of a site-specific environmental analysis (NEPA).

To prepare a concise environmental assessment (EA), site-specific management, monitoring and implementation objectives can be displayed in a tabular format within the environmental assessment. Refer to the example which follows.

Example – Documentation of the No Action Alternative in the HMAP EA

Alternative One: No Action Alternative, Continue Existing Management
Under Alternative 1 (No Action), the HMA would continue to be managed as a range of 150-250 wild horses as follows:

- The sex ratio of the animals released back to the range following future gathers would be about 34 percent males and 64 percent females.
- Existing monitoring, including utilization, forage condition, water availability, animal health and periodic population estimates and sampling for genetic diversity (inbreeding) would occur.
- AML would be adjusted, as needed, based on in-depth analysis of resource monitoring data.
- Fertility control would be applied to mares released back to the range following future gathers.

Table 4.1
No Action Alternative (Continue Existing Management) in HMAP Format

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
A. **Control Population Numbers** Manage the wild horse population within the established AML range to protect the range from the deterioration associated with overpopulation.	Aerially estimate populations a minimum of once every 3-4 years. Determine population number and average annual herd growth rate.	Schedule gathers to remove excess wild horses when (1) the population reaches or exceeds the AML upper limit (about every 3 years), or (2) when forage utilization exceeds 50 percent of current year's growth in ½-2/3 of the key areas; or (3) when animal health/condition is at risk.
B. **Assure Land Health** Limit utilization by all herbivores to 50 percent of the current year's above ground primary production for key grasses and 45 percent for key shrubs and forbs.	• Locate key monitoring areas within the HMA. • Establish baseline trend studies using the frequency sampling procedures outlined in the (cite applicable BLM Technical Reference or Handbook). • Measure utilization at key areas and complete use pattern mapping annually.	Re-adjust AML or identify management actions to address resolve land health issues, as needed/appropriate, based on results of land health monitoring.

Based on the analysis of potential environmental consequences, the authorized officer will determine whether to prepare an EIS or issue a Decision Record and FONSI.

HMAP
As a final step and to facilitate on-the-ground implementation, the selected management strategy (selected alternative), together with the habitat and population management, monitoring and implementation objectives are documented in HMAP format. The HMAP is included as an attachment to the authorized officer's final decision.

HMAP Format

1. Introduction. Briefly summarize the relevant background information.

2. Selected Management Alternative. Briefly summarize the selected management strategy/alternative as outlined in the EA, together with the site-specific habitat and population management objectives and management actions.

3. Monitoring and Evaluation Plan.

4. Project Tracking and Implementation Schedule.

The Monitoring Plan and Tracking Log/Project Implementation Schedule may also be prepared in a tabular format. See the examples which follow.

Table 4.2
Example -- Monitoring Plan

Item	How	Who	When	Actions to Take (Adaptive Management)
Population Management Monitoring				
Manage wild horse populations within the established AML range.	Aerial survey flights following established protocols. Simultaneous double count method or other approved protocol pending population estimation research results & recommendation.	FO WH&B Specialist	Aerial population estimates a minimum of every 3 years, i.e., 2010, 2013, etc.	Schedule gathers to remove excess wild horses when (1) the population reaches or exceeds the AML upper limit (about every 3 years), or (2) when forage utilization exceeds 50 percent of current year's growth in ½-2/3 of the key areas; or (3) when animal health/condition is at risk.
Habitat Management Monitoring				
Limit utilization by all herbivores to 50 percent of the current year's above ground primary production for key grasses and 45 percent for key shrubs and forbs.	Measure utilization at key areas and complete use pattern mapping annually.	FO WH&B Specialist	Annually (October)	Re-adjust AML or identify management actions to address resolve rangeland health issues, as needed/appropriate, based on results of rangeland health monitoring.

Table 4.3
Example – Tracking Log/Project Implementation Schedule

Description	Who	Where	When	Completed	Remarks
Population Management Actions					
Schedule gathers to remove excess wild horses when the population reaches/exceeds AML, utilization exceeds allowable limits, or animal health/condition is at risk.	BLM	(Name) HMA	About every 3 years (2010, 2013, etc)		
Habitat Management Actions					
Reconstruct Cactus Spring water development.	Friends of Spring Snails	T. 44 N., R 12 W, SE,SE Section 2	2009	2010	RIP No. XXXXXX

From:	Mary Jo Rugwell
To:	connie@cebrooks.com
Cc:	jruhs@blm.gov
Subject:	Fwd: Request for approval to release wild horse manuals 1988 and 1995
Date:	Thursday, October 12, 2017 11:39:10 AM
Attachments:	ATT00001.htm 4700_WildFreeRoamingHorseAndBurroManagement_19881123_Obsolete.pdf

---

Connie -

I understand from John Ruhs that you needed a copy of the obsolete 1988 version of the 4700 manual. It is attached at the bottom of this message string (I obtained it from our National Operations Center (NOC) library this morning).

You may also receive a copy directly from the NOC library. I hope that you are well.

Mary Jo Rugwell
State Director
Bureau of Land Management
Wyoming State Office
5353 Yellowstone Road
Cheyenne, WY 82009
Office: (307) 775-6001
Cell: (307) 214-9434
Fax: (307) 775-6003

Sent from my iPad

Begin forwarded message:

> **From:** "Cantor, Howard" <hcantor@blm.gov>
> **Date:** October 12, 2017 at 9:13:31 AM MDT
> **To:** Mary Jo Rugwell <mrugwell@blm.gov>
> **Cc:** Bob Casias <rcasias@blm.gov>, John Ruhs <jruhs@blm.gov>
> **Subject: Re: Request for approval to release wild horse manuals 1988 and 1995**
>
> Mary Jo,
>
> After I got off the phone with you just now, I saw an email from one of our librarians back to Dean, transmitting the obsolete 1988 version of Manual 4700. I'm attaching it here for your reference and use.
>
> Thanks,
> Howard
>
> Howard Cantor

Director, National Operations Center
Bureau of Land Management
6th Ave and Kipling St
Building 50
Denver, CO 80225
(303) 236-8857

Leadership is based on inspiration, not domination; on cooperation, not intimidation.
William Arthur Wood

On Wed, Oct 11, 2017 at 5:16 PM, Mary Jo Rugwell <mrugwell@blm.gov> wrote:

> Howard/Bob -
>
> I am forwarding an email that John sent me. Can you please assign someone on your staff to send copies of the manuals in the subject line from the library to Ms. Connie Brooks (her address is in the email string below). If you could confirm when this is done, I would really appreciate it!
>
> Mary Jo Rugwell
> State Director
> Bureau of Land Management
> Wyoming State Office
> 5353 Yellowstone Road
> Cheyenne, WY 82009
> Office: (307) 775-6001
> Cell: (307) 214-9434
> Fax: (307) 775-6003
>
> Sent from my iPad
>
> Begin forwarded message:
>
> **From:** "Ruhs, John" <jruhs@blm.gov>
> **Date:** October 11, 2017 at 3:51:01 PM MDT
> **To:** Mary Jo Rugwell <mrugwell@blm.gov>
> **Subject: Fwd: Request for approval to release wild horse manuals 1988 and 1995**
>
> fyi
>
> John F. Ruhs
> Deputy Director, Acting
> Bureau of Land Management
> O - 202-208-3801
> C - 307-214-5271
>
> ---------- Forwarded message ----------

From: **Connie Brooks** <connie@cebrooks.com>
Date: Wed, Oct 11, 2017 at 5:44 PM
Subject: Request for approval to release wild horse manuals 1988 and 1995
To: "jruhs@blm.gov" <jruhs@blm.gov>
Cc: "John Hay III (john.hay.III@rsnb.com)" <john.hay.III@rsnb.com>, rsga <rsga@wyoming.com>

Constance E. Brooks

C.E. Brooks & Associates, P.C.

5445 DTC Parkway, Suite 940

Greenwood Village, CO 80111

(303) 297-9100 FAX: (303) 297-9101

Dear Mr. Ruhs,

You may remember me from our meeting in August 2012. In any event, we are working on behalf of Rock Springs Grazing Association in regards to a wild horse gather challenge. John Hay suggested that I call you because the Colorado BLM Library has a copy of the 1988 Manual 4700 but apparently cannot release it without approval from the Washington Office.

Don Schramm has excerpts from the 1995 Manual.

Would you please ask that the Washington Office clear the Colorado BLM Library to release these old manuals for our records. They will be very helpful in sustaining this gather.

Very truly yours,

Connie Brooks

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

Table of Contents

.01 Purpose
.02 Objectives
.03 Authority
.04 Responsibility
.05 References
.06 Policy

.1 Wild Horse and Burro Information System
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  .12 The Herd Area Data Base
  .13 The Applicant Data Base
  .14 The Events Data Base

Glossary of Terms

4710 - MANAGEMENT CONSIDERATIONS
4720 - REMOVAL
4730 - DESTRUCTION OF WILD HORSES AND BURROS AND DISPOSAL OF REMAINS
4740 - MOTOR VEHICLES AND AIRCRAFT
4750 - PRIVATE MAINTENANCE
4760 - COMPLIANCE

H-4710-1 - Census (Reserved)
H-4720-1 - Capture (Reserved)
H-4750-1 - Preparation of Animals for Adoption (Reserved)
H-4750-2 - Adoption (Reserved)

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

.01 Purpose. This manual describes the authorities, objectives, and policies that guide the protection, management, control, and disposition of wild free-roaming horses and burros.

.02 Objectives. The objectives of the Bureau are:

A. To protect wild free-roaming horses and burros from unauthorized capture, branding, harassment, and destruction.

B. To manage herds of wild horses and burros as an integral part of the public lands ecosystem under the principle of multiple use.

C. To manage wild horse and burro habitat to achieve and maintain a thriving natural ecological balance.

D. To ensure humane and efficient disposition of excess wild horses and burros.

.03 Authority.

A. The Act of September 8, 1959 (18 U.S.C. 47), commonly known as the Wild Horse Annie Act.

B. The Act of December 15, 1971 (16 U.S.C. 1331-1340), as amended by the Federal Land Policy and Management Act of 1976 and the Public Rangelands Improvement Act of 1978, commonly known as the Wild Free-Roaming Horse and Burro Act.

C. The Federal Land Policy and Management Act of 1976 (43 U.S.C. 1711, 1712, and 1734).

D. The Act of June 28, 1934, as amended (43 U.S.C. 315), commonly known as the Taylor Grazing Act.

E. The National Environmental Policy Act of 1969 (42 U.S.C. 4321, 4331-4335, and 4341-4347).

.04 Responsibility.

A. The Director exercises the wild horse and burro program authority of the Secretary of the Interior. In doing so, the Director is responsible for formulating wild horse and burro program policy and providing liaison at the national level with other Federal agencies and interest groups.

B. The Deputy Director (Associate) exercises the Director's responsibilities in the Director's absence or at the Director's request.

C. The Assistant Director for Land and Renewable Resources develops and implements policy for the wild horse and burro program.

D. The Chief, Division of Wild Horses and Burros, oversees the wild horse and burro program by developing policies, guidance, procedures, and regulations, and long range and current budget estimates, and by organizing periodic workshops for Bureauwide coordination of the program.

E. The Service Center Director is responsible for providing technical support to the Headquarters Office and Field Offices by:

1. Responding to Field Office requests for training and technical assistance.

2. Developing, testing, evaluating, supervising, and maintaining the Wild Horse and Burro Information System.

3. Making recommendations to the Headquarters Office on procedures for the collection, storage and retrieval, analysis and interpretation, and application of wild horse and burro program data.

4. Making recommendations to the Headquarters Office on techniques for management, handling, and care of free-roaming and captured wild horses and burros.

F. The State Directors are responsible for achieving the Bureau's wild horse and burro program objectives within their respective States by:

1. Implementing Bureauwide wild horse and burro program policies, setting State wild horse and burro program priorities, and preparing supplemental program directives for statewide application.

2. Providing liaison with other Federal agencies, State agencies, user groups and interest groups, and other BLM State Offices, as needed, to ensure a coordinated wild horse and burro program.

3. Approving resource management plans, plan amendments, and associated environmental documents through which decisions are made concerning wild horse and burro management.

4. Evaluating statewide wild horse and burro program effectiveness through periodic analyses of related decisions and products (e.g., resource management plans, herd management area plans, data management).

5. Providing, or making available, training, workshops, and technical support to ensure that wild horse and burro program personnel are professionally equipped to implement program activities in accordance with established policies and guidelines.

6. Providing information requested by the Headquarters Office for developing policy and preparing reports and correspondence for a variety of audiences, including Congress, the courts, other agencies, and the public.

G. District Managers are responsible for achieving wild horse and burro program objectives within their respective District boundaries by:

1. Implementing Bureau and State wild horse and burro program policies, setting District wild horse and burro priorities, and preparing supplemental program directives, guidelines, and necessary environmental analysis documents for Districtwide application, including Herd Management Area Plans for all herd management areas in their Districts.

2. Cooperating with other Federal agencies and with State and local agencies and interest groups to ensure a coordinated wild horse and burro program.

3. Directing preparation of resource management plans and plan amendments through which decisions are made concerning wild horse and burro management.

4. Evaluating Districtwide wild horse and burro program effectiveness by periodically reviewing and evaluating wild horse and burro program accomplishments for compliance with Bureau, State, and District policies.

5. Maintaining sufficient professional expertise, within budgetary limits, in the District and Resource Area organizations to ensure that wild horse and burro program activities are carried out in accordance with established policies and guidelines.

6. Maintaining accurate records on wild horse and burro program activities and providing information requested by the State Office for statewide reports and for responding to Headquarters Office information requests.

.05 References.

A. Code of Federal Regulations Chapter 9 Part 71.3.

B. Code of Federal Regulations Chapter 43 Part 4700.

C. Code of Federal Regulations Chapter 43 Part 4.4.

D. BLM Manual Section 1203 - Delegation of Authority.

E. BLM Manual Sections 1601 - 1632 - Bureau Planning Manual.

F. BLM Manual Section 1734 - Inventory and Monitoring Coordination.

G. BLM Manual Section 1740 - Renewable Resource Improvements and Treatments.

H. BLM Manual Section 1790 - National Environmental Policy Act.

I. BLM Manual Section 9400 - Aviation Management.

J. BLM Handbook 1740-1 - Renewable Resource Improvement and Treatment Guidelines and Procedures.

K. BLM Handbook 1741-1 - Fencing.

L. BLM Handbook 1790-1 - National Environmental Policy Act Handbook.

M. BLM Wild Horse & Burro Information System Users Guide 4700 Series.

.06 Policy. It is the policy of the Bureau of Land Management, in accordance with the Wild Free-Roaming Horse and Burro Act (Public Law 92-195, as amended) and other laws governing the administration of public lands, to:

A. Protect, manage, and control wild horses and burros on public lands as an integral part of the public lands ecosystem. Appropriate management levels shall be determined for wild horses and burros through the resource management planning process. Wild horses and burros shall be considered comparably with other resource values on each herd area in the formulation of resource management plans and managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat. Current inventories of herd management areas shall be maintained. Management of wild horses and burros shall be constrained as necessary to ensure the protection of the habitat of candidate, threatened, or endangered species. Management actions shall be at the minimum feasible level that allows attainment of herd and habitat objectives and protects the range from deterioration associated with overpopulation. Wild horse and burro ranges shall be designated when it is determined to be in the public interest to manage herd management areas principally, but not necessarily exclusively, for wild horses and burros.

B. Remove excess wild horses and burros from public lands to preserve and maintain a thriving ecological balance and multiple-use relationship. Priority shall be given to removing wild horses and burros from private land when the landowner submits a written request to BLM for their removal.

C. Destroy humanely old, sick, or lame wild horses and burros, using methods judged acceptable for euthanasia of large animals by the American Veterinary Medical Association Panel on Euthanasia. Healthy excess wild horses that are not adopted shall be humanely maintained by the BLM or its agents, preferably on sanctuaries on private land, until such time that the BLM is ordered by an appropriate authority to implement the provision in the Wild Free-Roaming Horse and Burro Act for destruction of unadopted excess wild horses and burros in the most humane and cost-efficient manner possible.

D. Ensure that aircraft and motor vehicles used to administer the Act meet appropriate safety standards and are operated in a safe and humane manner and that a public hearing is held prior to the use of helicopters to capture wild horses and burros and motor vehicles to transport captured animals.

E. Place healthy excess wild horses and burros in private maintenance with qualified individuals who pay a fee established by regulation. The Director may reduce the adoption fee for excess wild horses or burros not adopted at the standard fee when the Director determines it is in the public interest to do so. The BLM shall convey title to eligible adopters at the end of 1 year of humane private maintenance.

F. Carry out compliance activities necessary to ensure humane treatment of adopted wild horses and burros.

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

.1 Wild Horse and Burro Information System. A comprehensive computerized wild horse and burro information system is a major component of the official records for the wild horse and burro program. When completed, the wild horse and burro information system will be comprised of four data bases. These data bases are designed to function as the primary record for use by program personnel in operation of the wild horse and burro program. In addition to these four data bases, additional data needed to manage the wild horse and burro program will be included in the BLM's Land Information System. Full utility of the wild horse and burro information system is dependent on timely and accurate entry of data into the data bases. Mandatory timeframes for data entry and other instructions for use of the data are contained in the BLM Wild Horse & Burro Information System Users Guide 4700 Series.

.11 The Disposal Data Base contains information about the disposition of every animal adopted since the start of the program. The data base was expanded on October 1, 1986, and contains considerably more information about animals gathered after that date. As presently structured, the Disposal data base includes data about each animal from the time it is captured until the time it is released back to the range or loses its status under the Wild Free-Roaming Horse and Burro Act through death or titling.

12. The Herd Area Data Base contains information about the wild horse and burro herds on public lands administered by the Bureau of Land Management and Forest Service territories containing BLM-administered public lands. This data base is not yet functional but will contain census information about each herd, land status, and information about planning decisions related to wild horses and burros.

13. The Applicant Data Base, when completed, will contain the names and addresses of individuals that have applied and been approved to adopt wild horses and burros and the types of animals requested.

14. The Events Data Base, when completed, will contain information about wild horse and burro activities such as meetings, roundups, adoption events, and other events open to the public, conducted by or involving BLM.

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

Glossary of Terms

-A-

adoption: see private maintenance.

appropriate management level: the median number of adult wild horses or burros determined through BLM's planning process to be consistent with the objective of achieving and maintaining a thriving natural ecological balance and multiple-use relationship in a particular herd area.

authorized officer: any employee of the Bureau of Land Management to whom has been delegated the authority to perform the duties described in this Manual. (See BLM Manual Section 1203 for an explanation of delegation of authority.)

-B-

band: a group of wild horses or burros running together or a lone wild horse or burro.

-C-

commercial exploitation: using a wild horse or burro because of its characteristics of wildness for direct or indirect financial gain. "Characteristics of wildness" include the rebellious and feisty nature of such animals and their defiance of man as exhibited in their undomesticated and untamed state.

-E-

euthanasia: the act of inducing painless death.

excess wild horses or burros: wild free-roaming horses or burros which have been removed from public lands or which must be removed in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in an area.

4700 - WILD FREE-ROAMING HORSE AND BURRO MANAGEMENT

-F-

freeze mark: identification symbol placed on the left side of the neck of a wild horse or burro by a technique utilizing marking rods chilled in liquid nitrogen to place a code made up of straight lines and angles (Angle System) representing the numerals "0" through "9"; each healthy wild horse or burro removed from the public lands is freeze marked to record an eight-digit identification number, with the first two digits representing the birth year.

-H-

herd: one or more bands using the same general area.

herd area: the geographic area identified as having provided habitat for a herd in 1971.

herd management area: a herd area identified in a management framework or resource management plan for the long-term management of a wild horse or burro herd.

herd management area plan: an action plan that prescribes measures for the protection, management, and control of wild horses and burros and their habitat on one or more herd management areas, in conformance with decisions made in approved management framework or resource management plans.

humane treatment: handling compatible with animal husbandry practices accepted in the veterinary community, without causing unnecessary stress or suffering to a wild horse or burro.

-I-

inhumane treatment: any intentional or negligent action or failure to act that causes injury or undue stress or suffering to a wild horse or burro and which is not compatible with animal husbandry practices accepted in the veterinary community.

-L-

lame wild horse or burro: a wild horse or burro with one or more malfunctioning limbs that permanently impair its freedom of movement.

-M-

minimum feasible level of management: the least amount of habitat improvement and population manipulation necessary to meet stated objectives for a herd management area.

-O-

old wild horse or burro: a wild horse or burro characterized because of age by (1) its physical deterioration and inability to fend for itself, (2) suffering, or (3) closeness to death.

-P-

private maintenance: the provision of proper care and humane treatment to excess wild horses and burros by qualified individuals under the terms and conditions specified in a Private Maintenance and Care Agreement.

public lands: lands or interests in lands administered by the Secretary of the Interior through the Bureau of Land Management.

-S-

sanctuary: a facility where unadopted excess wild horses or burros are maintained for BLM on private land in pastures that allow the animals to exist in an environment similar to their former free-roaming state.

sick wild horse or burro: a wild horse or burro with failing health, infirmity, or disease from which there is little chance of recovery.

signalment key: a code used to supplement the freeze mark for identifying an animal by providing a detailed physical description of the animal, including species, sex, distinctive markings, and color.

-W-

wild horses and burros: unbranded and unclaimed horses and burros that use public lands as all or part of their habitat, or that have been removed from these lands by the Authorized Officer but have not lost their status under section 3 of the Act.

From: Anderson, Kemba
To: Patrick Donnelly
Cc: m1peters@blm.gov; jsilvey@blm.gov; Taylor McKinnon; Michael Saul; Brian Amme
Subject: Re: Elko DO oil and gas EA comment deadline extension request
Date: Thursday, October 19, 2017 1:38:03 PM

Mr. Donnelly,

Thank you for your comment and bring this concern to my attention. BLM Leasing Reform Policy allows for at least 30 day comment period on the Leasing EA for the upcoming lease sale. The Elko District Office is in the process of correcting the posting on the eplanning website. If you have any more concerns, feel free to contact me.

On Thu, Oct 19, 2017 at 10:25 AM, Patrick Donnelly <PDonnelly@biologicaldiversity.org> wrote:

> Ms. Anderson,
>
> As discussed today with you on the phone and with Ms. Peterson in person in Elko, I'm writing to request an extension on the Elko District Office March 2018 Oil and Gas Lease Auction Environmental Assessment comment period. Most of Nevada BLM's oil and gas EA comment periods are 30 days. Given the scale and complexity of the proposed action and the sensitivity of the resources involved, we feel that 30 days is the minimum amount which allows sufficient time for public involvement in order to ensure adequate compliance with the public involvement requirements of NEPA. Especially given the high volume and rapid turnover of BLM Nevada's oil and gas sales across the state, 15 days is not nearly enough time for the public to have input on this EA, which encompasses nearly 70,000 acres of public lands and has the potential to entail significant impacts to resources.
>
> Thus we are requesting a 30 day comment period.
>
> Thank you for your consideration of this matter,
>
> -Patrick Donnelly
>
> Patrick Donnelly
>
> Nevada State Director
>
> Center for Biological Diversity
>
> pdonnelly@biologicaldiversity.org <mailto:pdonnelly@biologicaldiversity.org>
>
> 702.483.0449
>
> @bitterwaterblue

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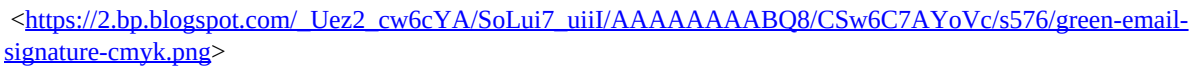

Kemba K. Anderson-Artis, MBA
Branch Chief Fluid Minerals
Nevada State Office
1340 Financial Blvd.
Reno, NV 89502
775-861-6566 phone
775-335-9015 cell
775-861-6711 Fax
kembaand@blm.gov

From:	Nada Culver
To:	NMleasesalecomments@blm.gov
Cc:	Paul Reed (preed@archaeologysouthwest.org) (preed@archaeologysouthwest.org); Judy Calman
Subject:	updated - comments on Farmington March 2018 lease sale
Date:	Friday, October 20, 2017 10:51:03 AM
Attachments:	2017-12 Calling for Moratorium on permitting and leasing greater Chaco Region.pdf Resolution No. APCG 2016-17.pdf APCG Resolution 2015-17_with changes.pdf APCG Chaco Resolution, 2014-04.pdf Recent Efforts.pdf The Great North Road A Cosmographic.pdf Chaco Roads.pdf Flats #1 Natural Gas Well.pdf Pierre"s Viewscape & Soundscape Report - Van Dyke.pdf Chaco Landscapes Van Dyke Lekson Heitman FINAL Feb 25 2016.pdf NM Mar. 2018 Draft EA comments -- Arch. Southwest, TWS, NMWA - 10-20-17.docx

---

Dear Mr. Klein – Apologies for re-sending, but please use this version of the comments, submitted on behalf of Archaeology Southwest, The Wilderness Society and the New Mexico Wilderness Alliance. Thank you for your attention to our comments.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org <mailto:Nada_Culver@tws.org>

From: Paul Reed [mailto:preed@archaeologysouthwest.org]
Sent: Friday, October 20, 2017 8:32 AM
To: NMleasesalecomments@blm.gov
Cc: Nada Culver <nada_culver@tws.org>
Subject: Fwd: draft Farmington comments

Dear Mr. Klein,

Attached please find comments by The Wilderness Society and Archaeology Southwest on the Draft EA for New Mexico BLM's March 2018 Oil & Gas Lease Sale

for the Farmington Field Office.

We ask that you download and include all the attachments with our comments.

We thank you for your consideration of these comments.

Sincerely,

Paul Reed

ALL PUEBLO COUNCIL OF GOVERNORS

Officers:
E. Paul Torres, Chairman
Governor Val Panteah, Sr., Vice Chair
Governor J. Michael Chavarria, Secretary

RESOLUTION

ALL PUEBLO COUNCIL OF GOVERNORS

Acoma
Cochiti
Isleta
Jemez
Laguna
Nambe
Ohkay Owingeh
Picuris
Pojoaque
Sandia
San Felipe
San Ildefonso
Santa Ana
Santa Clara
Santo Domingo
Taos
Tesuque
Ysleta Del Sur
Zia
Zuni

RESOLUTION NO. APCG 2017-12
CALLING FOR A MORATORIUM ON ALL PERMITTING AND LEASING FOR OIL AND GAS DEVELOPMENT IN AREAS THAT WOULD IMPACT TRADITIONAL CULTURAL PROPERTIES AND SACRED SITES IN GREATER CHACO REGION

WHEREAS, the All Pueblo Council of Governors is comprised of the Pueblos of Acoma, Cochiti, Isleta, Jemez, Laguna, Nambe, Ohkay Owingeh, Picuris, Pojoaque, San Felipe, San Ildefonso, Sandia, Santa Ana, Santa Clara, Santo Domingo, Taos, Tesuque, Zia and Zuni, and one pueblo in Texas, Ysleta Del Sur, each having the sovereign authority to govern their own affairs; and

WHEREAS, the purpose of the All Pueblo Council of Governors is to advocate, foster, protect, and encourage the social, cultural and traditional well-being of the Pueblo Nations; and

WHEREAS, through their inherent and sovereign rights, the All Pueblo Council of Governors will promote the language, health, economic and natural resources, and educational advancement of all Pueblo people; and

WHEREAS, each APCG member is an indigenous nation within the United States with its own cultural territory and sovereign right to protect its traditional cultural properties and sacred sites, whether or not they are located within each Pueblo's current exterior boundaries; and

WHEREAS, the protection of each Pueblo's traditional cultural properties and sacred sites is necessary to each Pueblo's cultural preservation now and into the future; and

WHEREAS, preserving the traditional cultural properties and sacred sites that exist in Chaco Canyon and in the Greater Chaco Region, including, but not limited to, the Great North Road, the West Road, and Pierre's Site, along with protection of the night skies, soundscapes, view shed and sight-lines within and surrounding Chaco Canyon is essential to the cultures and traditions of APCG members; and

WHEREAS, this resolution is a companion resolution to APCG Resolutions No. 2014-04 and No. 2015-17 that call for the protection of Chaco Canyon and all traditional cultural properties and sacred sites affiliated with Chaco Canyon and request meaningful government-to-government consultations with federal agencies over actions or management plans that may affect the Greater Chaco Canyon region; and

WHEREAS, in 1907, President Theodore Roosevelt created the 36,000-acre Chaco Culture National Historical Park to protect significant ancient ruins for future generations but thousands of traditional cultural properties and sacred sites are located throughout the Greater Chaco Canyon region and are unprotected; and

WHEREAS, the Greater Chaco Canyon region was historically a center of Puebloan culture and economic life where Pueblo people built great houses, astronomical observation sites, and ceremonial kivas, and these areas continue to be places of prayer, pilgrimage and living connections to our ancestors; and

WHEREAS, the Chaco Culture National Historical Park and other sites in the Greater Chaco Canyon region, administered by the federal Bureau of Land Management Farmington Field Office (BLM) and the Bureau of Indian Affairs, Navajo Region (BIA), have been designated a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO) due to the world-wide cultural and physical significance of these sites to humanity; and

WHEREAS, it is the responsibility of a federal agency to make the determination of whether a traditional cultural property exists prior to taking federal action, and it is likely that the Greater Chaco Region contains, in addition to other cultural properties, at least one, if not more, Cultural Landscapes that could qualify as traditional cultural property; and

WHEREAS, the BLM and BIA have not initiated any ethnographic work with the Pueblos to determine whether one, if not more, cultural landscapes exist in the Greater Chaco Region that may qualify as a traditional cultural property, but are proposing leasing of lands, and considering the issuance of permits for development at this time; and

WHEREAS, oil and gas drilling and related infrastructure, including roads and pipelines, in the Greater Chaco Region negatively impact and harm Pueblo traditional cultural properties and sacred sites and degrade and impair the cultural landscape(s) that include these traditional cultural properties and sacred sites; and

WHEREAS, the BLM has leased over 91% of public lands in northwest New Mexico, including in the Greater Chaco Canyon Region, for oil and gas development with over 40,000 wells; and

WHEREAS, much of the remaining 9% of unleased lands in northwest New Mexico administered by the BLM or the BIA is in the Greater Chaco Canyon region; and

WHEREAS, the oil and gas industry has developed new extraction technologies by combining horizontal drilling with industrialized hydraulic fracturing ("fracking"), creating increased industry interest in the Mancos shale in the Greater Chaco Canyon region; and

WHEREAS, the BLM and the BIA acknowledge that the agencies have not analyzed the impacts of fracking in the Greater Chaco Canyon region and yet have approved over 400 fracking wells since 2013, which have already harmed the cultural landscape(s) in the region and threatens other traditional cultural properties and sacred sites within cultural landscape(s); and

WHEREAS, the BLM and the BIA are working jointly to amend the BLM's 2003 Resource Management Plan to include consideration of the impacts of fracking in the Greater Chaco Canyon region and further agreed to halt all leases within a 10-mile radius of Chaco Canyon until it finished amending its Resource Management Plan, which it expects to issue in late 2018, and until completion of tribal consultations and community outreach; and

WHEREAS, in January 2017, over the opposition of the Pueblos, the BLM Farmington field office issued leases on 843 acres of public lands for fracking activities within 19 miles of Chaco Culture National Historical Park; and

WHEREAS, the New Mexico House of Representatives passed House Memorial 70 in March 2017 in the 53rd Legislature, First Session, reaffirming New Mexico's commitment to protecting and preserving tribal, cultural and historical sites and resources in the Greater Chaco Canyon landscape and "requesting that the BLM and BIA desist from any leasing or issuance of permits without prior tribal consultation in the greater Chaco landscape" throughout the process for completion of amendments to the BLM's resource management plan in accordance with federal law; and

WHEREAS, despite its previous agreement not to do so, and without completion of any ethnographic study to determine the existence of one, if not more, traditional cultural landscapes within the Greater Chaco Region, the BLM and BIA have been issuing permits and recently began a process to lease areas adjacent to the 10-mile radius of Chaco Culture National Historic Park, and in close proximity to known sites of importance on the Great North Road; and

WHEREAS, the continuation of permitting and leasing of lands by BLM and BIA for fracking activities in increasingly closer and closer proximity to Chaco Culture National Historic Park and other known sites of cultural significance threatens irreparable and irreversible harm to Chaco Canyon and traditional cultural properties and sacred sites, including existing traditional cultural landscape(s) in the Greater Chaco Region.

NOW, THEREFORE, BE IT RESOLVED that the All Pueblo Council of Governors calls upon the BLM and the BIA to immediately institute a moratorium on all oil and gas related permitting and leasing in the Greater Chaco Canyon region to protect traditional cultural properties and sacred sites in the region until the BLM and BIA initiate and complete an ethnographic study of cultural landscape(s) within the Greater Chaco Region, and the Farmington Field Office Resource Management Plan Amendment and Environmental Impact Statement (RMPA/EIS) for the Mancos-Gallup Formations 2003 Regional Management Plan.

CERTIFICATION

We, the undersigned officials of the All Pueblo Council of Governors hereby certify that the foregoing Resolution No. APCG 2017-12 was considered and adopted at a duly called council meeting held on the 21st day of September 2017, and at which time a quorum was present and the same was approved by a vote of 12 in favor, 0 against, 0 abstain, and 8 absent.

ALL PUEBLO COUNCIL OF GOVERNORS

By: _____
APCG Chairman E. Paul Torres

ATTEST:

_____
Governor Val Panteah, Sr., APCG Vice Chairman

All Pueblo Council of Governors

Officers
Governor *E. Paul Torres, Chairman*
Governor *Val Panteah Sr, Vice Chairman*
Governor *J. Michael Chavarria, Secretary*

2401 12th Street NW Suite 200 N Albuquerque NM 87104

Acoma
Cochiti
Isleta
Jemez
Laguna
Nambe
Ohkay Owingeh
Picuris
Pojoaque
Sandia
San Felipe
San Ildefonso
Santa Ana
Santa Clara
Santo Domingo
Taos
Tesuque
Ysleta Del Sur
Zia
Zuni

RESOLUTION

ALL PUEBLO COUNCIL OF GOVERNORS

RESOLUTION NO. APCG 2016-17

SUPPORT FOR THE PROTECTION AND PRESEVATION OF CHACO CANYON NATIONAL HISTORIC PARK FROM ENERGY DEVELOPMENT

WHEREAS, the All Pueblo Council of Governors ("APCG") is comprised of the Pueblos of Acoma, Cochiti, Isleta, Jemez, Laguna, Nambe, Ohkay Owingeh, Picuris, Pojoaque, San Felipe, San Ildefonso, Sandia, Santa Ana, Santa Clara, Santo Domingo, Taos, Tesuque, Zia and Zuni, and one pueblo in Texas, Ysleta del Sur, each having the sovereign authority to govern their own affairs;

WHEREAS, the purpose of the All Pueblo Council of Governors is to advocate, foster, protect, and encourage the social, cultural & traditional well-being of the Pueblo Nations; and

WHEREAS, through their inherent & sovereign rights, the All Pueblo Council of Governors will promote the language, health, economic, and educational advancement of all Pueblo people; and

WHEREAS, the 20 Pueblos possess government authority and sovereignty over our lands and which include the protection of our language, culture, and tradition; and

WHEREAS, the APCG recognizes the outstanding cultural and historical resources in the Chaco Canyon National Historic Park as direct descendants of the Chacoan cultures, each and every Pueblo maintains a strong cultural affinity to Chaco Canyon sites as primary ancestral homelands since time immemorial; and

WHEREAS, the All Pueblo Council of Governors Council desires to preserve all valuable tribal and cultural resources that originated on these lands not only for human but also the four-legged, finned and winged beings, and

WHEREAS, the All Pueblo Council of Governors believes these cultural and historical resources have special importance to all Native Americans in New Mexico; and

WHEREAS, the All Pueblo Council of Governors appreciates the Government to Government Relationship that was founded upon a unique Trust Responsibility from the Federal Government to Indian Country; and

WHEREAS, the All Pueblo Council of Governors understand that the Government to Government relationship is based upon strong and on-going communication that requires constant and consistent communication and a physical "sign-off" to assure that silence cannot be taken as consent as part of defensible communication; and

WHEREAS, the All Pueblo Council of Governors appreciates the opportunity to comment on the Bureau of Land Management Resource Management Plan; and

WHEREAS, the All Pueblo Council of Governors believes the fact that access to reliable and affordable energy resources as part of building strong stable Tribal communities is essential to keep up with the more than four percent population growth of our Native Nations; and

WHEREAS, the All Pueblo Council of Governors require energy, proclaim that the development of that energy should not be in our ancestral graveyards, scared sites or water resources, and

WHEREAS, the All Pueblo Council of Governors understand that with the advent of newer technologies such as Hydraulic Fracturing inside the Mancos Shale Horizons, water storage and reinjection of "spent water" bring efficiencies to the Oil & Gas sector for energy development, and

WHEREAS, the All Pueblo Council of Governors have considered the "Cost Benefit Analysis" of energy development weighed against the risks to the Cultural Resources, and

WHEREAS, the All Pueblo Council of Governors believes Native Tribes should participate in the management of the Chaco Canyon National Historic Park based on their cultural, historical and modern day connection to the Cultural Resources and surrounding former Tribal lands;

NOW THEREFORE IT BE RESOLVED, that the All Pueblo Council of Governors supports the All Pueblo Council of Governors Council support and approve the following measures to protect the Greater Chaco Landscape:

Continue to support the Master Leasing Plan (MLP) approach, from the July 2015 resolution;

Urge BLM to defer all oil-gas leasing in the remaining 9% of BLM surface-controlled lands in the Farmington Field Office;

If no. 2 is not possible, then BLM and BIA are urged to make permanent the current, temporary 10-mile cultural protection or buffer zone that is in place surrounding Chaco Culture National Historic Park.

Support expansion of protected, no-lease areas around significant Chacoan Outlier communities in the Greater Chaco Landscape, and

BE IT FURTHER RESOLVED, that the All Pueblo Council of Governors request to become Co-Lead Agency and Cooperating Agencies under 40 CFR 1500 to assure on-going participation in future activities, and

BE IT FURTHER RESOLVED, that the All Pueblo Council of Governors advocate the utilization of Tribal and Native professionals to participate as leaders in the preservation, management and monitoring of cultural, air and water resources at the expense of the energy industry, and

BE IT FURTHER RESOLVED, that the All Pueblo Council of Governors welcomes the permanent protection of these historical and cultural resources to be preserved now and for all future generations; and

BE IT FINALLY RESOLVED, that a copy of this resolution shall be forwarded to the President of the United States Barack Obama, the United States Secretary of the Interior Sally Jewell, the Governor of New Mexico Susana Martinez, and the entire New Mexico Congressional Delegation to show support for the protection and preservation of the Chaco Canyon National Historic Park Complex.

CERTIFICATION

We, the undersigned officials of the All Pueblo Council of Governors hereby certify that the foregoing Resolution No. APCG 2016-17 was considered and adopted at a duly called council meeting held on the 17th day of November 2016, and at which time a quorum was present and the same was approved by a vote of 11 in favor, against, 0 abstain, and 9 absent.

ALL PUEBLO COUNCIL OF GOVERNORS

By: E. Paul Torres
Governor E. Paul Torres, APCG Chairman

ATTEST:

J. Michael Chavarria
Governor J. Michael Chavarria, APCG Secretary

All Pueblo Council of Governors

2401 12th Street NW Suite 200 N Albuquerque NM 87104

Officers
Governor *E. Paul Torres, Chairman*
Governor *Val Panteah Sr, Vice Chairman*
Governor *Terry Aguilar, Secretary*

Acoma

Cochiti

Isleta

Jemez

Laguna

Nambe

Ohkay Owingeh

Picuris

Pojoaque

Sandia

San Felipe

San Ildefonso

Santa Ana

Santa Clara

Santo Domingo

Taos

Tesuque

Ysleta Del Sur

Zia

Zuni

RESOLUTION

ALL PUEBLO COUNCIL OF GOVERNORS

RESOLUTION NO. APCG 2015-17

COMPANION RESOLUTION FOR THE PROTECTION OF CHACO CANYON AND ALL TRADITIONAL CULTURAL PROPERTIES AND SACRED SITES AFFILIATED WITH CHACO CANYON

WHEREAS, the All Pueblo Council of Governors ("APCG") is comprised of the Pueblos of Acoma, Cochiti, Isleta, Jemez, Laguna, Nambe, Ohkay Owingeh, Picuris, Pojoaque, San Felipe, San Ildefonso, Sandia, Santa Ana, Santa Clara, Santo Domingo, Taos, Tesuque, Zia and Zuni, and one pueblo in Texas, Ysleta del Sur, each having the sovereign authority to govern their own affairs;

WHEREAS, the purpose of the All Pueblo Council of Governors is to advocate, foster, protect, and encourage the social, cultural & traditional well-being of the Pueblo Nations; and

WHEREAS, through their inherent & sovereign rights, the All Pueblo Council of Governors will promote the language, health, economic, and educational advancement of all Pueblo people; and

WHEREAS, this resolution is companion to All Pueblo Council of Governors Resolution No. 2014-04, which supports and requests meaningful government-to-government consultation with federal agencies, the Department of the Interior ("DOI"), which includes the Bureau of Land Management ("BLM"), Bureau of Indians Affairs ("BIA"), and National Park Service ("NPS"), over actions or management plans that may affect Chaco Canyon and traditional cultural properties, sacred sites, and night skies in the surrounding landscape; and

WHEREAS, the All Pueblo Council of Governors reiterates its request for meaningful government-to-government consultation, but now believes that the Department of the Interior ("DOI") must take additional steps to ensure that Chaco Canyon, traditional cultural properties and sacred sites in the surrounding landscape are fully protected from the potential impacts of oil and gas development and night skies are protected from flaring; and

WHEREAS, the All Pueblo Council of Governors thanks Senator Tom Udall, Senator Martin Heinrich, and Congressman Lujan for honoring the important cultural connections between our members and Chaco Canyon by working to ensure that federal agencies are coordinating and fulfilling their legal duties to manage and protect Chaco Canyon and the surrounding landscape.

NOW, THEREFORE, BE IT RESOLVED THAT the All Pueblo Council of Governors supports the creation of a protection zone around Chaco Canyon where the Department of the Interior ("DOI") will prioritize the protection of traditional cultural properties and sacred sites, including, but not limited to, the Great North Road, the West road, and Pierre's Site;

BE IT FURTHER RESOLVED THAT the All Pueblo Council of Governors requests that the DOI, BLM, BIA, and NPS, pursuant to their authorities and responsibilities to our members under the National Historic Preservation Act, the Archeological Resources Protection Act, the Native American Graves Protection and Repatriation Act, the Federal Land Policy and Management Act, the National Environmental Policy Act, and Executive Orders 12898 and 13007, formally adopt and cooperate on the management of the aforesaid protection zone, and furthermore that they engage and work closely with the Navajo Nation on these efforts; and

BE IT FINALLY RESOLVED THAT the All Pueblo Council of Governors supports ongoing efforts to secure stronger protections for the landscape surrounding Chaco Canyon, including the proposed "master leasing plan."

CERTIFICATION

We, the undersigned officials of the All Pueblo Council of Governors hereby certify that the foregoing Resolution No. APCG 2015-17 was considered and adopted at a duly called council meeting held on the 19th day of November 2015, and at which time a quorum was present and the same was approved by a vote of 13 in favor, 0 against, 0 abstain, and 7 absent.

ALL PUEBLO COUNCIL OF GOVERNORS

By: _____
Governor E. Paul Torres, APCG Chairman

ATTEST:

_____
Terry Aguilar, APCG Secretary

All Pueblo Council of Governors

2401 12th Street NW Suite 200 N Albuquerque NM 87104

Officers
Governor *E. Paul Torres, Chairman*
Governor *Arlen Quetawki, Vice Chairman*
Governor *Terry Aguilar, Secretary*

Acoma

Cochiti

Isleta

Jemez

Laguna

Nambe

Ohkay Owingeh

Picuris

Pojoaque

Sandia

San Felipe

San Ildefonso

Santa Ana

Santa Clara

Santo Domingo

Taos

Tesuque

Ysleta Del Sur

Zia

Zuni

RESOLUTION

ALL PUEBLO COUNCIL OF GOVERNORS

RESOLUTION NO. APCG 2014-04

SUPPORT FOR THE PROTECTION OF CHACO CANYON AND ALL TRADITIONAL CULTURAL PROPERTIES AND SACRED SITES AFFILIATED WITH CHACO CANYON

WHEREAS, the All Pueblo Council of Governors ("APCG") is comprised of the Pueblos of Acoma, Cochiti, Isleta, Jemez, Laguna, Nambe, Ohkay Owingeh, Picuris, Pojoaque, San Felipe, San Ildefonso, Sandia, Santa Ana, Santa Clara, Santo Domingo, Taos, Tesuque, Zia and Zuni, and one pueblo in Texas, Ysleta del Sur, each having the sovereign authority to govern their own affairs;

WHEREAS, the purpose of the All Pueblo Council of Governors is to advocate, foster, protect, and encourage the social, cultural & traditional well-being of the Pueblo Nations; and

WHEREAS, through their inherent & sovereign rights, the All Pueblo Council of Governors will promote the language, health, economic, and educational advancement of all Pueblo people; and

WHEREAS, each APCG members is an indigenous nation within the United States with its own cultural territory and sovereign right to protect its traditional cultural properties and sacred sites, whether or not they are located within each pueblo's current exterior boundaries;

WHEREAS, the protection of each pueblo's traditional cultural properties and sacred sites is necessary to each pueblo's cultural preservation now and into the future;

WHEREAS, the protection of night skies, soundscapes, view sheds and sight-lines within and surrounding Chaco Canyon is essential to preserving the traditional cultural values and sacred sites that exist in Chaco Canyon and in the landscape surrounding Chaco Canyon;

WHEREAS, the federal Bureau of Land Management and Bureau of Indian Affairs are currently evaluating proposals to issue additional oil and gas leases in the landscape surrounding Chaco Canyon, and are actively developing long-term management plans that will govern oil and gas development and the protection of traditional cultural properties and sacred sites in the landscape surrounding Chaco Canyon for the next fifteen to twenty years; and

WHEREAS, the issuance of oil and gas leases, drilling permits and approvals for oil and gas roads, pipelines and other types of oil and gas infrastructure in the landscape surrounding Chaco Canyon, which includes traditional cultural properties and sacred sites, and the development of long-term management plans for the landscape surrounding Chaco

Canyon threatens irreparable degradation and impairment to that landscape and to the traditional cultural values and sacred sites present within that landscape.

NOW, THEREFORE, BE IT RESOLVED THAT the All Pueblo Council of Governors supports the requirement for meaningful government-to-government consultation for all federal undertakings and management plans affecting each pueblo's traditional cultural properties and sacred sites, as mandated by the National Historic Preservation Act, the Archaeological Resources Protection Act, the Native American Graves Protection and Repatriation Act, the Federal Land Policy and Management Act, the National Environmental Policy Act and Executive Orders 12898 and 13007.

CERTIFICATION

We, the undersigned officials of the All Pueblo Council of Governors hereby certify that the foregoing Resolution No. APCG 2014-04 was considered and adopted at a duly called council meeting held on the 16th day of April 2014, and at which time a quorum was present and the same was approved by a vote of 16 in favor, 0 against, 0 abstain, and 4 absent.

ALL PUEBLO COUNCIL OF GOVERNORS

By: _____
Governor Edward Torres, APCG Chairman

ATTEST:

_____ 4/16/14
Governor Terry Aguilar, APCG Secretary

Recent Efforts to Research, Preserve, and Protect the Greater Chaco Landscape

Archaeology Southwest

Exploring and protecting the places of our past



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Executive Summary

Paul F. Reed
Preservation Archaeologist and Chaco Scholar
Archaeology Southwest

This short publication reports on recent efforts by a number of archaeologists and researchers working across the Greater Chaco Landscape. The group is united by its fundamental interest in understanding the ancient Chacoan world by studying its landscapes and by a very high level of concern over the threat of recent oil-gas development to this fragile landscape. This threat is heightened by several recent executive and secretarial orders from the current administration that aim to prioritize energy development on public lands, which could further fragment and degrade the Greater Chaco Landscape.

Chaco Canyon is a UNESCO World Heritage Site that preserves the history and culture of the Pueblo people. Chaco Canyon is the ancestral home of Pueblo people and it is where many of the cultural traditions that are practiced to this day at Acoma, Zuni, Tesuque, Zia, Hopi, Taos, and other pueblos in New Mexico emerged. Chaco's magnificent great houses – Pueblo Bonito, Chetro Ketl, and others – still tower over the canyon floor, while in the surrounding landscape, ancient roads and pathways to outlying villages and shrines offer silent testimony to the wonders of Chacoan society.

Over more recent centuries, the landscape around Chaco was settled by the Navajo people and other groups who have added their own unique traditions to the rich cultural legacy. Federal agencies are also a major, modern-day presence and oversee the canyon itself (a national park since 1980), along with important cultural sites in the surrounding landscape.

Increased oil-gas development associated with the Mancos-Gallup Shale play in northwest New Mexico has been threatening fragile Chaco-affiliated cultural resources across a large portion of the San Juan Basin since late 2011. In response, and in conjunction with the Navajo Area Office of the Bureau of Indian Affairs (BIA), the Farmington Field Office of the Bureau of Land Management (BLM) is currently in the process of amending the 2003 Resource Management Plan (RMP) and draft Environmental Impact Statement (EIS).

Archaeology Southwest and our partners National Trust for Historic Preservation (NTHP), National Parks Conservation Association (NPCA), and The Wilderness Society (TWS) have provided comprehensive comments and input over a period of three years that BLM and, more recently, BIA, have been working on the planning process. These comments, which includes new information about the significance, location, and interconnectedness of cultural resources within the Greater Chaco Landscape, must be taken into account by BLM and BIA as they develop their new management plan.

The Greater Chaco Landscape includes Chaco Culture National Historical Park and many cultural resources in the surrounding landscape that are affiliated with ancient Chaco, such as the Great North Road and Pierre's Site. Over the years, the BLM has leased more than 90 percent of its managed landscape for oil and gas development (Figure 1).

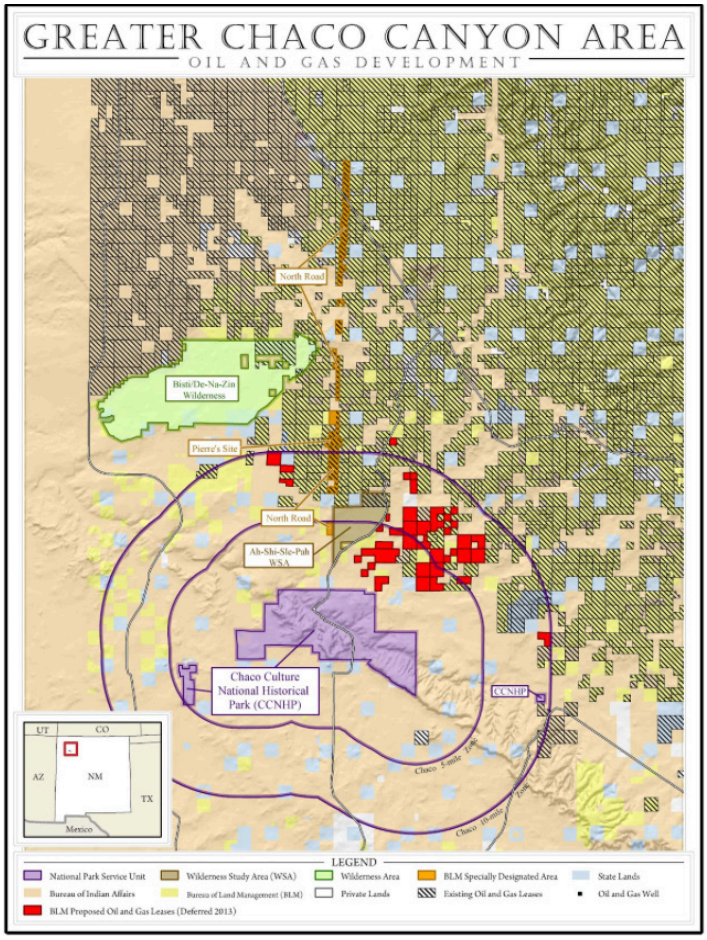


Figure 1. Map showing existing leases, deferred leases (that may be up for sale in 2018), and 5-mile and 10-mile zones of protection around Chaco Culture National Historic Park.

Together with our partners, we have asked the BLM and BIA to put a moratorium on future oil-gas leasing in a 10-mile protection zone around Chaco Culture National Historical Park, and to also ensure the protection of significant sites in the broader landscape, including Pierre's.

The All Pueblo Council of Governors (APCG) has spoken out on several occasions, issuing several resolutions calling on the BLM and BIA to work closely with Pueblo people while preparing this new plan. The Pueblo governors also endorsed a series of measures that would go a long way toward protecting the magnificent cultural resources and modern-day residents of the Chaco area from oil and gas development, including supporting the 10-mile protection zone around the park that would be off limits to oil and gas development and using a master leasing plan (MLP) to guide development in this sensitive area. This is critically important because so much of the landscape around Chaco has already been leased for drilling, and the MLP would provide a protective, guiding framework for managing future development, as well as leasing. Most recently, the APCG has partnered with the Navajo Nation to press the agencies for additional protections across the Greater Chaco Landscape.

Many groups and individuals in New Mexico have worked tirelessly to support this process. U.S. Senators Udall and Heinrich and Congressman Ben Ray Lujan have played an instrumental role in working to find a solution to protect the Chaco Canyon area—recognizing that they must balance all of their constituents' diverse interests. Moving forward, we will continue to need strong leadership from our elected representatives to see this process through.

Archaeology Southwest has continued intensive dialogue with BLM and BIA as they finalize the draft RMP amendment and EIS for the Greater Chaco Landscape. We feel strongly that the standard approach to cultural resource protection, as prescribed by Section 106 of the National Historic Preservation Act (NHPA), and other laws, is not working in this highly sensitive area. The Section 106 approach calls for cultural resources (historic and archaeological sites, traditional cultural places, and sacred sites) to be identified and then either avoided by construction activities or to have adverse impacts to resources mitigated through various measures. This approach has resulted in a highly dissected landscape that is crisscrossed by oil-gas roads and pipelines and various wells pads and other facilities (Figure 2). These activities have severely impacted the ancient Chacoan landscape.

We believe that the agencies should protect larger pieces of the remaining landscape, particularly areas surrounding Chacoan great house communities. With the advances in various technologies, as described herein by Ruth Van Dyke, Anna Sofaer and her colleagues, and Carrie Heitman and Sean Field, it is abundantly clear that archaeologists completing survey work prior to oil-gas development are not identifying all of the archaeological resources and phenomena on the landscape and that continuing with the current approaches to resource protection will result in losses of additional, undocumented cultural resources and further impacts to the Greater Chaco Landscape. Further, consistent with obligations under NHPA, the National Environmental Policy Act and related laws, the agencies must incorporate and utilize the significant new information about the Greater Chaco Landscape that has been generated internally and provided to them by the tribal and archaeological communities. Finally, we ask the agencies to work with us and other stakeholders to find a way to protect what remains of the ancient Chacoan landscape.



Figure 2. Aerial photograph of the central San Juan Basin showing the crisscrossing impacts of roads and pipelines on the Greater Chaco Landscape.

Recent Solstice Project Activities to Protect the Greater Chaco Landscape

Anna Sofaer, Robert Weiner, and Richard Friedman
The Solstice Project

In 2010, the Solstice Project implemented a project using Light Detection and Ranging, better known as LiDAR, to document the Chaco Culture's Great North Road. This was the first use of this cutting-edge technology to document Chaco roads, which have traditionally been identified and studied using aerial photographs, accompanied by ground truthing. The significance of the Great North Road became evident to the Solstice Project through its ground investigations with archaeologist Michael Marshall, and the earlier findings by John Stein, Fred Nials and John Roney reported in the 1980s BLM roads studies. These archaeological investigations indicated a minimal utilitarian use of the road, and rather that ritual architecture was situated on its route and a staircase with apparent ceremonial offerings of pottery sherds at the steep drop into Kutz Canyon, the termination of the road. The results of this study, when shared with the Puebloan historians and educators, revealed the Great North Road's profound importance to Puebloan cosmology as connecting with the spiritually significant direction of the North.

Surface expressions of Chacoan road features have been rapidly disappearing due to natural erosion and increased land use activities in the Four Corners region. Many roads that were clearly visible in aerial photography and on the ground in the 1980s are now virtually invisible from the air or ground. Recognizing that in the case of the Great North Road, intensive oil and gas development and its associated infrastructure, such as modern roads to facilitate access to well pads, were severely impacting its fragile state, the Solstice Project won a grant from the National Trust for Historic Preservation in 2010 to document it with LiDAR.

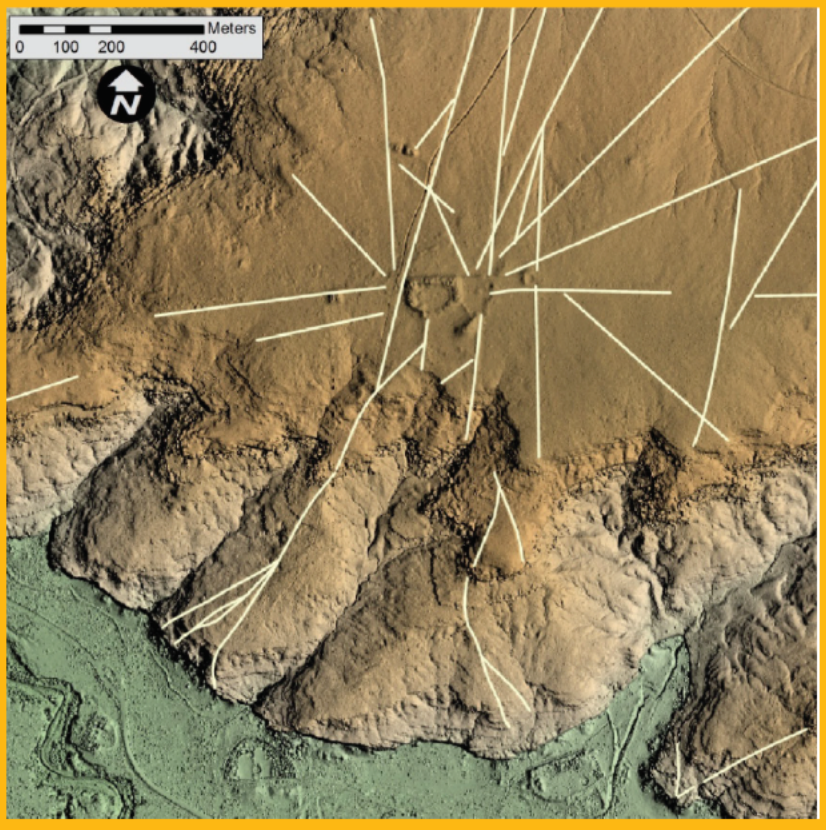
A LiDAR scanner was strapped onto an airplane that flew over the Great North Road, sending out thousands of laser pulses per second with precise geographic reference that mapped the terrain. Once the raw data was acquired, Solstice Project affiliated Chaco researcher and remote sensing expert Richard Friedman used GIS technology to remove vegetation from the image to reveal the ground surface. Some of the pulses emitted by the scanner pass through the trees and therefore the trees can be filtered out to create a "bare earth model." Friedman then used GIS technology to highlight linear surface anomalies in the LiDAR image by enhancing shadows. He was able to digitally manipulate a light source to emanate from any azimuth and at a low angle to create sharply defined shadows in the linear paths of the roads.
The results of the LiDAR scan, to be published in November 2017 in the journal Advances in Archaeological Practice, were extremely rewarding. The computer manipulation of the light source revealed incredibly subtle linear features – including one road with a depth of no more than three and a half inches and that is totally invisible on the ground. Not only were all previously known segments of the North Road detected using LiDAR, but also nearly 2 miles of previously unknown segments. This project showed that LiDAR could be employed to measure the length, width, depth, and cross-sectional profiles of Chaco roads at an unprecedented level of precision and with remarkably cost effective results. In addition, LiDAR data creates an invaluable digital record of roads that are rapidly vanishing on the ground and an archival documentation for researchers interested in Chaco roads now and into the future.

Solstice Project Founder and President Anna Sofaer, along with affiliated archaeologists Richard Friedman and John Roney, traveled to Washington D.C. in 2014 to present the highly effective results of this first use of LiDAR to document Chaco roads. They proposed a larger scale LiDAR project for Chaco roads in meetings with the Deputy Director of the Bureau of Land Management, as well as the staffs of Senators Martin Heinrich and Tom Udall, and Representative Ben Lujan, based on the effectiveness of the LiDAR study of the Great North Road. They stressed the urgency and importance of conducting LiDAR studies to document Chaco roads and other archaeological features within the San Juan Basin in advance of increased energy extraction activities. This lobbying resulted in the BLM recognizing the usefulness of LiDAR and acquiring 4,247 sq. km of LiDAR data in areas surrounding Chaco Canyon in 2017.

Following the LiDAR recording of the Great North Road, the National Trust for Historic Preservation in 2011 gave further support to Chaco's protection, and especially to the Great North Road, in designating the Greater Chaco Landscape as one of the nation's "Eleven Most Endangered Places."

In 2014, the Solstice Project released a four-minute video titled "Fracking Threatens Chaco Canyon's Sacred American Heritage" hosted on Vimeo to convey the threats to Chacoan cultural resources with increased energy development in the Four Corners region. As of August 2017, the video has had more than 15,000 views and has inspired significant public advocacy for the protection of Chacoan

More recently, Anna Sofaer and Solstice Project Research Associate Rob Weiner have given numerous public talks emphasizing advocacy to protect the Greater Chaco Landscape at various venues including Santa Fe Indian School, Museum of Indian Arts and Culture, School for Advanced Research, New Mexico Natural History Museum, and the RENESAN Institute for Lifelong Learning. For further background on the Solstice Project see solsticeproject.org.



Roads around Pueblo Alto detected by LiDAR. Image by Richard Friedman.

Chaco's Dark Skies

G.B. Cornucopia
Interpretive Ranger
Chaco Culture National Historic Park

Since 1988 Chaco has been active in presenting the wonders of the night sky to visitors. As Chaco's interpretive programs go, the Night Sky Program has become the most popular of Chaco's presentations.

In 1998 Chaco opened the first National Park observatory through a donation from a visiting amateur astronomer who wished to have his own facility under the dark skies of the southwest but didn't want to be burdened with the security issues of an unprotected site (Figure 3). Since its inception the observatory has hosted thousands of visitors, as well as offering a resource for astronomical research. Chaco has initiated partnerships with amateur astronomy clubs in the Albuquerque area who come to Chaco to offer "star parties" for the visiting public.

The National Park Night Sky Team, a grant funded entity of the National Park system, has periodically measured the dark sky qualities of Chaco using state-of-the-art digital recorders and has identified Chaco's darkness as one of the best in the park system. These assessments keep track of any degradation of the sky from sources of light that continue to grow around the canyon. The measurements are taken from the top of the mesas forming the canyon and are in full view of the surrounding lights and flares of nearby oil and gas drilling rigs that are spread across the Greater Chaco Landscape. As the number of rigs and facilities increase, especially to the north and east of the canyon, it is critical to continue this monitoring.

As more and more pictures from space of the earth at night have become available, it is clear that humans have changed the natural balance of light and dark in favor of more and more light. Studies have shown that the effects of increased light on animals, vegetation, and humans pose a serious threat to the natural balance. The good news is that darkness is not a depleting resource and can often be mitigated, if not reversed, by implementing dark friendly lighting techniques. However, this requires education and commitment, so that oil-gas developers can understand the issues before using lighting techniques that compromise Chaco's dark skies.

The International Dark Sky Association, located in Arizona, assesses and monitors dark skies across the world. The group has highlighted locations where skies are dark and still offer a view of the cosmos that communities of ancient people have taken for granted. In Chaco, we have a direct link to the ancient Puebloan builders of the Great Houses a thousand years ago! When we look into the night sky we see the same sky, nearly as dark as those ancient ones saw. Because of this, and because of Chaco's interpretive programs that introduce thousands of visitors each year to the natural wonder of a clear dark sky, Chaco was nominated and designated an International Dark Sky Park in 2013.

If we wish to stay in touch with the natural world, it is essential that we have places where the development that insulates us from the natural balance is held at bay, and we, as individuals, and communities can experience our true relationship with the world at large. Presently, Chaco Culture National Historic Park is one of those rare places. We now have the opportunity to make sure Chaco can continue to do so for future generations.



Figure 3. Astronomical observatory at Chaco Culture National Historic Park.

Geospatial Data, Remote Sensing, and Understanding Chacoan Roads Data

Carrie C. Heitman, Ph.D., Assistant Professor of Anthropology, University of Nebraska-Lincoln
Sean Field, M.A., University of Nebraska-Lincoln

When land management agencies, like the Bureau of Land Management (BLM), make oil and gas leasing decisions, they depend upon digital data ecosystems (like Geographic Information Systems or GIS). This GIS data in turn relies on other digital data ecosystems (like the New Mexico Cultural Resource Information System or NMCIS) to gather and pull in archaeological site location data. In short, data driven decision making requires digital intermediation platforms. And while this is a perfectly reasonable workflow to help inform land management decisions, there are inherent weaknesses in these systems that have real world consequences. We refer to this as the technocratic tyranny of digital data ecosystems.

In using digital intermediation platforms, non-digital data, such as paper maps or printed data tables, effectively do not exist and even bad digital data supersede good, analog data. What's more, data segregation (Balkanized between state and federal agencies, tribes, and separate scholarly networks), has hampered our collective ability to manage and preserve the Greater Chaco Landscape due to inaccurate locations or incomplete site information within some of these systems. From a research perspective, such practices have resulted in inefficient, duplicated efforts to refine those data. No singular entity or agency has the authority or sufficient funding to continually gather and reconcile both older, legacy (historic) and new archaeological data (like raw or processed LiDAR data) about the Greater Chaco Landscape. Hence, relying on one set of site location data (like NMCRIS) will lead to land management decisions based on incorrect or incomplete data.

We have been involved in three recent projects that demonstrate the real-world consequences of these challenges. In 2015-2016, Heitman led a team of researchers (funded by the National Park Service) to aggregate and reconcile disparate GIS databases on Chacoan great house locations. This was the second such effort in the last 20 years and will not be the last. The new GIS database was then shared with various state and federal agencies to help improve their site location data. More recently we, along with a team of others, were involved in a NASA DEVELOP collaboration project (in Summer 2016). The main objective was: "To identify Chacoan community signature profiles, such as roads, villages, middens, and structures, throughout the San Juan Basin to help with preservation and protection strategies by using NASA Earth observations." (More information is available at https://develop.larc.nasa.gov/2016/summer/ChacoCanyonCross.html.)

Among other products, the NASA DEVELOP team created a Chacoan Sites Risk Map to identify areas where Chacoan sites would be at risk from developing infrastructure. [Figure 4] Risk, in the NASA model, was defined as any area in close proximity to one of the following: 1) areas with an expected population increase from 2015 to 2020; 2) existing roads; 3) existing or planned oil and gas drills; and 4) perennial hydrological features. The resulting NASA risk map suggests that a large area of the San Juan Basin is being impacted by developing infrastructure. Forty-five of the 123 (37%) known Chacoan great houses in the NASA study area are at a high risk for disturbance from developing infrastructure. Fortunately, thirteen of these sites are already protected by National Park Boundaries and at least 3 others are protected by the BLM as "Areas of Critical Environmental Concern."

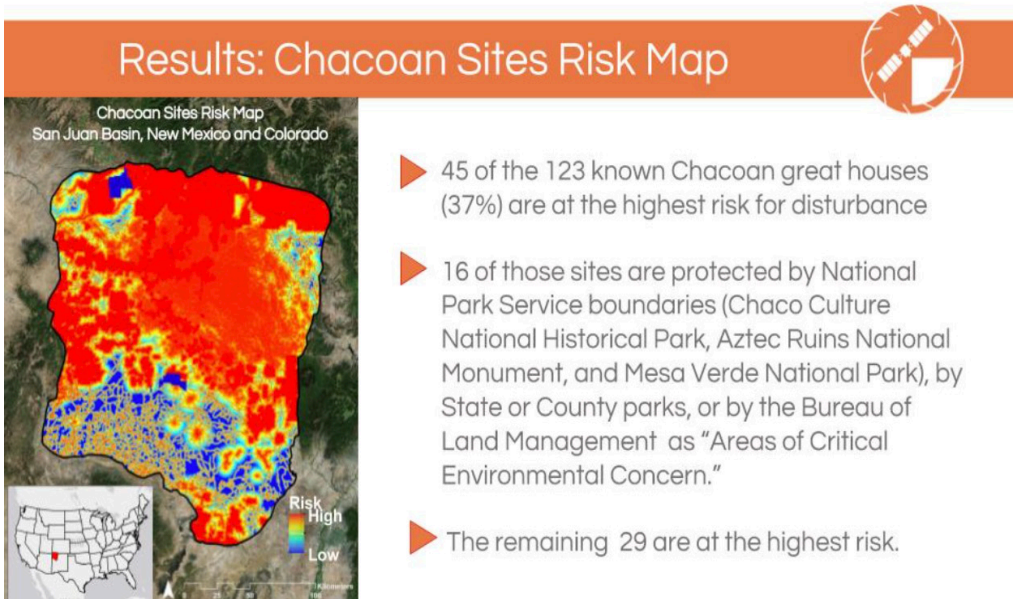


Figure 4. NASA map showing Chacoan outliers at high risk.

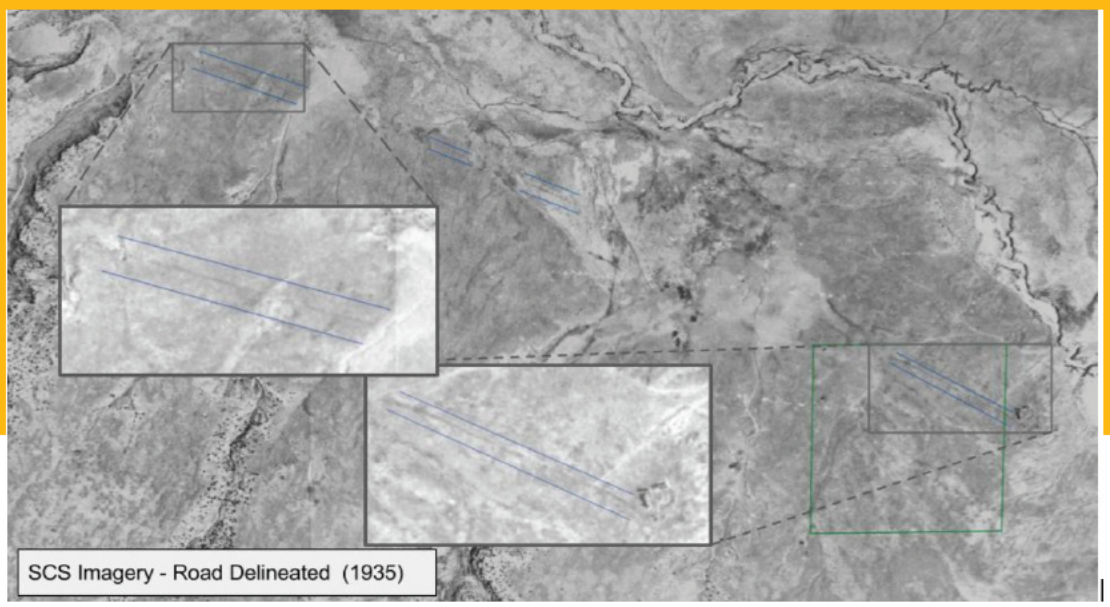


Figure 5. Legacy aerial imagery showing Pueblo Pintado Chaocan road.

Based on Sean Field's Master's thesis research, there is also a need for aggregating, digitizing, and assessing the confidence thresholds for linear, Chacoan road features. Using the Pueblo Pintado to Chaco Canyon road as an example, we have demonstrated the utility of using legacy data in the form of historic aerial imagery to assess the degradation of these features over time. [Figure 5] This archaeological feature was highly visible in 1935, and still visible in 1973 and 1985. Due to human impacts and erosion, it then became invisible (via aerial imagery) on the landscape between the years 1983 and 1991. According to more recent aerial imagery (1991 - 2017) the only remaining viable segments are within the protected NPS boundary around Pueblo Pintado itself. Although LiDAR data provide evidence for the continuity of this landscape feature and surpass aerial imagery as a tool for detection, we think it is important to use multiple sensing technologies to reveal different aspects of the pace and causes of feature degradation. Our ability to identify cultural resources using advanced sensing technologies will not protect these places from possible obliteration. The speed of this feature degradation over the course of 34 years (between 1983 and 2017) is cause for concern and should urge further action to protect these fragile cultural landscape features.

In conclusion, we would like to make a number of recommendations. Collectively, we need to: 1) acknowledge the cumulative and lasting negative impacts data segregation has had on our ability to document, preserve, and manage the Greater Chaco Landscape; 2) foster awareness of the weaknesses and potential improvements for of the digital data ecosystems in which we currently operate; 3) incorporate existing, legacy data sources into land management decisions; 4) recognize that some of our digital data ecosystems have the capacity to infringe on the sovereignty of Native lands and take appropriate actions to prevent this; and 5) promote and support responsible data sharing and the timely dissemination of research findings. While there is no perfect digital data ecosystem, we have an opportunity and an obligation to do the most with the information in hand.

Impacts of Oil and Gas Drilling on the Soundscape and Viewscape at Pierre's Chacoan Outlier, San Juan County, New Mexico

Ruth M. Van Dyke, Ph.D.
Professor of Anthropology, Binghamton University
Chaco Scholar, 1991 – present

Archaeological investigations indicate that viewscapes and soundscapes were integral to Chacoan life a millennium ago, yet we are only beginning to study these dimensions of ancient societies Existing cultural resource management practices do little to help manage or protect less quantifiable dimensions of the landscape, such as viewscapes and soundscapes I demonstrate the problem with a description of the visual and aural impacts of oil and gas drilling in the Pierre's Chacoan community, 15 miles north of Chaco Canyon

The Chaco phenomenon of northwestern New Mexico in the American Southwest is centered on, but not limited to, Chaco Culture National Historical Park Chaco Canyon was materially, socially, and most likely politically connected with outlying regions Archaeologists have long understood this through the evidence of architecture, artifacts, and roads More recently, we have begun to appreciate the Chacoan world was also connected to outlying communities through visibility

High mountain peaks and distinctive landforms such as Mt Taylor, Huerfano Mesa, and Hosta Butte are visible over vast distances against our clear desert skies For Navajo and Pueblo peoples past and present, prominent visual landmarks such as these are important in oral traditions, contribute to a sense of identity, and help with wayfaring A millennium ago, Chacoans, too, were concerned with lines-of-sight to prominent peaks and long-distance landscape visibility In a recent GIS study, colleagues and I demonstrated that a network of intervisible high places across northwest New Mexico likely was one means for connecting the far-flung communities of the Chacoan world Within Chacoan outlier communities, great houses are often situated on high places, where they can see not only surrounding smaller settlements, but where they can connect back to Chaco Canyon via one of more lines-of-sight

As our Native colleagues tell us, it is perhaps more important to try to understand an ancient sense of place than to estimate how many potsherds lie buried in a midden or calculate the person-hours required to construct a wall Thus, phenomenologically oriented archaeologists such as myself are ultimately interested in understanding the human experience of ancient places – particularly sensory dimensions of place, such as viewscapes and soundscapes We have only recently developed the theoretical frameworks and the technological tools to try to understand viewscapes in the Chacoan world We have devoted even less attention to soundscapes – the acoustic properties of archaeological sites, past and present And, because these kinds of studies are relatively new in archaeology, we lack robust legislation to help landowners and agencies figure out how to evaluate, study, and mitigate potentially damaging effects from oil and gas drilling or other types of destructive development I turn now to a case study – the Pierre's Chacoan community – to illustrate the kinds of impacts and damage that can result

The Chacoan outlier of Pierre's, located about 15 miles north of Chaco Culture National Historical Park, is clearly an important spot along the Chacoan Great North Road At Pierre's, there are two Chacoan great houses on a high mesa overlooking a surrounding community of at least 20 small habitation sites The Great North Road cuts through this community past a badlands pinnacle dubbed "El Faro," or "The Lighthouse," because it is topped by a small structure including a hearth or firepit (which means it may well have been an ancient place for signaling) Looking south from Pierre's, a viewer can see the great house of Pueblo Alto and other familiar landmarks of Chaco Canyon There is little doubt among Chaco scholars that the Pierre's complex is a ritual landscape, situated in this place because of its visibility and position vis à vis the Great North Road. Where great house communities are situated along engineered Chacoan road segments, it is likely that localized ritual processions may have taken place. The importance of the Pierre's landscape has been recognized for 35 years. When Chaco Culture National Historical Park was created in 1980, the legislation included Pierre's in a group of 33 outlying 'Chaco Culture Archeological Protection Sites'. Pierre's was one of the Chaco outliers included when Chaco Culture NHP received UNESCO World Heritage status in 1987.

The ground footprints of the archaeological sites at Pierre's are well-protected, but the surrounding viewscapes and soundscapes on BLM and Navajo lands are not; our archaeological preservation laws are not generally invoked to protect these less tangible aspects of the past human experience (Figure 6). In November 2016, I visited Pierre's to study and assess these impacts. I used relatively new viewscape and soundscape recording techniques, including 360 photography and a Roland Edirol digital recorder. I found that, despite the due diligence agencies have exercised to protect the ground footprint of Pierre's, there have been significant impacts to the viewscape and the soundscape. From the great houses and EL Faro, at least 12 pumpjacks are visible from the high places in the community – 6 of these lie in the view towards Chaco Canyon (Figure 7). Until the BLM asked the company to provide a muffler, noise from the nearest pumpjack was audible from throughout the community. Rather than a sacred landscape and part of a UNESCO World Heritage Site, the Pierre's community had the feeling of an industrial park.

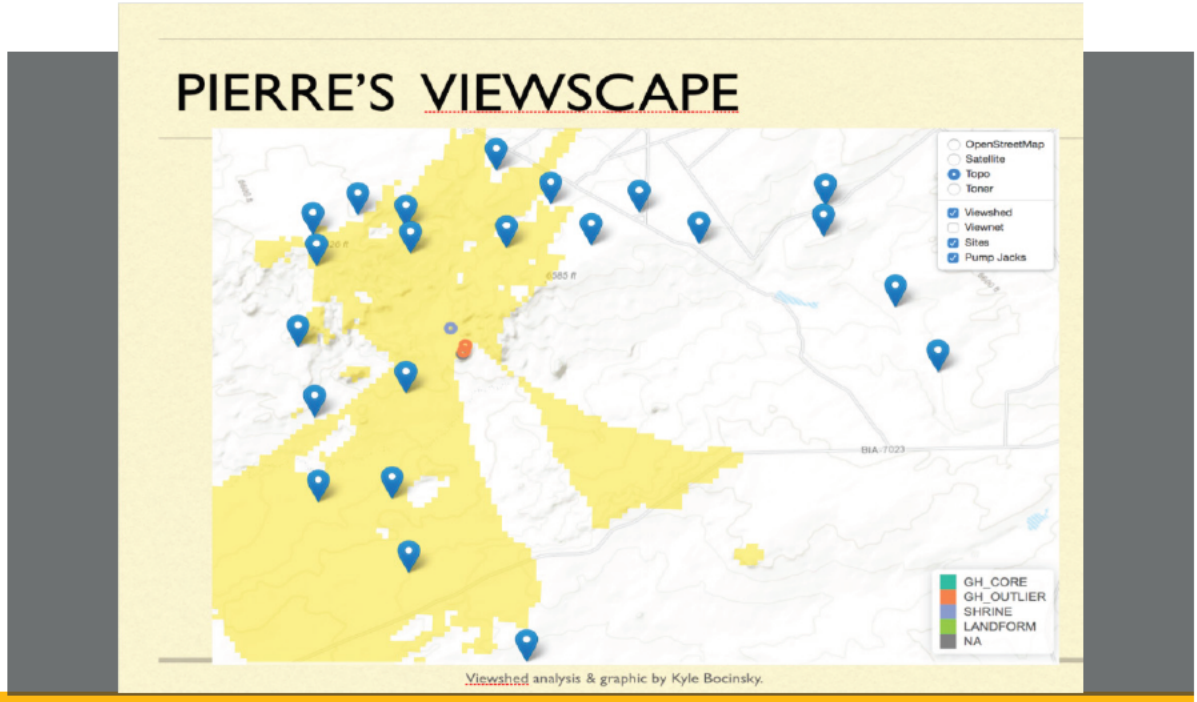


Figure 6

Locations of pumpjacks visible from Pierre's El Faro. Yellow = the area visible from El Faro, and the blue pins are the pumpjacks, derived from public information on the locations of oil and gas wells in New Mexico. Viewshed analysis & graphic by R. Kyle Bocinksy.

Archaeologists, legislators, and government employees must work together to ensure that these kinds of impacts to viewscapes and soundscapes do not continue unabated across the Chacoan world. We urge the BLM to withdraw unleased areas from consideration for oil and gas development. Where areas have already been leased, we urge the BLM to protect Chacoan communities from indirect and cumulative adverse impacts to their surrounding viewscapes and soundscapes. We can work with existing NHPA and NEPA language to help them do this. Where impacts have already happened, we can urge the BLM to require mineral developers to make amends. The most important thing that the public can do is invest in sustainable energy development and call our Congresspeople to impress upon them our values and opinions.



Figure 7

View from the nearest pumpjack, "Hoss Com #95," to the Pierre's community. The site labeled "LA 16509/ Housea A" is one of the two great houses atop the mesa. Photo by author.



Archaeology Southwest

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The Great North Road: a Cosmographic Expression of the Chaco Culture of New Mexico

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29.1 Introduction

The Great North Road is one of the most enigmatic constructs of the ancient Chaco culture of New Mexico. Efforts to establish strict utilitarian purposes for its construction do not explain certain unique features of it. We suggest it is a cosmographic expression of the Chaco culture.

The Chaco society, a prehistoric Pueblo culture, flourished between AD 950 and 1150 throughout the 80 000 km2 of the San Juan Basin of northwestern New Mexico (Marshall *et al.* 1979; Powers, Gillespie and Lekson, 1983; Cordell, 1984; Marshall and Sofaer, 1988) (Figure 29.1).

Figure 29.1
Map of the San Juan Basin, showing major Chacaon sites and roads. The inset shows this region within present State boundaries. Lines represent prehistoric roads and dots indicate outlying Chacoan communities. Copyright Carol Cooperrider, 1986; additional data supplied by John Roney.



Chaco Canyon was the center of this culture. Here the Chaco people constructed multi-storied buildings containing 100 to 700 rooms (Lekson, 1984). These structures are noted for their planned, symmetric organization, massive core-veneer masonry construction, and numerous great kivas, the large ceremonial chambers of the prehistoric pueblo culture.

Descendants of the prehistoric Pueblo culture live today in the pueblos of New Mexico and Arizona. Ethnographic reports on the traditions of the historic Pueblo Indians suggest parallels between the historic and prehistoric and may provide insights into the general cosmological concepts of the prehistoric Chaco culture.

Astronomy played an important role in the Chaco culture. This is expressed in the cardinal alignments of the major axes of several large ceremonial structures at or near the center of the canyon (Williamson, Fisher and O'Flynn, 1977; Sofaer and Sinclair, 1986a), and in a complex set of solar and lunar markings on Fajada Butte, at the south entrance of the canyon (Sofaer, Zinser and Sinclair, 1979; Sofaer, Sinclair and Doggett, 1982; Sofaer and Sinclair, 1986a).

29.2 The roads

Roads also played an important role in the Chaco culture, judging from their extent and the effort required for their design and construction (Kincaid, 1983). In the late florescence of the Chaco civilization (c. AD 1050 to 1125) elaborate, formalized roads were constructed (Figure 29.2). No archetype for these roads appears to have existed in the region before their development by the Chacoans, and a recent inventory shows they were not used after the Chaco civilization's peak, about AD 1140 The Chaco roads have generally been interpreted as arteries connecting communities for trade, transportation of goods and materials, and movement of population. These explanations of the roads' functions have been premised on a model of the Chaco culture that has envisioned Chaco Canyon as the political and economic center of a widespread trade and redistribution system extending throughout the San Juan Basin. (Vivian, 1983, provides a detailed summary of the various eeonomic models which have been applied to the Chaco culture.)

The extensive religious architecture in Chaco Canyon suggests that the canyon may have served primarily as a ceremonial nexus for the outlying communities. Factors supporting this concept include: evidence from the middens of periodic intensive consumption of food at the large public structures (Judge, 1984); the dearth of burials and the presence of a few 'high status' burials (Akins and Schelberg, 1984); and possible large-scale ceremonial breakage of ceramic vessels (Toll, 1984). Consistent with this view of the religious function of Chaco Canyon, it appears that one of the Chaco roads - the Great North Road - and perhaps others, express religious considerations

The Chaco roads have been noted for their great width and unusual linearity, and they have been described as 'extensively engineered' (Nials, 1983, p. 6.26). The roads were developed by excavation to a smooth, level surface, and some included masonry construction.

Approximately 300km of roads, including the Great North Road, have been documented in the last 15 years by aerial photography and ground investigation in numerous intensive studies. A further archaeological investigation of the Great North Road was recently conducted by the authors. This involved the inspection of all structural sites and many kilometers of roadway. Numerous sites were mapped and sampled, and a technical report concerning this work is in preparation (Marshall and Sofaer, 1988).

29.3 The Great North Road - description

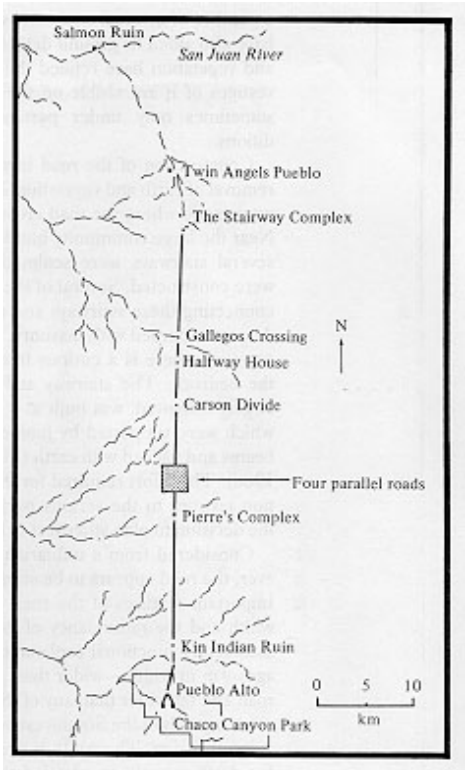

Figure 29.3
Map of the Great North Road.
Copyright, The Solstice Project, 1986.

The Great North Road (Figure 29.3) has its origin in several routes which ascend by staircases carved into the cliff from Pueblo Bonito and Chetro Ketl in Chaco Canyon, which are the two largest structures of the Chaco region. These routes converge at Pueblo Alto, a large structure located close to the north rim of the canyon. From there the road runs 13 degrees to the east of north for 3 km to Escavada Wash. It then heads within 1/2 percent of true north for 16km, where it articulates with Pierre's Complex, an unusual cluster of small buildings on knobs and pinnacles. The road then heads close to 2 degrees east of north for 31 km and ends at Kutz Canyon. It appears to terminate at three small, isolated sites, and a stairway recently located by the Solstice Project (Marshall and Sofaer, 1988) that descends from the Kutz Canyon escarpment to the canyon floor (see Figures 29.5 and 29.6).

From Pueblo Alto to Kutz Canyon, the road lies within one corridor, with no evidence of bifurcations. For much of its length, it exists as two, and occasionally four, closely spaced, parallel roads. The road's length and the complexity of its construction have led scholars to term it the 'Great North Road'.

The road traverses rolling, sagebrush country, where the only prominent natural features in view, and then only from rises, are the distant snowcapped mountains to the north. The only major topographic relief are the canyons at each end. With the possible exception of Pierre's Complex, there are no communities on the road's course from Pueblo Alto to Kutz Canyon. Two large complexes - Aztec and Salmon Ruin - lie to the northwest, 20 and 30 km beyond the road's terminus. Most of the outlying Chacoan communities are to the south, west and east of Chaco Canyon.

The road has been traced in numerous segments by aerial photography. On the ground, it has been intensively investigated from Chaco Canyon to Pierre's Complex and partially studied from there to Kutz Canyon. Its straight course and distinctive parallel segments have aided scholars in identifying and following it. Associated ceramic scatters and a number of unusual structural sites along its route have also aided its ground detection. Because earth and vegetation have refilled the road, only limited vestiges of it are visible on the ground today and sometimes only under particular lighting conditions.

Construction of the road involved primarily the removal of earth and vegetation. Extensive road cuts were made where the road crosses land elevations. Near the large community buildings of the canyon, several stairways were sculpted and large ramps were constructed. Several of the multiple roadways connecting these stairways

and ramps with Pueblo Alto were curbed with masonry. Along one of these segments there is a curious linear groove cut into the bedrock. The stairway at Kutz Canyon, now largely collapsed, was built as a series of platforms which were supported by juniper posts and crossbeams and packed with earth (Marshall and Sofaer, 1988). The effort required for the road's construction testifies to the serious purpose that attended the decision to plan and execute it.

Considered from a utilitarian perspective, however, the road appears to be *overbuilt* and *underused* Important features of the road - its extraordinary width and the redundancy of its routes - have no satisfactory functional explanation. The road averages 9 m in width - wider than a modern two-lane road and far wider than any of the other prehistoric roads or trails of the Southwest outside of the Chaco cultural region. The width is greater than required for draft animals or wheeled vehicles. Since this culture had neither, the width seems especially excessive in practical terms.

Redundancy occurs in the multiple stairways heading out of the canyon, the four routes chat converge on Pueblo Alto, and most particularly where the Great North Road is expressed, for a good fraction of its length north of Pierre's Complex, as a set of two parallel roads. In addition, at one location, a set of four 'almost perfectly parallel' roads extending for 1.5 km is evident in aerial photography (Nials, 1983, p. 6.29) (Figure 29.4). Recent reevaluation of the aerial imagery for the Solstice Project has revealed further portions of the road in previous gaps to the north of Pierre's Complex (G. Obenauf, 1986, unpublished report to the Solstice Project on re-evaluation of Bureau of Land Management aerial photography). Many of these segments consist of two parallel roads. (The new portions lie on the straight line determined by the sections found earlier and thus further emphasize the overall linearity of the road.) There is no satisfactory functional explanation for these redundant features. Yet the effort devoted to achieving them indicates they are not casual expressions of the Chaco culture.

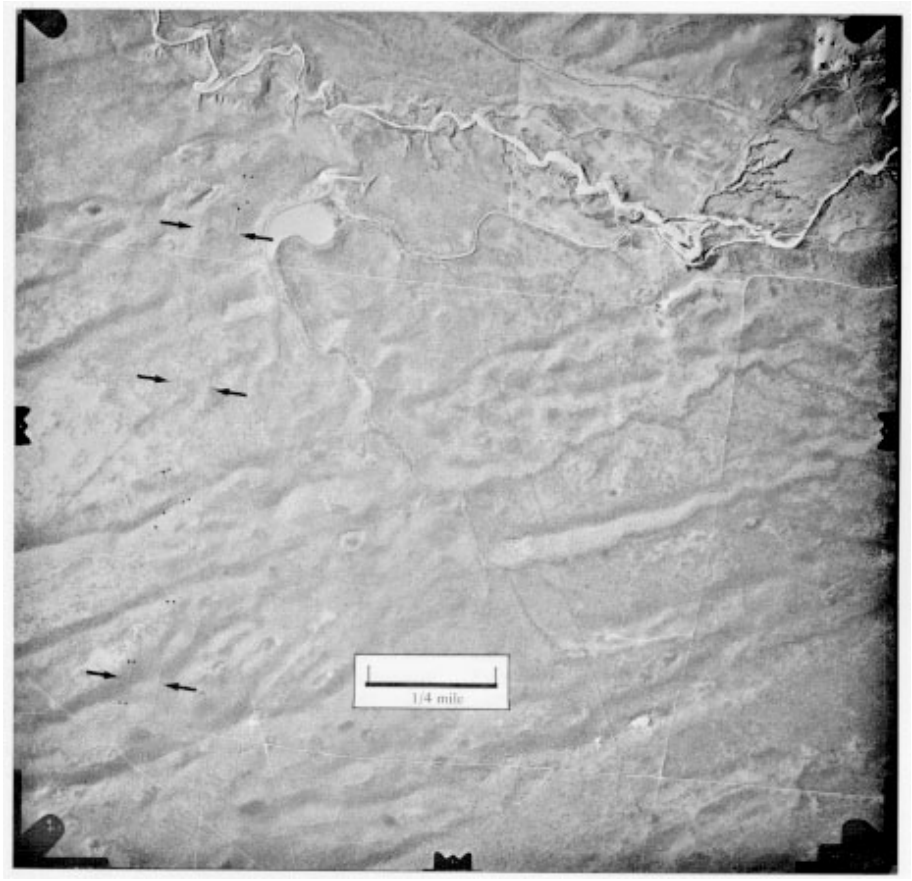

Figure 29.4
Aerial view of a 2km section of the Great North Road north of Pierre's Complex. Arrows and dots indicate the road's four parallel segments. (Other linear features are modern roads.)
Bureau of Land Management aerial imagery, 1981.

Viewed from a utilitarian perspective, we would expect the Great North Road to connect Chaco Canyon with other major population centers. An examination of the structures along the Great North Road and its destination, however, does not appear to support the earlier functional interpretation of its development and use. The road, after leaving the ceremonial complex of Chaco Canyon, traverses the least developed region of the Chaco

cultural area. The structures along the road are small in comparison with other outlying Chaco structures, and minute in comparison with those in Chaco Canyon. All of the structures contain less than six rooms, and most of them contain less than three. Only Pierre's Complex suggests a possible community.

Earlier maps and reports of the Chaco cultural region have assumed that this road goes to Twin Angels Pueblo (Kincaid, 1983, Figure 4.1) and then extends at a NNW bearing, to one or both of the large San Juan River communities of Salmon Ruin (Powers *et al.,* 1983; Cordell, 1984) and Aztec (Morenon, 1977). There is, however, no ground inventory or aerial investigation that provides evidence that, in fact, the road goes to these pueblos. Moreover, efficiency for travel and transportation of goods to Salmon Ruin and Aztec would dictate a more direct and easier route from Chaco Canyon - one further to the west. Instead, the road goes north and descends a nearly impassably steep slope of Kutz Canyon.

Twin Angels Pueblo is located in the Kutz Canyon badlands, 6 km from the road's apparent terminus (Carlson, 1966). It is a relatively small pueblo of 17 rooms - less than one-tenth the size of Salmon Ruin or Aztec. (We note with interest that, although there is no evidence of the continuation of the road to or near Twin Angels Pueblo, that site lies only 1/2 degree east of north from the start of the road near Chaco Canyon. We cannot, at this point, rule out the possibility of a road relationship with this pueblo.)

A recent inventory of the Great North Road has produced no evidence that indicates extensive use for the transportation of economic goods (Stein, 1983). It is estimated that only 10% of the ceramics found on the Great North Road are from the San Juan River communities (Stein and Levine, 1983), giving scant evidence of significant trade with them. The absence of hearths and ground or chipped stone in the road inventory suggests there was little encampment along the road.

To summarize, the road's great width and parallel routes, its ephemeral practical use, and apparent terminus at an isolated badlands canyon fail to justify, in functional terms, the effort entailed in its construction. The road apparently goes 'nowhere' and displays a level of effort far out of proportion to the meager tangible benefits that may have been realized from it. In many important respects, the road appears to be its own reason for development - an end in itself.

29.4 The Great North Road - purpose

In the absence of a satisfactory functional explanation and practical destination for the Great North Road, and knowing what we do about Chaco and its interest in religious architecture, we posit that the primary purpose of the road may have been the expression of spiritual values. We will consider its direction to the north and its topographic direction with this in view. In addition, we will consider the sites along its course and their frequent location on distinctive land forms.

In the ceremonial architecture and astronomy of the Chaco culture the north-south axis is primary. Most of the great kivas have approximate north south axes and the kivas generally have niches primarily located to the north (Reyman, 1976). The axes of two major ceremonial structures of Chaco Canyon, Pueblo Bonito and the great kiva, Casa Rinconada, are within 1/4 degree of north (Williamson et *al.,* 1977; A. Sofaer and R. M. Sinclair, 1984, unpublished survey). A bearing within 1/2 degree of north south has been noted between two high ceremonial structures which are intervisible - Pueblo Alto and Tsin Kletzin (Fritz, 1978) - the former of which is itself aligned to the cardinals (Sofaer and Sinclair, 1986b). It is interesting to observe that Pueblo Alto and Pueblo Bonito are origin points in the canyon for the Great North Road. Just prior to the time of the road's construction, Alto was constructed; close to the time of the road's actual development, Bonito was greatly expanded and given its cardinal alignments (Lekson, 1984).

Seven noon-seasonal markings using shadow and light patterns on petroglyphs on Fajada Butte also involve the north-south axis. They occur within a few minutes of meridian passage of the sun, when the sun is due south, and thus involved a comparable interest in and knowledge of the north- south axis (Sofaer and Sinclair, 1986a).

The effort made by the Chacoans to construct the Great North Road with a bearing within 1/2 degree to 2 degrees of true north is similar to the effort they made to involve the north-south axis in their large ceremonial constructions and the noon-seasonal markings on Fajada Butte. It is important to note that the road appears to deviate intentionally from astronomic north after Pierre's Complex in order to arrive at the dramatic edge of Kutz Canyon. Clearly the people of Chaco had the capability of directing the road to within 1/2 degree of north, and as noted above they did so in a 16 km segment. For the next 31 km of the road they departed from this bearing and

struck, with a rigorously straight course, their direction to a large mound on the edge of Kutz Canyon. The purpose of this deviation appears to have been a blending of astronomic north and symbolic use of topographic features in a cosmographic expression.

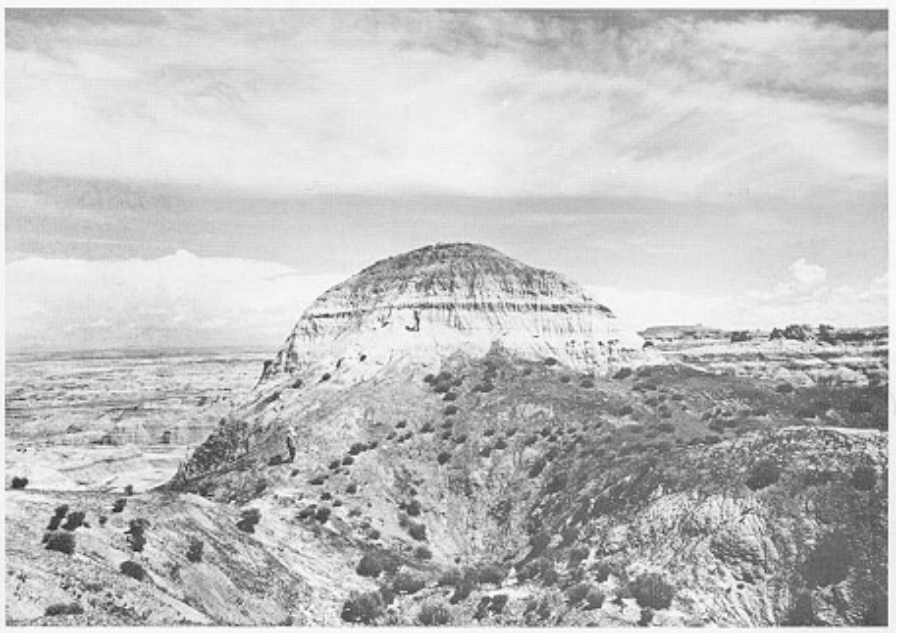

Figure 29.5
Upper Twin Angels mound, looking north, seen from the edge of the canyon. A small shrine-like structure is located on top. The road terminus and stairway are just out of the picture to the left.
Photograph by Anna Sofaer, Copyright The Solstice Project, 1986.

The road's 2 degree angle change directs it straight from the cone-shaped mound at Pierre's Complex, El Faro, to the large Upper Twin Angels mound. This mound (Figure 29.5) is located on the edge of the steepest slope of Kutz Canyon, where the stairway descends to the canyon floor. The mound stands out prominently above the deeply eroded slope of the canyon wall (Figure 29.6); from 10 km to the north, it is the only relief that extends above the southern horizon. These symmetrically shaped pinnacles, El Faro and Upper Twin Angels mound, while not very high, are the most distinctive prominences in the vicinity of the road corridor as it crosses the rolling northern terrain.

The straightness of the Great North Road has suggested that it was 'laid out as a single unit' (Morenon, 1977), and the 'chronological homogeneity' in the material culture associated with it has suggested 'that it can be viewed as a single construction event' (Kincaid, Stein and Levine, 1983, p. 9.76). The sites adjacent to the road were built at the time of its construction, apparently in association with its construction and use.

Five isolated structures along the road are small low-walled units located on distinctive land forms such as pinnacles or ridge crests (Kincaid, 1983; Marshall and Sofaer, 1988). They resemble shrines of the historic Peublo culture, which are similarly small, often in remote locations, and frequently on elevated land forms. Such a site was constructed on the top of the Upper Twin Angels mound.

At Pierre's Complex, almost all of the 27 cures are located on pinnacles, mesa tops, and steep ridge slopes (Powers *et al.,* 1983). While it is the largest development on the road and three of its structures are similar in scale to some small-to-medium outlying Chacoan pueblos, it is atypical. About a third of the structures are isolated rooms or non-habitation sites. A recent report describes it as 'a constellation of special-function architecture', the location of which 'was probably predetermined during the engineering of the North Road' (Stein, 1983, p. 8.9). This report further states: 'indeed, arrangement of the major structures within the complex acted to preserve the bearing of the road and to "receive" it into the community.' These structures include a hearth construction on top of El Faro, from which there is extended visibility north and south.

Certain aspects of the ceramics associated with the Great North Road suggest the possibility of ceremonial activity on the road. There are several curious concentrations of shards along the road at locations isolated from structures and without evidence of nearby encampment. Unusually dense elongate ceramic scatters occur along the road

several kilometers south of Pierre's Complex (Kincaid *et al.,* 1983, p. 9.74). Along the isolated Kutz Canyon stairway, there is a concentration of ceramics (Marshall and Sofaer, 1988). The extensive quantity of broken ceramics at Pueblo Alto has suggested to some analysts the possibility of large ritual gatherings involving dispersal of food items and deliberate breakage of vessels (Judge. 1984; Toll, 1984). The ceramics along the Great North Road (Kincaid *et al.,* 1983) and at Pueblo Alto (Toll, 1984) have a significantly higher proportion of jars and non-utility ware than the ceramics at a typical Chacoan site. The road's enigmatic ceramic concentrations, the possibility of ceramic related rituals at Pueblo Alto, and the character of the road ceramics suggest the possibility of ceremonial activity associated with ceramics on the road.



Figure 29.6
North slope of Kutz Canyon seen from the canyon floor. The arrow indicates the top of the stairway.
Photograph by Anna Sofaer.
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29.5 Other Chaco roads

Many of the other Chaco roads also exhibit nonutilitarian features and suggest cosmological purposes. For instance, the other roads are as wide and straight, and show no evidence of frequent use. Long linear grooves were cut into the bedrock along certain roads. The principal road to the south, the South Road**,** has a segment of parallel roads. The ceramics on the other roads share the same non- utility ratio as the Great North Road. Small isolated structures resembling historic shrines have been found so frequently along the roads that they are now used as a means of predicting the presence of a road (Kincaid et al., 1983, p. 9.16).

Recent road inventories have discounted several earlier postulated road connections between Chaco Canyon and major communities (Nials, Stein and Roney, 1988). Only a few such roads have been verified. Where certain roads do articulate with large communities, they appear to be only interconnecting avenues between nearby outlying communities or to link structures within the community, such as the large public building and the great kiva. Sometimes they appear to represent only a formalized entrance way to ceremonial locations in the community. Where the road articulates with public buildings, there is frequently evidence of large ceremonial earthen architecture: ramps, circular mounds, and platform mounds (J. R. Stein, 1983, private communication). The roads in this vicinity are usually wider and often curbed with masonry (see Figure 29.2). The pecked grooves and evidence of fire on ramps, burnt structures, elevated fire boxes, and fire pits warrant further investigation for possible ceremonial significance. At Pueblo Alto, very large firepits are located at the road's entrance points.

Some roads lead *only* to topographic features such as pinnacles, springs, or lakes. One major road, the Ashlislepah Road, which runs from Penasco Blanco in Chaco Canyon Chaco to the northwest, connects with no other communities. It articulates, instead, with a group of cisterns, where there is a small, apparently non-utilitarian site, and then appears to terminate at now-dry Black Lake (Marshall and Sofaer, 1988). Another road,

which runs from the community of Kin Ya'a and the southern terminus of the South Road 7 km to the south appears to terminate near the base of massive Hosta Butte, one of the highest and most prominent natural formations in the San Juan Basin (Nials et al., 1988).

29.6 Ethnographic background

Historic Pueblo cosmology and ceremony may afford insights into the religious considerations underlying construction of the Great North Road and other Chaco roads. Here we find frequent symbolic use of straight roads, mythic and ceremonial journeys to and from the north and the 'middle place', and attention to prominent topographic features as elements of a spiritual landscape. There is even evidence of emblematic use of parallel roads and pecked grooves.

There are many symbolic uses of roads in Pueblo ritual and myth. 'Road' translates as 'channel for the life's breath' in Tewa, a Pueblo language (A. Ortiz, 1987, private communication). 'Life is a road; important spirits are . . .keepers of the roads, the life roads. All spirits or sacrosanct persons have a road of cornmeal or pollen sprinkled for them where their presence is requested' (Parsons, 1939, pp. 17-18). These roads can represent the road traveled by the people to the middle place from the shipapu, the place where they emerged from the worlds below (Parsons, 1939, pp. 310, 363). Sometimes the road is for the spirits of the dead to return to the shipapu (White, 1942, p. 177).

For the Keresan Pueblos, north is where Iyatiku, the mother of all, resides at the shipapu. An account of Keresan cosmology describes the importance of north and the road to the north (White, 1960). When the people came out from the worlds below 'they stayed near the opening at Shipapu for a time, but it was too sacred a place for permanent residence, so Iyatiku told them they were to migrate to the south.' They moved south and stopped at a place where they lived for a long time.

> When people died, their bodies were buried, but their souls went back to Shipapu, the place of emergence and returned to their mother in the fourfold womb of the earth . . . So every year, now, the souls of the dead come back to the pueblos of the living and visit their relatives and eat the food that has been placed for them on their graves and on the road to the north.

This 'road to the Shipapu' is described in another report as 'crowded with spirits returning to the lower world, and spirits of unborn infants coming from the lower world' (Stevenson, 1894, p. 67). This and other roads are frequently described as 'straight' (Stevenson, 1894, pp.31, 41, 145).

When a person dies in the Keresan and Tanoan pueblos, the officiant takes offerings that represent that person's soul to the north and deposits them in a canyon or a mesa crevice (White, 1973, p. 137). Ceramic vessels are frequently broken in rituals related to the dead (Parsons, 1939, pp.72,, 77; Ortiz, 1969, p. 54). Sometimes a vessel containing food which is 'the last meal of the deceased' is put on the road to the north or sometime it is 'killed' (broken at the rim) and then thrown by the officiant 'out to the north, the direction in which the soul . . . travels toward Shipapu' (White, 1942, p. 177).

Traditionally, the Pueblo people re-enact the creation and emergence events, especially at important solar times. As part of these ceremonies, they make ritual journeys to certain mountains, canyons, caves and lakes - places they regard as Shipapu openings (Ellis and Hammack, 1968, pp. 31, 33; Ladd,, 1983). These journeys may be as long as 500 km to and from the pueblo. Along the route, the ceremonialists leave offerings at shrines which are located on distinctive land forms, such as buttes, cone-shaped hills, ravines and springs. From a Keresan pueblo on the south edge of the prehistoric Chaco region, ceremonialists packed their burros with solar offerings and traveled north, stopping first at Chaco Canyon (Ellis and Hammack, 1968, p.32). They made offerings at a shrine on the south side of the canyon and then traveled to a shrine at Jackson Butte and finally to the shipapu, a small lake or spring in the San Juan Mountains. In Pueblo culture, the mountains are where the cloud beings, the spirits of the dead, reside (Parsons, 1939, pp. 172, 173).

For Jemez, a Tanoan pueblo, north is 'spiritually indicative of the mythical and ancestral homeland' (Weslowski,, 1981, p. 123), and the place of emergence is in the mountain range to the north of the pueblo. One of their most sacred shrines is located on its prominent peak. There the 'underworld chiefs make a pilgrimage... every June to begin the summer series of rain retreats and ceremonies' (Weslowski, 1981, p. 117). In the emergence and migration of this pueblo, the leader Fortease, upon emergence from the shipapu, chooses the direction 'towards the south' and then makes four roads for the people to travel on in search of their place of settlement (Parsons,

1925, pp. 137, 138). Fortease is reported to have made the roads by 'clearing away the brush'. Reference to two parallel roads occurs in Tanoan cosmology (Ortiz, 1969, p.57):

> True to the underlying message of the origin myth. . . the Tewa do begin and end life as one people. The term they use for the life cycle is poeh, or 'path', after the two different migration paths the moieties followed after emergence. Thus, at the beginning of life there is a single path for all Tewa.... it divides into two parallel paths and continues in that way until the end of life. At death the paths rejoin again and become one, just as the moieties rejoined in the myth of origin.

At the Zuni Pueblo, a pilgrimage is conducted every four years at summer solstice by 50 religious leaders to a lake, the Zuni 'village of the gods', the place where the spirits of all Zunis go after death (E. R. Hart, 1985, unpublished manuscript: 'The Zuni Indian tribe and title to *Kolhu/wala:wa* (Kachina Village)). Fires are lit along the route by one of the participants, the Zuni Fire God. Another important pilgrimage, to the Zuni Salt Lake, is on roads that have been described as very straight and with shrine- like sites similar to those on the Chaco roads (Kelley, 1984). Although for the Zuni, these sacred lakes and the origin place are not located to the north, north is associated with the 'undermost' of the below worlds (Stevenson, 1904, p. 25) and has primacy in the ordering of ceremonial events and religious leadership (Cushing, 1979, pp. 188-90). In the prayers and chants telling of their emergence and migration to the middle (i.e. Zuni), reference is made to four parallel roads: 'Hither towards Itiwana (the middle) I saw four roads going side by side.' (Bunzel, 1932a, p. 717.) One Zuni ceremony includes breakage by the religious leaders of ceramic vessels throughout the pueblo (Cushing, 1979. D. 321).

Long linear grooves are cut into the mesas near two present-day pueblos. Contact with these grooves is reported to help diagnose sickness in curing ceremonies, to help people to regain their strength and to help persons 'to cease yearning for the dead or absent and to keep them from returning in their dreams' (Parsons, 1939, p. 449). There are many references to running in Pueblo ceremony and myth, sometimes on north-south roads (Parsons, 1925, p. 119) and sometimes symbolic of emergent events on north-south parallel courses (Dutton and Marmon, 1936, p. 12); and in certain instances on ritually swept east-west tracks to aid the journey of the sun (Parsons, 1939, p. 547).

In several reports, canyons or deep holes are seen in myths or in the actual topography as leading to the shipapu (E. R. Hart, unpublished manuscript). Symbolic ladders connect with the underworld (Bunzel, 1932b, pp. 589, 590; Cushing, 1979, p. 132). At one Keresan Pueblo, the shipapu is described as (Lange, 1959, p. 416) 'the Lagune... to the north, beyond the "Conejos". . . very round and deep. Many streams flow into it, but it has no issue. Out of this Lagune came forth the Indians and in it dwells "Te-tsha-aa", our mother... The good ones return to her.'

The 'middle place', so important in Pueblo cosmology, is seen as the place of the convergence of the cardinal directions and the nadir and zenith directions (Ortiz, 1972, p. 142). Where these directions join is the sacred center for Pueblo people. This place is sometimes symbolically conveyed in the joining of ritual roads at the pueblo center (Goldfrank, 1962, p. 47). It is interesting to note that the cardinal directions in the Chaco architecture, and the north-south axis of the Great North Road, merge at a central ceremonial complex of the vast Chaco cultural province, Pueblo Bonito.

29.7 Conclusion

The Great North Road embodies many non- utilitarian aspects and has no clear practical destination. It displays a level of effort in its engineering and construction that is far out of proportion to any material benefits that could be realized from it. Its direction to the north and its linkage to the middle place of Chaco Canyon find echoes in much of the tradition of the historic Pueblos, where roads, and especially a road to the north, have intense symbolic value. We conclude that the Great North Road was conceived, in harmony with much of Chaco architecture, as a cosmographic expression uniting the Chaco world and its works with its spiritual landscape.

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CHACO ROADS

John Kantner

Introduction

The famous prehistoric roadways have an important role in research on the Chaco Anasazi. Not only do they provide insight into the development of the so-called "Chaco phenomenon," but the roads also pique the curiosity of the general public, as witnessed by the publication of a popular book on the topic (Gabriel 1991). The public and archaeologists alike are mystified by the great width and apparent length of roads in a culture that did not have wheeled vehicles or pack animals. The use of cutting-edge remote sensing technology to investigate the roadways has further stimulated interest in the topic (Lyons and Hitchcock 1977; Obenauf 1991). This curiosity, however, has had a dark side, for there has been a tendency to accept scenarios of road development and function without careful consideration of the available evidence. This brief paper hopes to contribute to the research on Chaco roads by providing a detailed description of what is known about this fascinating but controversial cultural feature.

Road Morphology

Archaeologists have focused on a large number of attributes in order to distinguish prehistoric Chaco roads from the many historic roads found in the region. Nials (1983; Nials et al. 1987) presents the most comprehensive discussion of road morphology that considers numerous factors, including width and depth, roadbed preparation, longitudinal profile, topographic expression, and border elements. The following discussion focuses on those features that characterize most identified Chaco roads.

Chaco roads are notoriously wide, with most ranging 8-10 m in width, but there is considerable variability. Nials (1983) notes that the larger, well-defined roads located near major sites average 9 m in width, while isolated "spur" roads tend to measure half this. A single roadway can be much wider near an architectural site, but then narrow to a mere 2 m and exhibit few distinguishable features in remote areas where the terrain is more restrictive. Determining the depth of Chaco roads has also proven to be difficult. Many suspected roads exhibit significant amounts of gullying, while border elements such as large berms exaggerate the actual depth below ground level. In fact, the majority of

suspected roadways have no topographic expression at all, either because they were never excavated into the surface during road construction or because natural processes have destroyed them (Nials 1983:6-15). Less frequent are roads that were excavated to hard-packed soil to form a roadbed; these range 10-50 cm in depth (Vivian 1995:17). A few road segments were actually excavated into sandstone bedrock, apparently in order to delineate the road.

Nials (1983:6-21) notes that one of the most striking characteristics of Chaco roads is the highly variable elements that often border the roadways. Border elements range from spaced stones to crude masonry walls to large earthen berms. Most common is a low earthen or stone curb that likely formed during road preparation or cleaning (Vivian 1995:18). More unusual elements include walls of shaped masonry and grooves that were cut into sandstone to define roads as they traversed bedrock (e.g., Windes 1991). Most borders do not extend beyond 50 m, and a single road segment may have several different border elements. Some roads may exhibit a border only on one side, or two different elements may exist on opposite sides of a road.

Longitudinal profiles of Chaco roads illustrate that they were normally "terrain-following" rather than graded. However, there are several examples where roadways were leveled by removing fill from high points, filling in low points, or using a cut-and-fill method utilizing both techniques (Nials 1983:6-10-6-12). More extensive treatments such as raised beds, stairways, or ramps are even more unusual, and those that have been identified are primarily located in and immediately around Chaco Canyon (Vivian 1995:18-19). Stairways are either cut directly into sandstone cliffs, or the steps are constructed of masonry and fill. Ramps along Chaco roads do not usually completely ascend obstacles, but instead provide platforms for stairways or foot- and hand-holds (Nials 1983:6-12).

One of the most often cited characteristics of Chaco roads is their linearity. Many segments proceed in a straight line, often disregarding local topography. However, as Nials (1983:6-27) describes, "reportedly straight roads actually consist of a series of approximately aligned straight segments, which together often produce a straight trend for a larger portion of the road...Major course adjustments are usually in the form of an abrupt change (dogleg)." In a few cases, roads employ ramps or staircases to go over obstacles rather than going around them. The North Road is often considered to be the best example of this linearity, for it proceeds on a nearly perfect northerly direction for 50 km. However, perceptions of linearity can be colored by the straight lines that archaeologists draw on maps and label as "projected alignments" when the actual roadway cannot be identified (e.g., Stein 1983:Figure 8-4). Furthermore, there are numerous examples where roadways do curve or go! around obstacles, such as the segment near Standing Rock Herradura (Nials et al. 1987:110), the roadway south of Muddy Water (Nials et al. 1987:140), and the Ahshislepah Road between Escavada Wash and Ahshislepah Wash (Stein 1983:Figure 8-7; see also Windes 1991:Figure 11.3). Winding road segments are especially common in areas outside of the relatively flat San Juan Basin. Despite these

caveats, however, most Chaco road segments do tend to maintain a high degree of linearity.

An especially puzzling characteristic of Chaco roads is the construction of parallel road segments, which have been identified at places along both the North and South Roads. An extreme example is located north of Pierre's Ruin on the North Road (Nials 1983:6-29). Here, four segments spaced less than 40 m apart appear to be almost perfectly parallel. Little is known about these strange features, but evidence does indicate that one of the parallel segments typically exhibits significantly more use than its counterpart.

Road Accoutrements

A variety of cultural features are commonly associated with suspected Chaco roads. These features are usually located adjacent to roadways, and their function was undoubtedly closely tied to the function of Chaco roads. However, definitively establishing the relationship between road-associated features and the roads is often difficult since the roads cannot be easily dated. In fact, many cultural features located on Chaco roads were abandoned before the roads were constructed (e.g., Casa Patricio on the South Road) or built after the Chaco period (e.g., Gray Ridge Compound on the alleged Coyote Canyon Road). This serves as a warning that we cannot automatically assume that features physically located near roads were functionally associated with the roads.

Nials et al. (1987) present the most detailed examination of road-associated features. They list seven architectural forms common to Chaco roads: herraduras, avanzadas, zambullidas, earthworks, platforms, great houses, and great kivas. This discussion will focus on the first five; the latter two are discussed separately in another online paper. Another feature, the Windes' circular shrine, is also often considered to be associated with Chaco roads, but a recent study suggests that these small shrines are not part of the road complex (Kantner 1997).

Herraduras are circular to horseshoe-shaped enclosures that usually measure 5-7 m across. The low masonry walls are normally open on one side, and the majority of examples are oriented towards the east. These structures almost always open onto the surface of Chaco roads, and they tend to be situated at topographic breaks, although Nials et al. (1987:13) note that not all breaks along roads exhibit herraduras. Both the zambullida and the avanzada categories are more vaguely defined. The former are generally considered to be masonry structures that are intermediate to herraduras and great houses. The massive walls are usually lower than those found in great houses, but like great houses, they tend to exhibit multiple rooms. The avanzada is a catch-all category that includes "minor architectural perturbations in the vicinity of prehistoric roads" (Nials et al. 1987:14). Both of these categories may well be variations of the herradura.

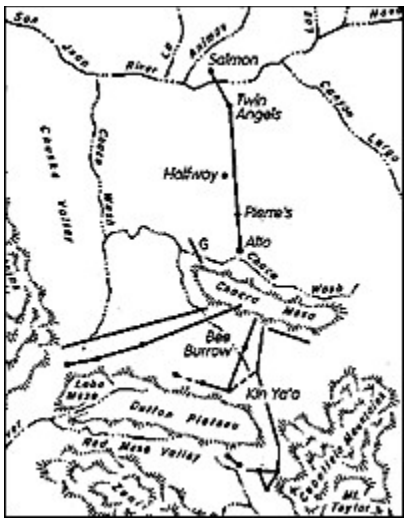
Earthworks are often physically associated with roads as they approach great houses. These features, composed of mixed midden and fill, appear to be placed so as to delineate

an area surrounding a great house. They may therefore be more closely related to great house function than to road function, but they do serve to clearly delineate where roads enter great house sites. Similarly, a few large platforms composed of earth and rubble have been associated both with great house features and with roads. These platforms are so rare that no clear patterning can be identified (e.g., Vivian 1995; Nials et al. 1987:16).

One additional feature should be considered when discussing Chaco roads: associated artifacts. In general, few artifacts have been found on the roadways, and there seems to be considerable variability in the quantities and types of artifacts found on different roadways. For example, Kincaid et al. (1983:9-76) note that high percentages of imported and decorated wares are associated with the North Road along with a preponderance of jars. In contrast, the South Road is characterized by comparatively higher proportions of utility wares and local ceramics and more bowls. Similar frequencies were identified for the short road segments around Pueblo Alto, leading Windes (1991:124) to conclude that "most canyon ceramic breakage along roads was related to jar transport" while noting that "water would be a major requirement for inhabitants [of Chaco Canyon.]" Non-ceramic materials are extremely uncommon on Chaco roadways, as are domestic features such as hearths (Nials et al. 1987:25).

Regional Distribution

Since the early 1980s, nearly 100 separate road segments have been associated with the Chaco Anasazi. Early archaeological discussions of these roads tended to consider them as long, continuous routes originating in Chaco Canyon and connecting with outlying areas on the edge of the San Juan Basin (e.g., Mathien 1991:Figure 10-2). However, intensive investigations of several of these alleged roadways have demonstrated that many are actually historic roads, while others are short segments that do not extend as far as originally projected (e.g., Kincaid et al. 1983; Nials et al. 1987). This research has led to a new perspective that sees most Chaco roads as having been primarily short segments associated with great houses, while few roadways traversed long distances (Roney 1992).



There are nine major routes that some scholars contend were Chaco roadways extending substantial distances. Of these, only two have been at least partially confirmed through aerial and ground reconnaissance (Vivian 1995:11). The North Road, which runs north out of Chaco Canyon and ends at Kutz Canyon, is regarded by many scholars as the best example of a lengthy Chaco roadway. Although its 50-km length has been surveyed on the ground, intensive mapping was conducted on only a small portion of this route, from Pueblo Alto to Pierre's Ruin Complex (Stein 1983: Figure 8-4). These investigations indicate that most of the route consists of numerous short segments. The remainder of

the North Road in this area assumedly has been destroyed by natural processes or was never formally defined using a constructed roadbed. A similar situation exists for the South Road, which was also checked on the ground (Nials et al. 1987). Like the North Road, the 51-km South Road projected from Chaco Canyon to Hosta Butte is characterized by segments of constructed road separated by long stretches where no roadway could be identified. Although the separate segments for both major roadways seem to align on the projected routes, it is important to remember that neither route can be verified to have been a long, continuous, constructed road.

Further archaeological investigation has demonstrated that several of the remaining projected routes are not the lengthy Chaco roadways they were once believed to be. For example, the alleged Southeast Road from Chaco Canyon to the San Mateo Ruin and the Mexican Springs Road to the west could not be verified despite intensive ground survey (Nials et al. 1987:20). For other roadways, only short segments of constructed road have been identified along their proposed routes. Examples include the Coyote Canyon Road extending from Chaco Canyon southwest into the San Juan Basin and the Ahshislepah Road running northwest from the canyon to Black Lake (Nials et al. 1987). Whether the short segments located along these routes confirm the presence of lengthy roadways connecting Chaco Canyon with other parts of the San Juan Basin is still uncertain.

While confirming the existence of long, continuous roadways emanating from Chaco Canyon has proven to be a difficult endeavor, archaeologists have identified an increasing number of short and seemingly unconnected road segments located throughout the northern Southwest. Roney (1992) recently listed all of the prehistoric roads associated with the Chaco Anasazi. Many of the 70 road segments that Roney lists are concentrated in and around Chaco Canyon (see also Windes 1991), but probable segments are also found as far away as eastern Arizona, southwestern Colorado, and southeastern Utah. The number of these disjointed segments keeps growing; as many as 21 new segments were recently identified in the area around Aztec Ruin (Stein and McKenna 1988).

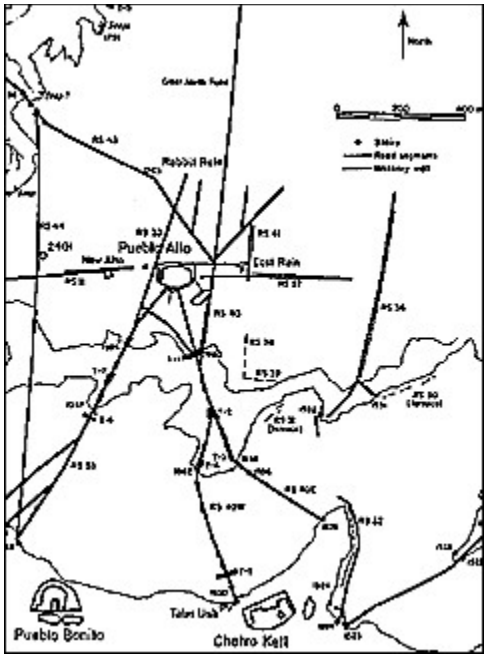
Most short road segments are associated with great houses or great kivas, with one terminus often contiguous to the structure. These segments then seem to disappear after proceeding a short distance of usually not over 3-4 km. This could indicate one or a combination of three scenarios:

1) the roads once extended further, but they have since been destroyed;

2) formally constructed roads never extended any further than the extant termini, but the routes projected beyond the constructed roadway were still used;

or 3) the roads never extended further, and people never traveled beyond the current termini. In support of the latter scenario, numerous short segments proceed short distances to springs, shrines, or other local features (e.g., Windes 1991:120-122; Kantner 1997). Fowler and Stein (1992) also note that many short road segments in the area south of

Chaco Canyon appear to have connected occupied great houses with older, abandoned Chaco architecture located nearby, although this pattern may postdate the Chaco period.



The overall picture of prehistoric road distribution in the northern Southwest seems to indicate two different types of roadways. The first, characterized best by the North and South Roads, is the long "artery" extending from Chaco Canyon to outlying areas on the edges of the San Juan Basin. The second type of road is the segment that seems to emanate from a great house or great kiva and extend only a short distance. The latter is associated both with architecture in Chaco Canyon itself and with the numerous great houses and great kivas scattered over the northern Southwest.

Dating Chaco Roads

Developing a clear understanding of the function of Chaco roads requires accurate dates for the various segments. However, dating roadways has proven to be difficult. In general, few artifacts can be definitively associated with outlying roadbeds, leading archaeologists to rely on the dates of nearby architectural features to determine when roads were in use. The result is that the proposed dates for most Chaco roads are not very precise or dependable.

Kincaid et al. (1983:9-34-9-46) attempted to date the North Road, South Road, and the Ahshislepah Road using mean ceramic dating on small collections associated with each roadway. They concluded that the South Road generally dates to the A.D. 900s, while the North and Ahshislepah Roads date to the late A.D. 1000s. Recently, Windes (1991:125-126) employed a more accurate multidimensional scaling analysis to date the relatively artifact-rich road segments in Chaco Canyon. The results indicate that most of these roads date to the latter part of the A.D. 1000s and the early A.D. 1100s. Windes' study included a short segment of the South Road, and in contrast to the 1987 study, he concluded that this segment dates to the late A.D. 1000s. The general impression from the few studies that have dated Chaco roads is that a few may have been built in the early A.D. 1000s, but that the majority were constructed after A.D. 1050 and were mostly unused after A.D. 1150 (see also Nials et al. 1987:25).

Conclusions

Research on prehistoric Chaco roads is currently undergoing major changes. Because many of the alignments identified during aerial reconnaissance are in fact historic roads (e.g., portions of the Southeast Road), there is now less of a tendency to project alignments all over the San Juan Basin without first evaluating the evidence on the

ground. Archaeologists realize that the "connect-the-dots" approach is dangerous in the face of increasing numbers of identified segments over a larger area of the Southwest. As a result, a series of new questions are beginning to emerge, a few of which are summarized here:

1) What makes a prehistoric alignment a "Chaco road?" Are there roadways that were not associated with the Chaco Anasazi, such as the Salt Mother Road near Zuni or the post-Chaco "roads through time"?

2) How is each road segment related to the overall cultural landscape? Most Chaco roads have been investigated using a narrow survey corridor, but clearly other nearby settlement patterning is relevant to understanding the function of roads.

3) Did all of the projected road segments actually exist? The tendency has been for archaeologists to explain missing road segments by alluding to various geomorphic processes. Scholars should more carefully consider where projected roadways should still appear, where they might be buried, and where they should have eroded away.

These and many more questions remain for archaeologists to consider as the investigation of Chaco roadways progresses.

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CONFLUENCE CREATIONS

U.S. DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

ePlanning

DOI-BLM-NM-F010-2017-0042-EA (Flats #1 Natural Gas Well and PGA Unit Access Road and Pipeline Development Project)

NEPA Project Summary

NEPA #:	DOI-BLM-NM-F010-2017-0042-EA	**Status:**	Preparation and Planning
Project Name:	Flats #1 Natural Gas Well and PGA Unit Access Road and Pipeline Development Project	**Decision Date:**	
EIS OEPC #:		**FONSI Date:**	
Applicant:	Dugan Production Corporation		
Case File Number/: Project Number			
Start Date:	02/15/2017		
End Date:			

Project Description:
Dugan Production Corporation (Dugan) proposes to construct a vertical, 750 foot deep, natural gas well, as well as multiple access roads and pipelines on public lands managed by the Bureau of Land Management's Farmington Field Office (BLM-FFO) and State of New Mexico. Dugan has submitted right of way (ROW) grants and sundry applications for the portions of access roads and pipelines on lands managed by the BLM-FFO and will submit an Application for Permit to Drill for the Flats #1 well; Dugan is requesting ROW grants from the State of New Mexico for portions of access roads and pipelines on State of New Mexico lands.

Project Location:
Township 23N, Range 11W, Sections 4, 6, 9, 15, and 16, San Juan County, New Mexico Township 24N, Range 11W, Sections 13, 32, 33, 34, 35, and 36, San Juan County, New Mexico

Project Lead:	Eric Creeden		
Phone Number:	(505) 564-7710		
Email Address:	ecreeden@blm.gov		
Office(s):	Farmington FO	**Lead Office:**	Farmington FO
Counties:	San Juan		
Program(s):	Fluid Minerals (Oil & Gas, Tar Sands, Oil Shale)	**Subprogram(s):**	Oil & Gas
Cooperating Agencies:			

Documents:

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Last Updated: 05/02/2017 17:08:24 MDT

Impacts of Oil and Gas Drilling on Viewscapes and Soundscapes at the Chaco Outlier of Pierre's, San Juan County, New Mexico

Ruth M. Van Dyke
February 16, 2017

INTRODUCTION

The National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA) stipulate that Federal agencies take into account not only direct but also indirect and cumulative impacts when contemplating energy development. Oil and gas production in the Mancos Shale of northwest New Mexico are creating indirect and cumulative impacts to the archaeological and cultural heritage of the ancient Chacoan landscape. The Chaco Culture National Historical Park and its outlying Chaco Protection Sites are recognized as a UNESCO World Heritage Site. Archaeological investigations indicate that viewscapes and soundscapes were integral to Chacoan life a millennium ago, yet we are only beginning to study these less tangible dimensions of the Chacoan polity. Piecemeal cultural resource management practices do little to help manage or protect less quantifiable dimensions of the landscape, such as viewscapes and soundscapes. In November 2016, I visited the Pierre's Chacoan outlier, which is protected from development as part of the Chaco Protection Sites, to assess the impact of oil and gas production in the surrounding area on the viewshesd and soundscapes of the community. In the following paper, I report on the results of this investigation. I then recommend some future actions for the BLM and BIA to avoid repeating and amplifying the problems described herein.

My investigation, reported here, indicates that although the BLM has taken care not to place drill rigs on top of surface archaeological sites, there are major indirect and cumulative impacts to the resources – specifically, to the viewscapes and soundscapes. Sadly, rather than a sacred landscape and part of a UNESCO World Heritage Site, the Pierre's community today resembles an industrial park. I urge the Bureau of Land Management and the Burea of Indian Affairs to develop specific guidelines and criteria for mitigating the indirect and cumulative impacts of oil and gas production on viewscapes and soundscapes. Future leasing should not proceed without development of a Master Leasing Plan that takes viewscapes and soundscapes into account. Ideally, such a plan would involve Class III survey at a landscape level across the potentially affected areas, and avoidance or better mitigation of indirect and cumulative impacts.

VIEWSCAPES AND SOUNDSCAPES IN ARCHAEOLOGY

The sense of sight is fundamental to human learning, navigation, and being in the world. Phenomenologists, landscape archaeologists, and GIS-based scholars are among those interested in the study of visibility — who can see whom, and what can be seen — on the ancient landscape. GIS databases and software are excellent tools for examining and modeling visible connections over large areas (e.g., Bernardini et al. 2013; Bernardini and Peeples 2015;

Connolly and Lake 2006; Fisher et al. 1997; Johnson 2003; Lake 2007; Llobera 1996, 2003, 2007; Waldron and Abrams 1999; Wheatley 1995; Wheatley and Gillings 2002). GIS-based visibility studies usually focus on determining lines-of-sight (the reciprocal ability of people at two locations to see one another), viewsheds (the surrounding terrain and features that can be seen from a single location), and viewnets (networks of locations connected by lines-of-sight). However, GIS cannot tell us whether visibility was meaningful (Fitzjohn 2007; Frieman and Gillings 2007; Hacıgüzeller 2012; Llobera 2007). Although remote aerial data can be useful, archaeologists are ultimately interested in what ancient peoples could see from a human perspective. Thus, there is no substitute for on-the-ground field-based phenomenological investigations focused on viewscapes, or what can be seen by the human eye from a specific location. Phenomenologically-oriented archaeologists have long focused on the visual dimensions of past places (e.g., Barrett and Ko 2009; Brück 2005; Cummings et al. 2002; Cummings and Whittle 2004; Day 2013; Hamilton and Whitehouse 2006; Scarre 2002; Tilley 1994, 2004, 2008, 2010; Van Dyke 2007).

The study of ancient soundscapes is in its infancy (Scarre and Lawson 2006). Recently archaeologists have begun looking seriously at soundscapes, as evidenced by a recent issue of *World Archaeology* (Schofield 2014). We can define a soundscape as "any sonic environment, with particular emphasis on the way it is perceived and understood by an individual or by a society" (Truax in Elliot and Hughes 2014:306). Working in Upper Paleolithic caves, Till (2014) argues that it is important to consider what he terms the "acoustic ecology" of an archaeological site. However, it is particularly challenging to study archaeo-acoustics in open-air sites (D'Errico and Lawson 2006).

VIEWSCAPES AND SOUNDSCAPES AT CHACO

The Chaco phenomenon of northwestern New Mexico in the American Southwest is centered on, but not limited to, Chaco Culture National Historical Park. Chaco Canyon was materially connected with outlying regions through architecture, artifacts, and roads. Between A.D. 850 and 1150, inhabitants developed Chaco Canyon into a focal point for ritual, political, and economic activities that brought together people from diverse outlying settlements. The human eye can see for great distances on this horizontal, high desert terrain, which is punctuated by landmarks such as mountain peaks and mesas. Contemporary descendant communities are concerned with visibility, and archaeological evidence suggests these concerns are of great antiquity.

In the American Southwest, many high places are visible and intervisible by virtue of the elevated topography and the open skies. For Navajo and Pueblo peoples past and present, prominent visual landmarks help with wayfaring and contribute to the creation of a sense of community (Bernardini and Peeples 2015). Oddly shaped mountain peaks, buttes, and volcanic plugs figure prominently in oral histories (Duwe 2011; Fowles 2009; Kelley and Francis 1994; Linford 2000; McPherson 1992, 2001; Ortiz 1969, 1972). It is likely that intervisibility helped weave together the fabric of the Chacoan world (Van Dyke et al. 2016).

The Chaco phenomenon is characterized by highly visible, monumental structures called great houses, which are often, but not always, situated on high places. During the Classic and Late Bonito phases, builders often positioned outlier great houses in highly visible locations on

elevated terrain, at mesa edges, or teetering precipitously atop badland spires. For example, builders erected the Guadalupe great house on an isolated sandstone butte high above the Rio Puerco of the East, approximately 90 km southeast of Chaco Canyon (Baker 1983; Baker and Durand 2003; Pippin 1987). Although only one story high, the great house commands a 360º view of the surrounding terrain, including Cabezon Peak, and sits above a community of 30–40 small sites on the valley floor.

Archaeologists also have documented a range of smaller features — shrines, stone circles, herraduras, and cairns — that often were sited deliberately in locations of high visibility. In a recent study, Van Dyke et al. (2016) used GIS-based viewshed and viewnet analyses to argue that great houses on high places create an intervisible network centered on Chaco Canyon, and that shrines and related features play a role in creating this network. However, our study is incomplete, as many areas of the San Juan Basin that are likely to contain shrines on high places have not been systematically investigated.

There are many possible reasons why Chacoans placed architectural features on high places, and these are not necessarily mutually exclusive. People standing on these locations may have intended *to see* (as in surveillance). They also may have intended *to be seen* (as in signaling group membership or political authority) by the surrounding community. And, people may have been working to facilitate visual communication within communities, as well as between communities and Chaco Canyon. In a few cases where fine-grained outlier community data are present, scholars have employed GIS line-of-sight and viewshed analyses in attempts to untangle these issues, but results are mixed and contradictory (see for example Dungan 2009; Ellenberger 2012; Hayes and Windes 1975:154–155; Kantner and Hobgood 2003; Robinson et al. 2007). Surveillance, communication, and a shared sense of identity are three possible reasons for local outlier great house visibility, and each has different implications for the nature of the Chacoan polity. As noted in the White Paper (Van Dyke, Heitman, and Lekson 2016), at present we lack the high-resolution outlier community data that would be necessary to continue to evaluate these hypotheses. Clearly, more work is needed, in more outlier communities, to evaluate how these processes unfolded across time and space. The answers have implications for our understanding of the nature of the Chacoan sociopolitical system.

Few scholars have attempted to study acoustics in Chacoan communities. Stein et al. (2007) conducted experiments in central Chaco Canyon and determined that the north canyon walls are excellent conductors of reverberative sounds such as whistlers and drums. Weiner (2015) suggests that bells, rattles and drums could have been particularly important for ceremonies and processions in Chaco Canyon. Archaeoacoustics in Chacoan communities, however, remain even more woefully understudied than viewsheds, viewscapes and visibility.

Clearly, viewsheds, viewscapes and soundscapes are potentially important lines of evidence that may have much to contribute to our understanding of the Chacoan past. However, because these kinds of studies are relatively new in archaeology, we lack robust legislation to help landowners and agencies figure out how to evaluate, study, and mitigate potentially damaging effects from oil and gas drilling or other types of destructive development. Nonethless, NEPA stipulates that Federal agencies take into account the indirect and cumulative effects that such development has on the landscape. I turn now to a case study – the Pierre's Chacoan community – to illustrate the kinds of impacts and damage that ensues

when drilling has proceeded in the absence of a Master Leasing Plan, and without due attention to indirect and cumulative effects.

PIERRE'S OUTLIER

The Chacoan outlier of Pierre's is situated 19 km north of Chaco Culture National Historical Park, on the southern edge of the break between the Chaco Slope and the mesas and badlands of the Denazin and Ah-shi-sle-pah Washes on the USGS 7.5' Pueblo Bonito NW quadrangle. The outlier is clearly articulated with the Great North Road, which leaves the vicinity of Pueblo Alto and, in a series of stages, heads north to Kutz Canyon, 50.5 km distant (Figure 1 – Map forthcoming). Powers et al. (1983:94-122) and Harper et al. (1988) both conducted intensive survey and recording in the Pierre's community during the 1980s. The community was also investigated by the Chaco Roads Project (Stein 1983:8-7 - 8-9) and the Solstice Project (Marshall and Sofaer 1988). The Pierre's community is spatially distributed over an area of approximately 1.6 sq km. Powers et al. documented 17 Ancient Pueblo sites in the surrounding community, and Harper et al. added an additional nine. All but one small Basketmaker III - Pueblo I artifact scatter date from the Late Pueblo II or Early Pueblo III period.

There are several Bonito style structures in the community. The "Acropolis" cluster consists of two core-and-veneer structures (LA 16509, House A and LA 16508, House B) atop a large butte near the center of the community. House A contains an estimated 15 ground floor rooms and 3 enclosed kivas over an area of 255 sq m. House B is located 30 m to the north/northeast of LA 16509. House B contains an estimated 13 ground floor rooms and a single enclosed kiva and covers 315 sq m. An additional structure, House C (LA 35423), is an isolated room located approximately 5 m northwest of LA 16509; although the room was given a separate site number by the Chaco Roads Project, Harper et al. (1988:119) contend that House C should be considered part of LA 16508.

"El Faro," or "The Lighthouse," consists of a pinnacle on the valley floor that is topped by a small, 3- room structure including an exposed hearth (LA 16514, Powers et al.'s P-5). At the base of this pinnacle, there is another massive core-and-veneer building covering 505 sq m, estimated to contain 18 rooms and one enclosed kiva (LA 16515, Powers et al.'s P-6). A neighboring pinnacle 80 m ESE of El Faro hosts at least two small roomblocks, LA 16518 (P-9) and LA 16519 (P-10). LA 16519 is situated directly on top of this second pinnacle and might be considered to represent an "atalaya" or watchtower, following Marshall and Sofaer (1988).

There is little doubt among Chacoan researchers that the Pierre's complex is a ritual landscape, situated here because of its visibility and position vis à vis the Great North Road. Stein (1983) traced the North Road to within 300 m of El Faro, and all previous researchers consider enclosures on the south side of El Faro as potentially road related. It is logical for Chacoans to have positioned a major site complex in this location, because this is the first major topographic break in the landscape moving north from Chaco Canyon. The pinnacles and butte of Pierre's are visible from Pueblo Alto, and vice versa. Chacoans likely engineered road segments using backsights, and they could have oriented buildings and roads to the sun with a simple gnomon device (Lekson 1999). However, road construction would have required a clear line of sight, as is possible between Pierre's and Pueblo Alto. Gwinn Vivian and Doug Palmer have conducted experiments with mirrors flashed in the sunlight to establish line-of-sight connections between Pierre's and the canyon great houses of Pueblo Alto and Tsin Kletsin. I participated in one of these experiments in September 2015. The hearths atop the two pinnacles (El Faro, LA 16514, and the atalaya, LA 16519) suggest that the Chacoans were, indeed, interested in signaling between

these locations. Looking north along the Great North Road past Pierre's the next topographic break is Carson Divide (Marshall and Sofaer 1988) which is also topped by a potential signaling feature. Where great house communities are situated along engineered Chacoan road segments, it is likely that localized ritual processions may have taken place. Marshall (1997), for example, suggests that Chacoans processed north along the Great North Road to deposit vessels (and perhaps, symbolically, the dead) in Kutz Canyon. Such possibilities are understudied and could benefit from experimental reconstruction.

The importance of the Pierre's landscape for the Chaco phenomenon has been recognized for 35 years. When Chaco Culture National Historical Park was created on December 19, 1980 (PL 96-550 Title V), the legislation also included "Thirty-three outlying sites … hereby designated 'Chaco Culture Archaeological Protection Sites'" (Sec 502b), recognizing "…the potential for conflicts between resource preservation and energy development" (JMP 1983:1). The Protection Sites are jointly administered under a Joint Management Plan (hereafter, JMP) by Federal and State agencies and the Navajo Nation (JMP 1983, amended 1990). On December 8, 1987 Chaco was accepted and inscribed on UNESCO's World Heritage List. The World Heritage listing acknowledged the geographic scale of ancient Chaco by including some Protection Sites, including Pierre's. Both the JMP and the World Heritage listing noted the potential for future conflicts between energy development and site protection. Sadly, such conflicts are much in evidence on the Pierre's landscape, as I will demonstrate in what follows. A pumpjack, Dugan Production Corp Hoss Com #95, is located just outside the Pierre's community only 650 m southwest of the butte, and the noise of this machinery is audible within the outlier community.

METHODS

Any assessment of the visual and aural nature of an archaeological site must incorporate an element of direct human observation. I visited the Pierre's community on November 25, 2016 – a cold, clear, sunny, late autumn day. Because the Pierre's sites – particularly LA 16509 (House A), LA 16508 (House B), LA 16514 (El Faro), and LA 16519 (the atalaya) – are very likely to be significant in terms of visibility along the Chacoan road, I chose these 4 locations for 360 degree viewscape investigation. I also included LA 16515, the large Bonito style structure at the base of El Faro on the basin floor. Each of my 5 viewscape locations is found on this map (Figure 2).

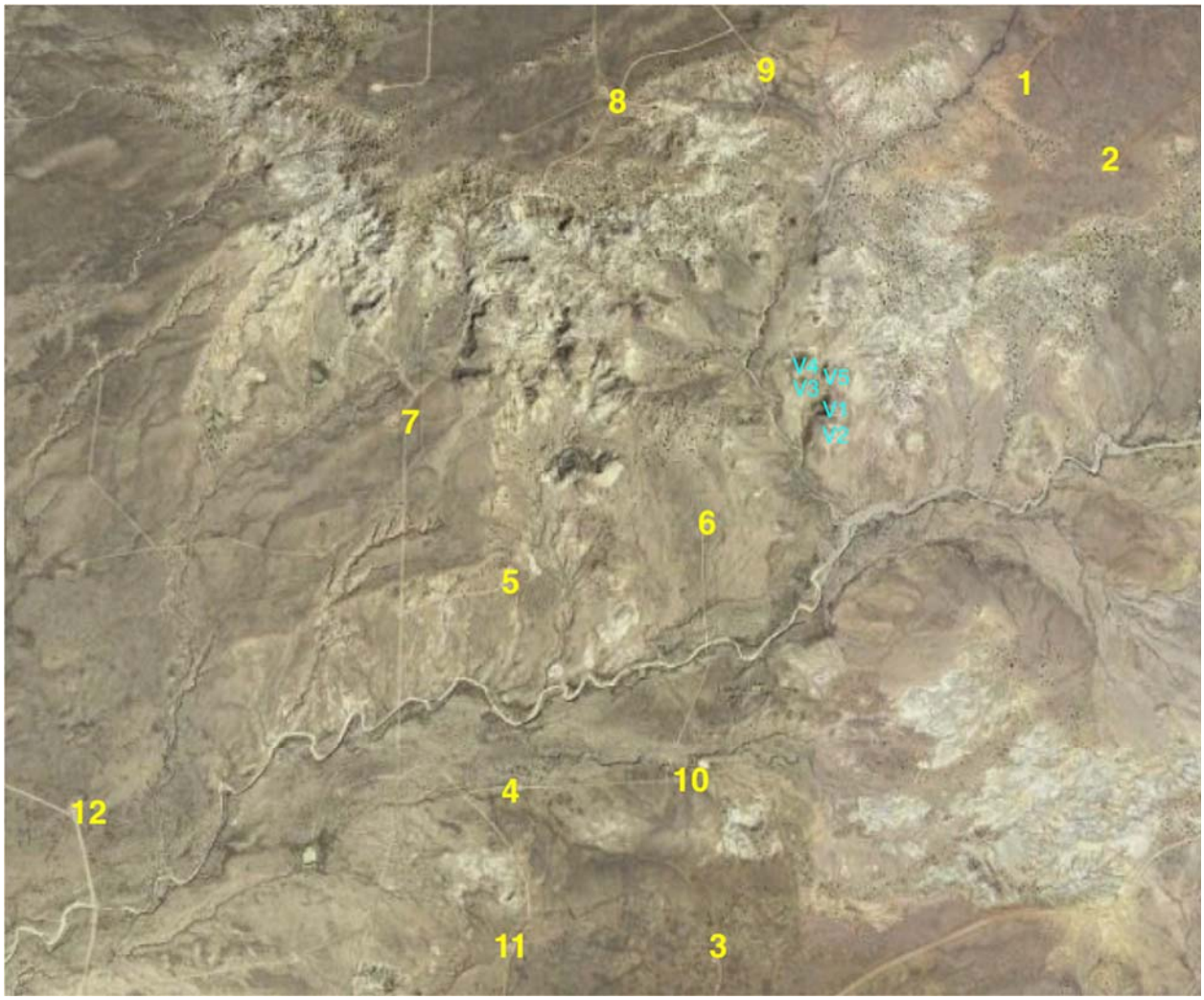

Figure 2: The Pierre's Community: Locations of Viewscapes 1-5 and Pumpjacks 1-12.

At each of these 5 locations, I determined cardinal directions using a Silva Ranger compass oriented to magnetic north. I then recorded the 360° viewscapes at each of these locations using three techniques: still photography; video photography; and drawings. I used an iPhone 6 with a 29-mm lens and 8 mega-pixel resolution to capture a series of still photographs in 360° circumference from each of the 5 locations. I used the same iPhone 6 to shoot high definition (1080 pixel) video in 360° at 60 frames/second. I used a graphic method of field recording developed by Hamilton and Whitehouse (2006) to create 360° circular drawings of the viewscapes from each location (Appendix A). These drawings include 3 sight horizons (near distance, middle distance, and final horizon). Within each horizon, and using the compass for accuracy, I noted major topographic features, architectural features, and oil and gas drilling features. I numbered the pumpjacks within the viewscapes from #1 to #12. Back from the field, I used my collected data to create 5 short videos in iMovie 10.1.4. These videos, labeled Viewscapes 1, 2, 3, 4, and 5, are available as mp4 video files at https://www.dropbox.com/sh/b3xbu93tnxn35xc/AABiARKk96SsT9H065wjKgsfa?dl=0.

At each of the 5 locations, I also attempted to record the decibel intensity of nearby drill rig noise (audible in the community) using a Roland Edirol R-09HR portable sound recorder with internal microphone. This was not particularly effective in the morning, due in part to 5-10 mph winds, and due to the low and fluctuating frequencies of the drill rig noise. In the afternoon, the wind died down, and I successfully used the recorder to capture the low hum and occasional backfire of the nearby drill rig, Hoss Com #95. For quantifiable results, future endeavors should utilize an industrial grade sound sensor or decibel meter.

RESULTS

Viewscape 1 records the 360 degree view from the highest point on LA 16508, Pierre's Great House B, and Viewscape 2 records the 360 degree view from the highest point on LA 16509, Pierre's Great House A. The two viewscapes are similar. There are a total of 12 pumpjacks visible. To the north, there are two pumpjacks on the horizon (#1 and #2); the closest of these is approximately 900 m away. There are also three drilling tanks. To the northwest, pumpjack #9, which is painted camouflage colors, is visible on the horizon, together with a drill tank; pumpjack #7, which is dark red, stands out against yellow caprock and is visibly moving – it is also accompanied by a tank on the horizon. To the west, pumpjack #7 moves up and down on the horizon. To the southwest, I can see the knob on the other side of the Pierre's community with the Chuska Mountains on the far horizon, and White Rock visible in the foreground. White Rock is an important relay point for line-of-sight connections from Chaco to the outliers in the Chuska Valley. There are two pumpjacks labeled #10 and #12 visible on the valley floor just south of the knob. On the valley floor 650 m to the southwest is pumpjack #6, or Hoss Com #95. Looking across the landscape towards Chaco Canyon, there is a whole string of pumpjacks in view positioned along at least two rig roads: # 5, 12, 11, 4, and 3. Behind them, the major topographic landmarks of Chaco Canyon all visible to the south: West Mesa, Hosta Butte, South Gap, South Mesa, Fajada Butte, and Chacra Mesa. It is possible to flash mirrors between this location and Pueblo Alto as well as Tsin Kletsin. To the east on the far horizon there are a few tanks as well as a Navajo settlement. It was very windy in the morning when I shot Viewscapes 1 and 2, and I was unable to record any sound from this location over and above the wind.

Viewscape 3 records the 360 degree view from LA 16515, the large masonry house on the valley floor, at the base of the El Faro pinnacle. The closest pumpjack to the community, Hoss Com #95, is not visible from this point but it is audible, particularly when the engine backfires, which happens every couple of minutes. We thought at first someone was shooting, but it turned out to be the backfire. Because LA 16515 is on the valley floor, there are only 3 pumpjacks visible from this spot (#3, 4, & 8), but all 3 can be seen bobbing up and down on the horizon. The view to the north is truncated by the pinnacle. To the east is the neighboring pinnacle with LA 16519 (Viewscape 5). Beyond this pinnacle, the view to the east is effectively truncated by badlands topography. The large butte crowned by Great Houses B and A, or LA 16508 and LA 16509 is to the ESE. Looking towards Chaco Canyon to the SSE, I can see South Mesa, South Gap, West Mesa, and Hosta Butte. Pumpjack #3 is bobbing up and down on the horizon in front of South Mesa. Looking to the south, pumpjack #6 (Hoss Com #95) is blocked from view by a swale. However, as the wind has died down, I can clearly hear the engine

puttering as well as the occasional backfire. Looking to the SSW towards Little Hosta Butte and Dalton Pass, pumpjack #4 is bobbing up and down on the horizon immediately in front of Dalton Pass. To the west, the local topography blocks most of the view, with the Chuska Mountains partially visible on the far horizon. However, to the NNW, pumpjack #8 is clearly visible on the horizon, again, bobbing up and down on the horizon.

Viewscapes 4 and 5 record the 360 degree views from the sites at the tops of two pinnacles – El Faro (LA 16514) and the atalaya (LA 16519), respectively. When I recorded these viewscapes, it was early afternoon, and the sun angle was low and to the south. There are 9 visible pumpjacks from these locations. To the north, I can see pumpjacks #1 and #2; #1 is on the horizon 850 m away, and #2 is in the middle distance just under the horizon (Figure 3).



Figure 3: Pumpjacks 1 and 2 looking north from the atalaya.

To the east, the badlands topography blocks the long-distance horizon, although in the far distance, buildings and vehicle on the horizon represent a Navajo settlement. To the ESE is the large butte crowned by the two great houses A and B, or LA 16508 and LA 16509. To the south is the landscape of Chaco Canyon, with Mount Taylor, South Mesa, South Gap, Hosta Butte, West Mesa, and Little Hosta Butte (Figure 4).

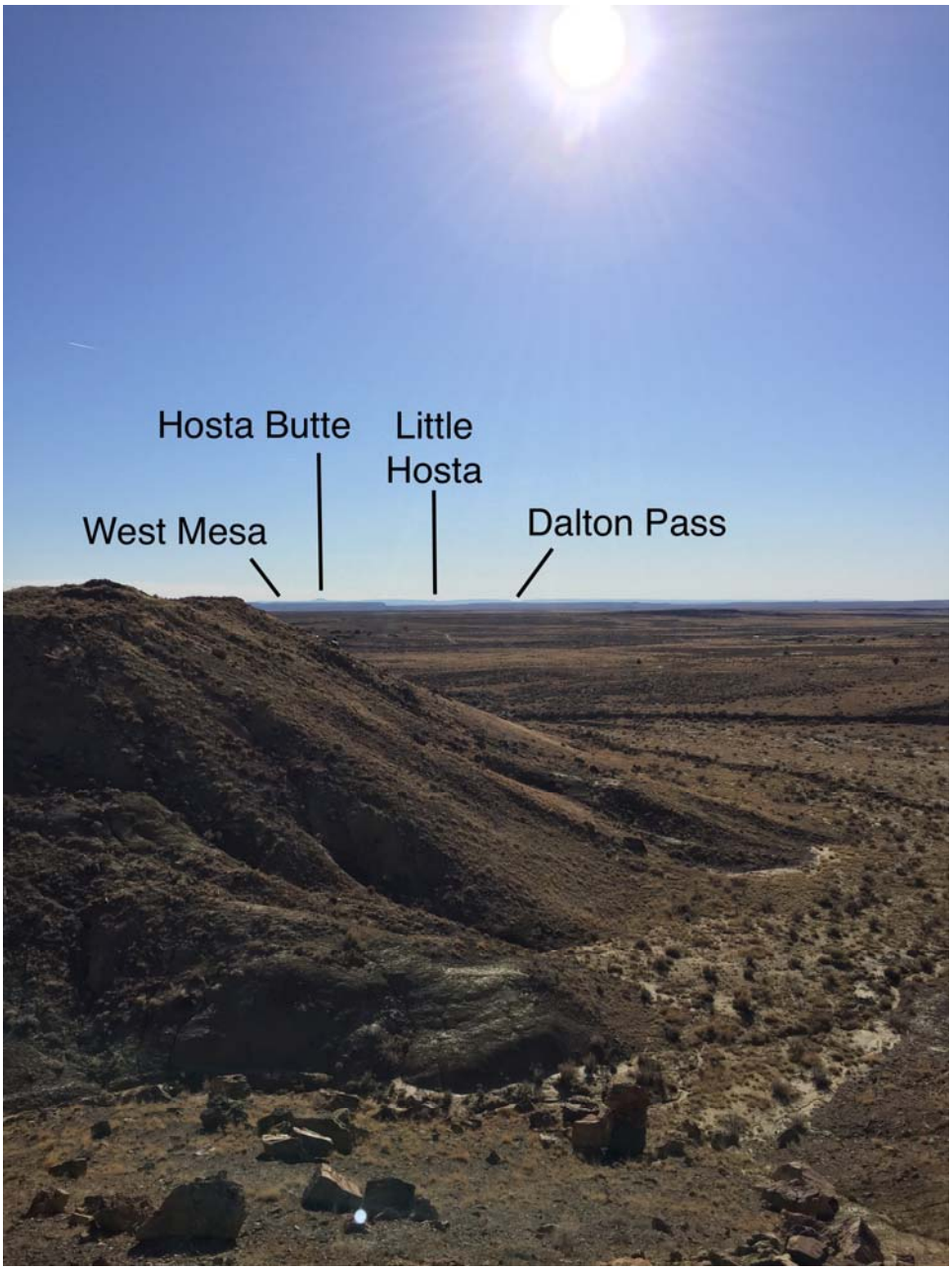

Figure 4: The Chacoan landscape looking south from the atalaya.

But looking southwest down the valley towards the Chaco River I see three pumpjacks (#3, 4, & 5) flashing in the sun as their arms pump up and down (Figure 5).



Figure 5: Pumpjacks 3, 4, 5, and 6 (Hoss Com #95) on the valley floor below El Faro.

Pumpjack #6 on my viewscape map is Hoss Com #95, which is located 750 m to the southwest. It was reportedly placed perpendicular to Houses A & B so that it would be less visible from the Pierre's community, but I note that this method doesn't work from either of the two pinnacle sites. Furthermore, Hoss Com #95 is clearly audible from this location – I can hear the clanking of the engine punctuated by an occasional backfire (Figure 6).



Figure 6: Hoss Com #95 (pumpjack #6), 650 m southwest of the Pierre's community, with LA 16514 (left pinnacle), LA 16519 (labeled), LA 16509 and LA 16508 (top of butte on right) in background.

To the SSW, there is another pinnacle in the middle distance, and the Chuska Mountains and Narbona Pass on the horizon. This is an important direction for visibility; White Rock, in this direction, is an important relay point with communities in the Chuska Valley. To the west, the rim of the valley blocks the far horizon, but pumpjack #7 is clearly bobbing up and down against the horizon on the rim of the valley (Figure 7).



Figure 7: Pumpjack #7 is clearly pumping up and down on the rim of the valley to the west.

To the NNW, the dark red pumpjack #8 is below the yellow sandstone caprock. Pumpjack #9 is on the horizon but less visible since it is painted in camouflage colors (Figure 8). Both are accompanied by tanks.



Figure 8: Pumpjack #8 and #9 (red arrows), looking northwest from the atalaya (LA 16519), with their accompanying tanks (yellow arrows). Although #9 is on the horizon, it is less visible than #8 because it is painted in camouflage colors.

SUMMARY AND CONCLUSIONS

Despite the efforts of the Bureau of Land Management and the National Park Service to jointly minimize the ground footprint impacts of oil and gas drilling on the Pierre's community, there have been significant impacts to the viewscape and the soundscape. No less than 12 pumpjacks and at least 5 drilling containers are visible from the high places in the community. Pumpjacks labeled #1,#2, #7 and #9 are prominently visible on the skyline from Houses A and B as well as the pinnacle sites. Noise from the nearest pumpjack (#6), Dugan Production Corp Hoss Com #95, located approximately 600 m southwest of Pierre's butte, is audible from throughout the community. Although this pumpjack was positioned to be perpendicular in the line of sight from Houses A and B (Viewscapes 1 and 2), it is NOT perpendicular to the line of sight from El Faro (Viewscape 4) and the atalaya (Viewscape 5). Looking south towards Chaco

Canyon, numerous pumpjacks (#3, 4, 5, 10, 11 & 12) dot the valley floor. Rather than a sacred landscape and part of a UNESCO World Heritage Site, the Pierre's community today has the feeling of an industrial park. Clearly, the BLM did not take indirect and cumulative effects of the oil and gas drilling into account (as required by NEPA) when these drills were authorized.

Viewscapes and soundscapes should be considered important aspects of the ancient Chacoan landscape. Chacoan viewscapes and soundscapes should not be impacted without assessment and attempts at mitigation. It is my recommendation that the Bureau of Land Management should implement landscape-level Class III survey prior to any oil and gas leasing agreements in the San Juan Basin, and these surveys should include assessment of the viewscapes and soundscapes of Chacoan outlier communities, as I have conducted here. Ideally, no drilling would take place within the topographic area visible from (and audible from) any Chaco outlier great house. The areas covered by such a moratorium would vary based on local topography at each great house – a blanket protection of 1-2 km, for example, is not sufficient, because every great house's topographic situation is different. This is a further reason for the need for Class III survey prior to leasing. If drilling must take place within the viewscape and soundscape of a Chacoan community, the drilling company should be required to camouflage equipment by painting it the same color as the surrounding terrain. They should furthermore be required to use quiet pumpjacks or sound-dampening equipment to mitigate the noise. A Master Leasing Plan is needed to ensure that these indirect and cumulative effects are mitigated in the future.

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Appendix A: Viewscape Circle Maps

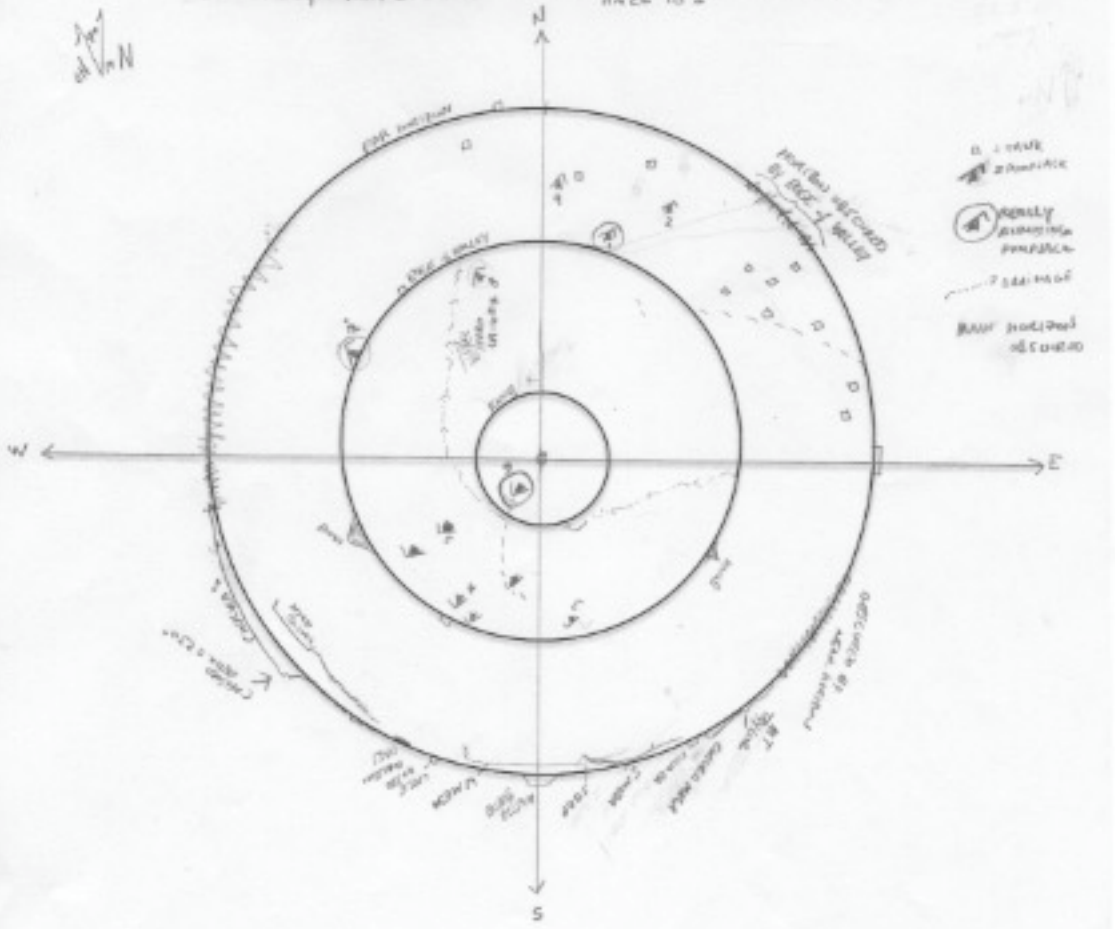
Viewshed Circle Map #1

Site No: LA 16 SOB (Pierre's House R) Recorder: R Van Dyke Height: 4' (SEATED)

Date: 11/25/16 Time: 10:40 AM

Coords: Z 13 E 235209 N 4014879 Position of sun: 150° N, LOW ANGLE

Weather conditions: CLEAR HUMIDITY 5-15 mph from E Light conditions: BRIGHT SUN LOW ANGLE, HAZE TO S Temp: 42°



Viewshed Circle Map #2

Site No: LA 16509 (Pierre's Mound A) SOUTHERN BASE ON

Recorder: R. Van Dyke

Height: 4' (scored)

Date: 11/25/16

Time: 11:40 AM

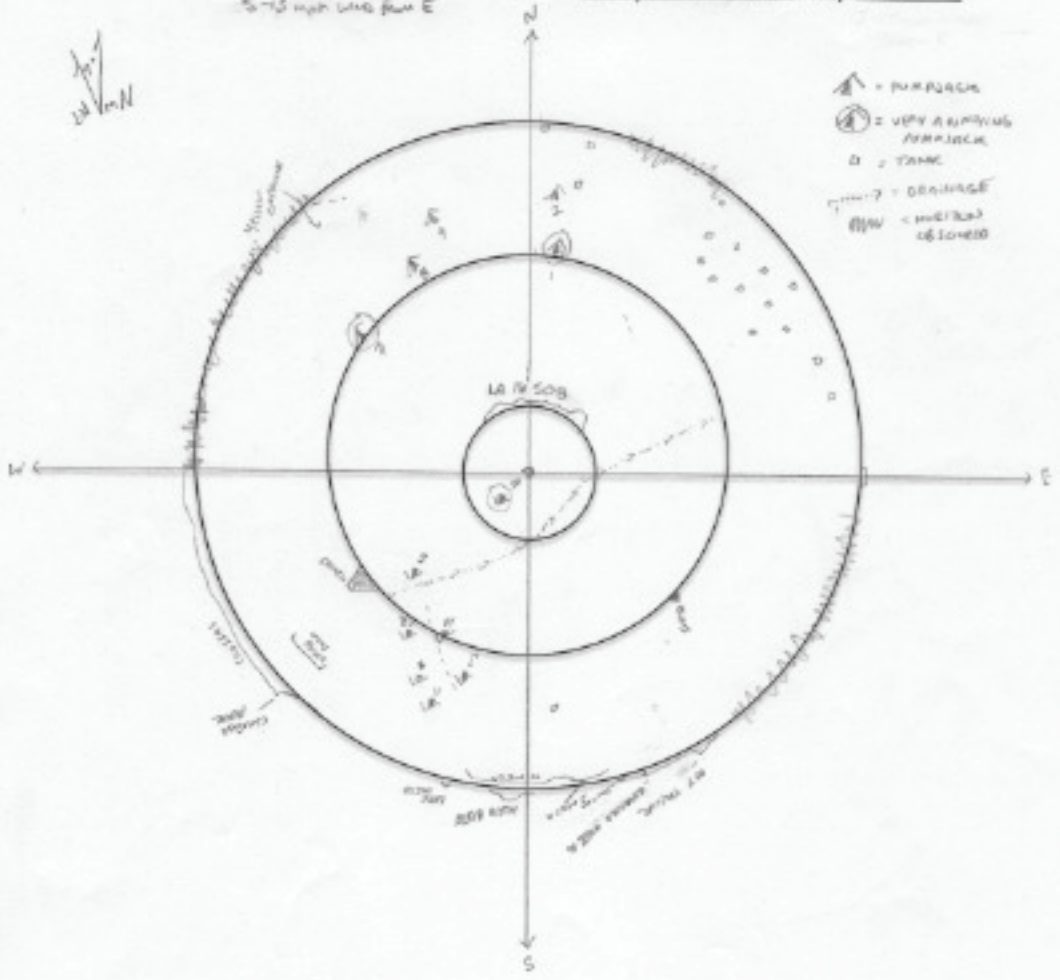
Coords: Z 13 E 235196 N 4014827

Position of sun: [illegible], 160° [illegible] N

Weather conditions: COLD, SUNNY, WINDY 5-15 mph WIND FROM E

Light conditions: CLEAR, BUT HAZE TO S LIGHT

Temp: 42°F



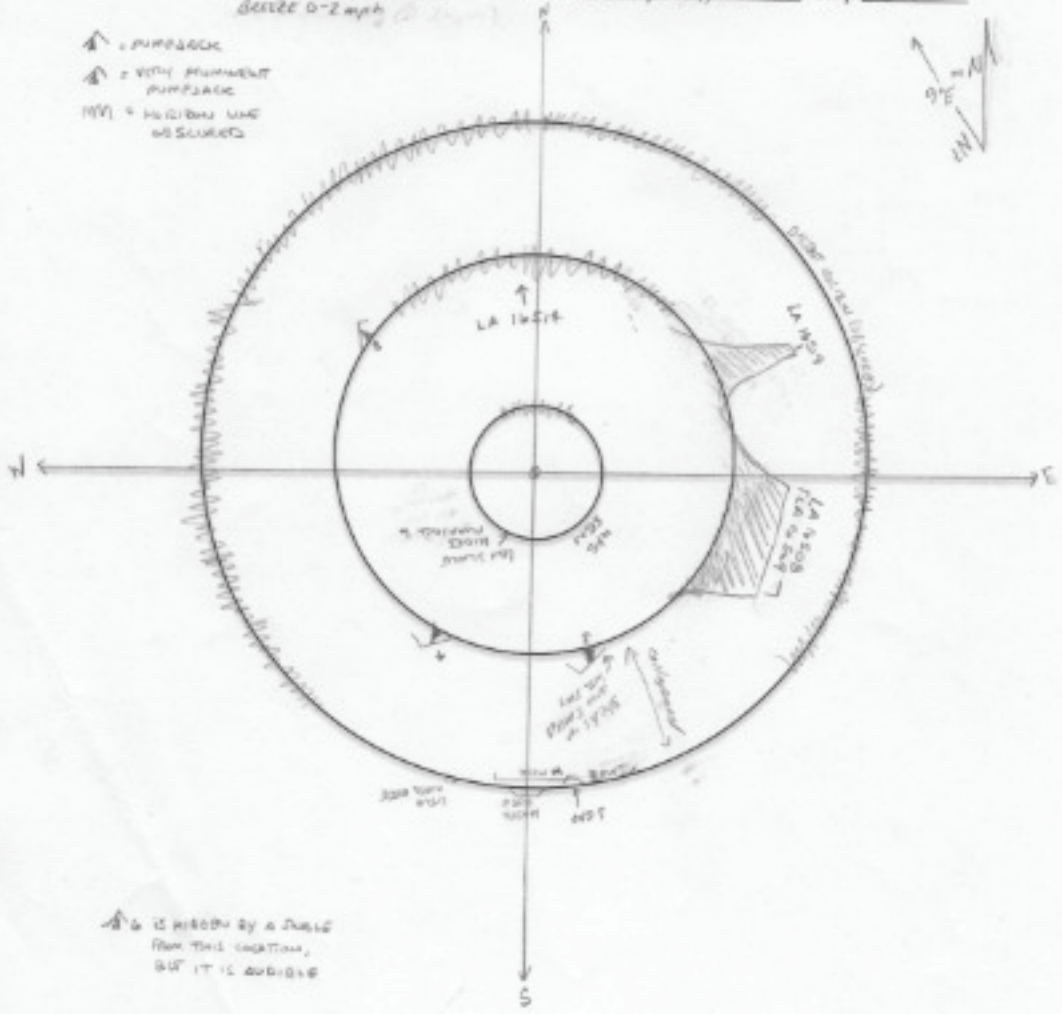
Viewshed Circle Map #3

Site No: Pierre's LA 16S15 Recorder: R. Van Dyke Height: 5'2"

Date: 11/25/16 Time: 12 pm

Coords: Z 13 E 235084 N 4014980 Position of sun: 180°

Weather conditions: CLEAR, SUNNY, COLD BREEZE 0-2 mph Light conditions: CLEAR, CONTRY, HAZE TO S Temp: 48° F



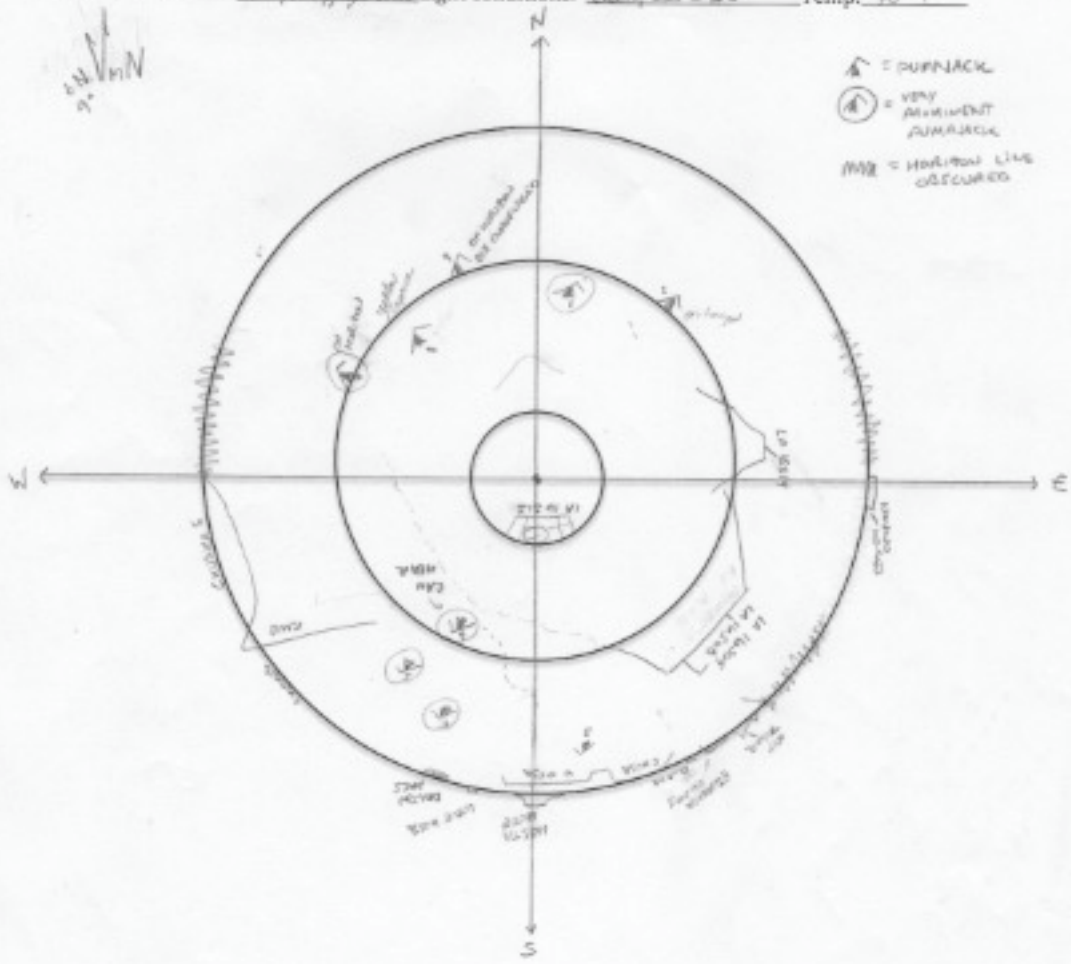
Viewshed Circle Map #4

Site No: Pierre's LA 1651A Recorder: R. Van Dyke Height: 5'2"

Date: 11/25/16 Time: 1:30 PM

Coords: Z 13 E 235090 N 4012039 Position of sun: SSW

Weather conditions: clear, sunny, light breeze Light conditions: clear, sun 2 to 5 Temp: 48°F



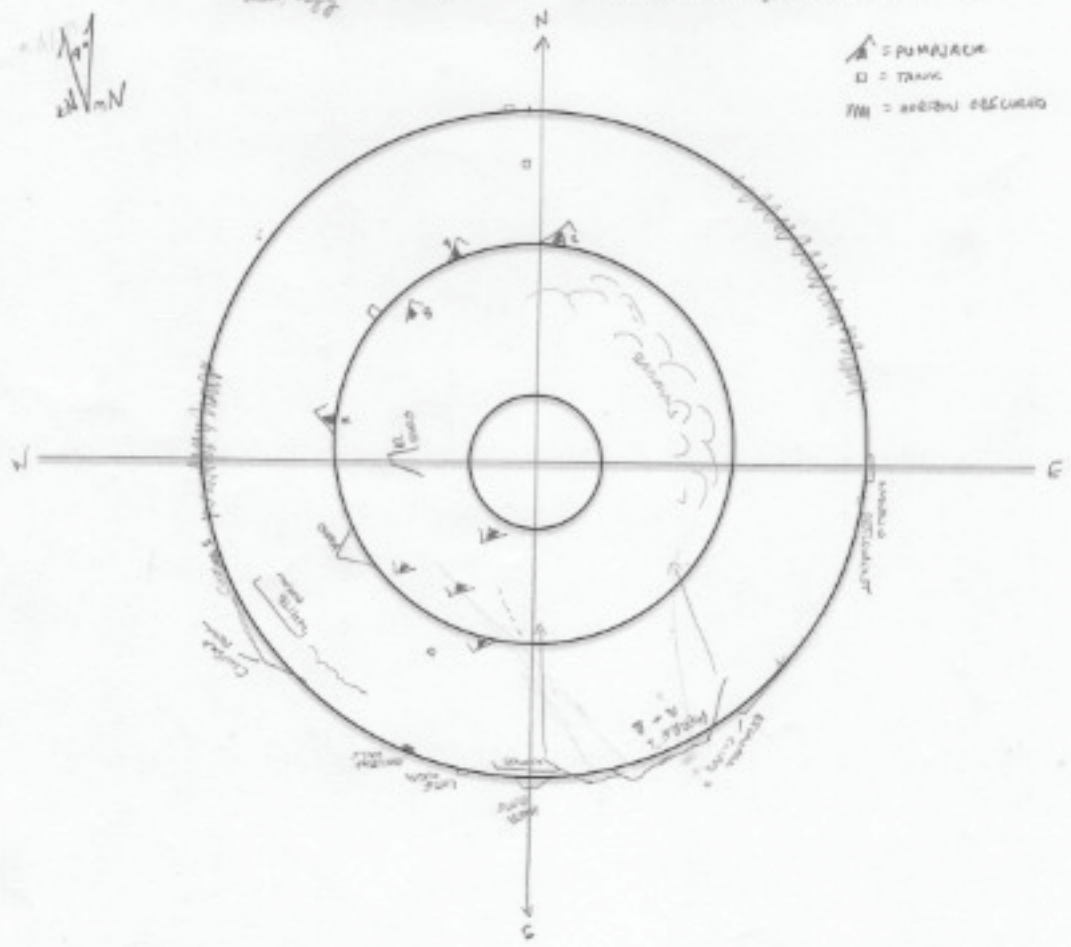
Viewshed Circle Map #5

Site No: LA 16519 Recorder: P. Van Dyke Height: 5'2"

Date: 11/25/16 Time: 2 pm

Coords: Z12 E 285173 N 4015016 Position of sun: SSW

Weather conditions: light breeze, clear, hazy Light conditions: clear, haze 45, sunny Temp: 52°



Chaco Landscapes: Data, Theory and Management

Ruth Van Dyke, Stephen Lekson, and Carrie Heitman
with a contribution by Julian Thomas

February 25, 2016

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by the University of Colorado, Boulder, Colorado

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REFERENCES

User's Guide

This paper, informally termed the "White Paper," presents current anthropological theory, methods, and research on Chacoan landscapes at several scales. The paper consists of 17 pages of text which summarize anthropological and management issues, supported by 45 pages of Appendices and a list of References cited. A condensed set of "Management Considerations" is presented in Section VIII of the text.

The Chaco Landscape

The Colorado Plateau is a land of long horizons punctuated by dramatic buttes, mesas, and mountain ranges. The rich cultural heritage and natural beauty of this region hold meaning for the millions of tourists who visit each year to experience this iconic landscape. Many of these same places on the Plateau are still considered central to indigenous religious practices, histories, and oral traditions of descendent communities in the region. This landscape is also defined by the complex connections and histories of diverse resident communities. Ancient communities of the Plateau are the focus of ongoing major anthropological investigations into such issues as Neolithic demography and agriculture, emergent sociopolitical complexity, and human impact on the environment. In short, Chacoan archaeology has many stakeholders.

Chaco Canyon is a UNESCO World Heritage Site, important not only for contemporary indigenous peoples and archaeologists but for all of humanity. It preserves a unique aspect of the human experience and draws over 40,000 visitors yearly to witness its grandeur and Native history. The confounding aspect of this cultural chapter is precisely its scope and formal expression across such a vast landscape. It was not until the 1970s that archaeologists fully grasped the extent of the ancient Chacoan roadways and thus the scope of the Chaco world. Forty years later, we are still struggling to understand this spatial and temporal complexity, trying to determine the connections and human experiences of those who built and traversed these roads, great houses, shrines, and kivas.

Chaco was not a single locality, nor was it merely a series of discrete localities or elements; management decisions that reduce this landscape to dots on a map threaten to destroy the most compelling, least-understood, and perhaps most significant aspect of this phenomenon. A century of research has shown that Chaco was comprised of relationships and shared symbols. Our ability to resolve many of the remaining research issues outlined above depends upon the protection of this landscape in a way that honors both what is known and what we still have to learn.

The goal of this paper is to provide an academic overview regarding the Chaco landscape: what it is, what we know about it, how we know what we know, and what we still have to learn. The purpose is to provide a comprehensive tool that can be used for management purposes. The text provides a summary road map while appendices to this document contain supporting information and broader discussions. The paper is divided into 7 sections: (1) introduction to Chaco in time and space; (2) management history and considerations; (3) landscape theory; (4) defining the Chaco landscape, part one – the material elements; (5) research issues; (6) defining the Chaco landscape, part two – the experiential elements; and (7); concluding arguments. In the main body of this paper we lay out our primary points; supporting data and additional discussion for each section is found in corresponding appendices.

I. Introduction: Chaco in Time & Space

Chaco Canyon, in the center of the San Juan Basin in northwest New Mexico, is well-known as the location of one of the most complex sociopolitical phenomena in the ancient American Southwest. Chaco chronology is divided into Early Bonito (AD 850-1040), Classic Bonito (AD 1040-1090) and Late Bonito (AD 1090-1140) phases (Lekson 2006:7). During its heyday between AD 1000-1140, builders erected monumental architecture in Chaco Canyon in the form of great houses, great kivas (large, circular communal and religious structure), and associated features (Lekson 1986; Lekson ed. 2006; Lekson ed. 2007; Vivian 1990).

At the heart of Chaco Canyon lie two dozen great houses. Pueblo Bonito is one of the earliest and best-known of these (Judd 1964; Neitzel 2003; Windes and Ford 1992, 1996). Chaco great houses are characterized by a set of unique attributes termed Bonito-style architecture: core-and-veneer sandstone masonry, planned layouts, large rooms, multiple stories, and enclosed kivas (Gladwin 1945; Vivian 1990:270-286). Chacoans crafted these buildings at an exaggerated scale, with formal symmetry, according to specific designs (Fritz 1978; Marshall 1997; Sofaer 1997; Stein and Lekson 1992). The monumental buildings coexist with small, domestic pueblos that form clusters of low mounds predominately along the south side of Chaco Canyon. Over time, the landscape of Chaco Canyon became increasingly formalized with the construction of shrines, staircases, mounds, ramps, and road segments (Hayes and Windes 1975; Kincaid 1983; Vivian 1997a, 1997b; Wills 2001; Windes 1978).

Chaco Canyon was a focal point for people in settlements across the San Juan Basin (see for example Cameron and Toll 2001; Judge 1989; Kantner 1996; Lekson 1999, 2009; Lekson ed. 2006; Renfrew 2001; Sebastian 1992). We know this because we find numerous aspects of the architectural and artefactual canon formalized in Chaco Canyon replicated by communities scattered across the San Juan Basin – indeed, from Grand Gulch in southeastern Utah to the hills north of Magdalena, New Mexico, a span of 280 miles. The entire area of the region has been estimated between 30,000 to 60,000 square miles (about the size of Alabama). These characteristics (discussed in greater detail in Sections 4 and 6) defined the broader Chacoan world. Chaco Canyon was surrounded by approximately 230 "outlier" settlements found across northwest New Mexico and adjacent areas (Fowler et al. 1987; Kantner 2003; Kantner and Mahoney 2000; Marshall et al. 1979; Marshall and Sofaer 1988; Powers et al. 1983).

The term "outlier" requires clarification. Apparently it originally referred to outlying, detached units of (then) Chaco Canyon National Monument: Kin Ya'a, Kin Bineola, and Pueblo Pintado. The outlying unit of Kin Ya'a is almost 30 miles south of the present park. Other outlying units were much closer: Kin Bineola is less than 5 miles from the park boundary. From a quasi-administrative term, "outlier" later came to signify any great houses outside the monument and later park boundaries. The Bis sa'ani "outlier" on Escavada Wash (the drainage immediately north of Chaco) is less than 5 miles from Chaco Canyon. Outlier great houses in southeastern Utah are over 150 miles away from Chaco. While some archaeologists prefer to call these sites "great houses" rather than "outliers," we use both terms. "Great house" has been discussed above. We also use "outlier," for two reasons: First, "great house" has been applied to Pueblo III and IV sites, long after Chaco's peak; and second, "outlier" connects the site and its landscape to Chaco Canyon, and aids in understanding landscapes at the largest scale.

The Chaco-era great house is a well-established and readily recognized empirical pattern. The number of great houses, however, is a moving target. An early (remarkably comprehensive) listing by Andrew Fowler and John Stein (1992) included just under 275 "great houses." A significant number of those sites, however, were late Pueblo III and Pueblo IV in time, and probably not relevant to the Pueblo II-early Pueblo III Chacoan landscape. Moreover, new Chaco era outlier great houses have been and continue to be discovered; for example, three in the last several years in southeastern Utah. At present, our GIS data bases list about 230 relevant Chaco-era outlier great houses. This database can be considered reasonably definitive for *known* great houses. However, we are confident that more will be discovered, in the less-thoroughly researched areas of the Chaco region (for example, the southern third of the region).

In the end, the term "outlier" is most useful for relating distant sites (such as Far View House at Mesa Verde) to the center of the greater Chacoan landscape at Chaco Canyon. Several schemes have been suggested for sites at various distances from the canyon. For example, "downtown" Chaco is the core area around Pueblo Bonito, Chetro Ketl and Pueblo Alto. The "Chaco Halo" recognizes a high density of sites (and great houses) immediately surrounding the canyon; for example those on Escavada Wash. The "San Juan Basin" is a geologic term used (and modified) by archaeology for the area between the Chuska Mountains on the west, the Nacimiento Moutains on the east, Mount Tayor-Lobo Mesa on the south, and the San Juan River valley and its tributaries on the north. But outlier great houses are found far beyond that area, up to 150 miles away to the north and south. Lekson (2009) has suggested three zones or distance limits: the central "downtown Chaco;" an "inner circle" up to 150 km from downtown Chaco (the distance within which a bulk good economy could theoretically operate, and roughly congruent with the San Juan Basin as defined above) and an "outer periphery" or limit at about 250 km (empirically, the outermost great house sites).

Some of these "outlier" settlements were founded in the Classic Bonito phase, but others have occupations extending back into the 800s (e.g., Doyel et al. 1984; Van Dyke 2000; Windes 2015). Most outlier great houses were a central focus for a surrounding community of small sites or hamlets. Some outliers clearly represent Chacoan colonies (e.g., Reed 2008; Todd and Lekson 2011), while others are argued to be local developments whose inhabitants emulated Chaco (e.g., Hurst 2000; Van Dyke 1999a). Inhabitants may have made periodic trips to Chaco Canyon, contributed resources and labor to large-scale events, participated in religious ceremonies, and defined themselves as members of the Chacoan rituality. Various lines of material culture evidence (discussed below) continue to help archaeologists better understand the complex relationships that existed within and between specific Chacoan communities.

A number of models have been developed to explain the rather dramatic and geographically expansive appearance of Bonito style architecture across an arid, agriculturally marginal landscape during the Pueblo II period **(Appendix I)**. Early explanations focused on the canyon. More recent work has recognized that relationships between Chaco Canyon and outlying great house communities (outliers) must have been an important part of the *raison d'être* of Bonito style architecture in both areas. How and why were great houses built in outlier communities? What does the appearance of great house architecture tell us about the nature and meaning of this broader Chaco phenomenon? Our ability to unravel this complex chapter of human history thus hinges on the long-term protection of these cultural resources, and the continuing yet constructive non-destructive research.

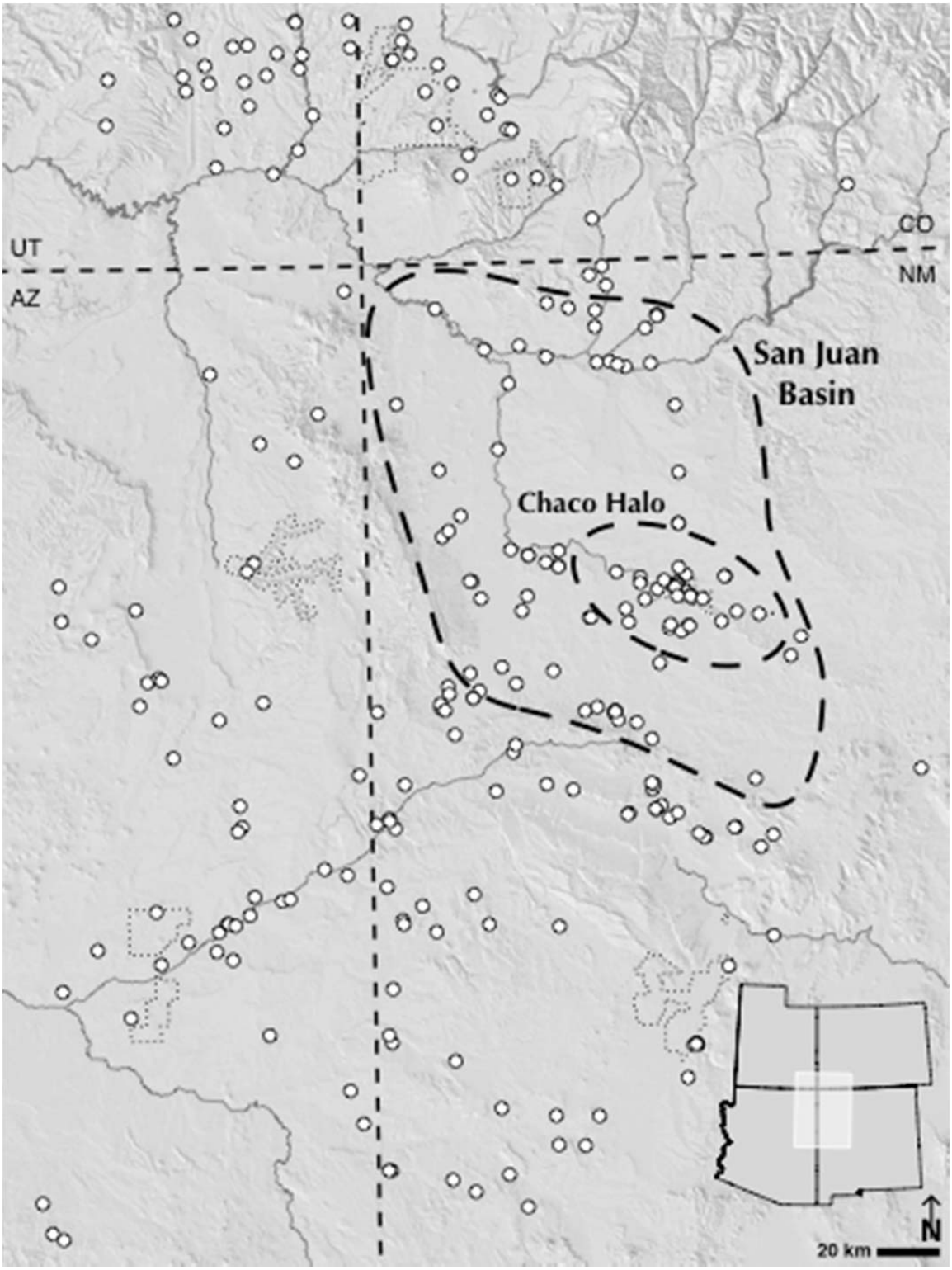

Figure I.1. The Greater Chacoan Landscape. This 60,000 sq mi area includes the core "Chaco Halo," the San Juan Basin, and outliers beyond the Basin. White circles are great houses; dashed areas are National Parks and Monuments. Figure drafted by Kyle Bocinsky.

II. Management History

On March 11, 1907 Chaco Canyon was named a National Monument, with several "outlier" units including Pueblo Pintado, Kin Bineola, and Kin Ya'a. Chaco Culture National Historical Park was created in December 19, 1980 (PL 96-550 Title V). This legislation also included "Thirty three outlying sites … hereby designated 'Chaco Culture Archaeological Protection Sites'" (Sec 502b), recognizing "…the potential for conflicts between resource preservation and energy development" (JMP 1983:1). (Pueblo Pintado, Kin Bineola and Kin Ya'a were already protected as part of the national park and therefore were not included as Protection Sites.) The Protection Sites are jointly administered under a Joint Management Plan (hereafter, JMP) by Federal and State agencies and the Navajo Nation (JMP 1983, amended 1990). On December 8, 1987 Chaco was accepted and inscribed on UNESCO's World Heritage List. The World Heritage listing acknowledged the geographic scale of ancient Chacoan society by including a number of Protection Sites: Aztec Ruins, Kin Bineola, Kin Ya'a, Pueblo Pintado, Casamero, Kin Nizhoni, Pierre's, Twin Angels, and Halfway House (the latter three related to the ancient "North Road"). Both the JMP and the World Heritage listing noted the potential for future conflicts between energy development and site protection. See **Appendix II**.

For 40 years, the NPS and other agencies, Tribes, and industry have attempted to address potential conflicts between energy development and the expanding understanding of the Chaco world and landscape, in and beyond the energy-rich San Juan Basin. Indeed, one of the first comprehensive "outlier" surveys was sponsored by the Public Service Company of New Mexico in cooperation with the New Mexico Historic Preservation Division (Marshall, Stein, Loose and Novotny 1979), to identify outlier great houses for future management of energy development. Another early extensive "outlier" survey was sponsored by the National Park Service (Powers, Gillespie and Lekson 1983). One of the few comprehensive excavations of an "outlier" in modern times was at Bis sa'ani, in advance of a coal mine that was never developed (Breternitz, Doyel, and Marshall 1982). In the following decades, numerous studies in the San Juan Basin have addressed the impacts of energy development on Chacoan archaeology, but never on the scale of the landscape studies of the 1980s. Given (1) the significant growth of knowledge about the Chaco world since the 1980s, (2) the increasing sophistication in both archaeology and historic preservation regarding landscapes, and (3) the renewed interest in energy development in the Chaco region, a new management philosophies seems warranted.

III. Landscape: Theoretical Background

Over the past two decades, landscape has emerged as a unifying concept for the archaeological study of place and social reality (e.g., Ashmore and Knapp 1999). Prior to 1980 (when Chaco was made a National Park) the term was seldom used in American archaeology. Indeed, Chaco and its region was one of the first places southwestern archaeology seriously considered landscape (Stein and Lekson 1992); and since that time, southwestern archaeology has lead the field in developing new methods and concepts, which now form a recognized "southwestern school" of landscape studies (Fowles 2010). We now have a broad range of concepts, theories, methods and tools which were unavailable in 1980s and 1990s. Many current areas of archaeological and anthropological interest, including identity, ethnicity, ritual, power, and ideology intersect at the nexus of landscape. In the Southwest U.S., the term *landscape* is invoked by archaeologists straddling a wide range of epistemological positions. Some equate landscape with settlement patterns, examining the changing and variable distributions of people and resources across space. GIS analyses have figured prominently for these researchers. Some

anthropologists explore "cultural landscapes," investigating the links – which may involve oral traditions and traditional cultural properties (TCPs) as well as archaeology – that connect indigenous groups with specific places. Still others view spatial experiences as reflexively constructed over time, and landscape as a window through which to investigate less tangible aspects of ancient life such as meaning and ideology. This latter group uses interpretive methods such as phenomenology. While each of these approaches has different roots, they can be, and are, employed in a complementary fashion on the Colorado Plateau. **Appendix III** unpacks each of these three bodies of theory; see also **Appendix V**. We contend that this larger body of landscape theory should continue to drive large-scale research programs in order to significantly advance our understanding of the greater Chacoan world. The benefit of this approach will provide management strategies that can address long-term management and preservation goals that are important to the many stakeholders who live in and visit the Chaco world heritage sites and cultural and physical landscape.

IV. Defining the Chaco Landscape: Part I – Material Expressions

Archaeologists have long recognized that Chaco reaches well beyond the confines of Chaco Canyon (Gladwin 1945; Martin 1936; Morris 1939; Roberts 1932). Canyon great houses provide the archetype through which outlier great houses have been identified. Until the 1970s, these "outliers" were investigated in a piecemeal fashion. Oil and gas developments in the 1970s and 80s led to the first major attempts to locate and record outliers and associated features across the Chaco World (Marshall et al. 1979). During this period, the Chaco Project and the BLM sponsored large-scale, landscape-level investigations (Fowler et al. 1987; Kincaid 1983; Nials et al. 1987; Powers et al. 1983). The application of large-scale pedestrian surveys and aerial reconnaissance in the 1970s revealed the existence of ancient roads associated with Chacoan structures. At least eight road segments, three of them major, extend into the San Juan Basin from Chaco Canyon. More recent uses of aerial thermography, Unmanned Aerial Vehicles (UAVs), Light Detection and Ranging (LiDAR) and other geophysical methods continue to reveal additional sites and features but have, as yet, only been applied to relatively small areas of the Chaco landscape. Marshall and Sofaer (1988) continued to investigate outliers with a focus on road-related features, shrines, and archaeoastronomy. In 1983-84, Powers directed a full-coverage survey of new lands around Kin Bineola, Kin Klizhin, Chacra Mesa, Upper Kin Klizhin, and the South Addition (Powers and Van Dyke 2015). Most of the information compiled by these authors is located in government documents or grey literature (exceptions include Doyel 1992; Kantner and Mahoney 2000, Chaco Project survey data, and Additional Lands survey data). Kantner (2003; Kantner and Kintigh 2006) collated a "Chaco World" database of known outliers for the Chaco Synthesis (Lekson ed. 2006). These data are available through the Chaco Research Archive (chacoarchive.org). In recent years, the Chaco World database has been updated and expanded by Van Dyke et al. (2016) and Matt Peeples, working with Archaeology Southwest. Efforts are currently underway as part of the current Chaco Landscapes project to reconcile the three disparate geospatial datasets and share those data with land managers and researchers. The process of reconciling these three data sources has also brought to light some of the major gaps in our knowledge about many of these great house communities. Our understanding has evolved dramatically in recent decades—bringing to light new dimensions of the Chaco landscape and locations for further study. Features and attributes of the greater Chaco landscape have been catalogued in different ways by researchers. A short list of material signatures found on the Chaco landscape includes the following: (1) monumental architecture

(great houses, great kivas); (2) roads and related features (staircases, earthworks); (3) outlier communities; (4) patterned distributions of surface artifacts corresponding to landscape features; (5) shrines and related features (stone circles, crescents, cairns); and (6) rock art.

Despite the obvious importance of Chaco outliers to our understanding of the system as a whole (see **Part V**), only about one-eighth of a total of a documented 230 outliers has been the focus of extended fieldwork in the form of survey or excavation projects (see for example Cameron 2009; Duff 2005; authors in Kantner and Mahoney 2000; Kearns 1996; Martin 1936; Morris 1918,1928; Reed 2008; Todd and Lekson 2010; Van Dyke 1999a; Warburton and Graves 1992) **Appendix IVA**). Research at outliers in the post-NAGPRA era has tended to minimize excavation in deference to Indigenous concerns. Much can be learned from non-destructive investigations into architecture and artifacts on the ground surface using some of the techniques mentioned above (LiDAR, aerial thermography, etc). The tremendous promise of these techniques (e.g., Casana et al. 2014) has yet to be realized. The sheer scale of the undertaking, with over two hundred outliers scattered across tribal, state, federal, and private lands, means that we still have very far to go.

For many outliers, Bonito-style architecture of the great house itself is well-described, but information for surrounding small sites is incomplete or nonexistent. Research to date has demonstrated the tremendous variability in how these communities were laid out. In **Appendix IVB**, we demonstrate this variability through the following examples: Peach Springs (a textbook outlier); Skunk Springs (a sprawling community with a deep history); Andrews & Casamero (ancestral and scion communities); Escalon (Bonito-style architecture without a community); and Section 8 (a "black box"). The tendency for land managers to delimit a one-size-fits-all expedient circular boundary around known great house locations cannot and will not adequately identify or protect these landscapes, because Chaco outliers are highly variable in form and extent (e.g., Van Dyke 1999b, 2003). Detailed, comparative studies of outlier communities are imperative to allow us to address the research issues delineated in Appendix V, as outliers are found in microenvironments ranging from the Red Mesa Valley and the Chuskan slopes to the Middle San Juan drainage and the Basin floor.

Chaco roads are often difficult to identify. These engineered linear features are best visible from the air when light angles are low; researchers have recently had much success tracking Chaco roads with LiDAR (Friedman n.d.). At least eight major road segments extend outward from Chaco Canyon (Vivian 1997b, and many additional short segments are known (Roney 1992). See **Appendix IVC** for more information.

Shrines exist in a wide range of forms and purposes across the Southwest landscape. Chaco scholars have described the following shrines or shrine-like features: J or box-shaped "communication" shrines (Hayes and Windes 1975); stone crescents (Marshall and Sofaer 1988); stone circles (Windes 1978); herraduras, or horseshoe-shaped features associated with Chacoan roads (Kincaid 1983; Nials et al. 1987); and cairns, or simple piles of stacked rock. We provide further descriptions in **Appendix IVD**; see also **Appendix VA (Visibility).**

Chacoan rock art is relevant for addressing the research questions detailed below in **Part V**. Some Pueblo oral traditions, for example, consider spirals to represent migrations. Chacoan rock art remains infamously under-recorded and understudied, despite the high-profile example of the Sun Dagger atop Fajada Butte (Sinclair et al. 1987; Sofaer and Sinclair 1987; Sofaer 1997, 2007; Sofaer et al. 1979, 1982). The most intensive efforts towards remedying this situation have been conducted in Chaco Canyon by Jane Kolber and a team of volunteers; Kolber, Kelly Hayes-Gilpin and Donna Yoder have plans to eventually publish a synthetic description of this

research. Outside Chaco Canyon, across the Basin landscape, rock art is likely to be under-reported. This is illustrated by the fact that in the Chaco Additions comprehensive survey of Kin Bineola, Kin Klizhin, and parts of Chacra Mesa, Powers and Van Dyke (2015) tallied 76 discrete rock art elements. Comprehensive and systemic work is needed, in conjunction with indigenous collaborators, to record and interpret the rock art on the greater Chaco landscape.

V. Anthropological Research Issues on the Chacoan Landscape

Chaco has been an active area of research for archaeologists and anthropologists for over a century because its archaeology and dynamic cultural history offers a fascinating and perplexing case study which intersects with a host of current research issues – issues of local, national and international significance. The purpose of this section is to briefly review the major anthropological research issues around Chaco and highlight the ways in which the greater Chaco landscape is crucial to our ability to address them.

A. Chaco's Boundaries in Time and Space

Archaeologists agree that Chaco was centered in the canyon during the "golden century" between AD 1040-1140, but we are much less clear about how Chaco came into being, how it declined, and how and where these processes connect with the larger narratives about the ancient Southwest. Chaco's origins lie in the preceding Pueblo I period (A.D. 700-850) on the Colorado Plateau, but events are not neatly bounded by the Chaco Culture NHP, or by the San Juan Basin. Windes (2015; Windes and Van Dyke 2012); Wilshusen (Wilshusen and Van Dyke 2006) and Van Dyke (2007, 2008) have posited that late Pueblo I inhabitants from the northern San Juan moved south to establish early great house communities during the late A.D. 800s; however, these processes are understudied and remain poorly understood. Many of the relevant outlier communities are on Navajo Nation lands between Chaco Canyon and the Chuska Mountains; they form part of a planned study by Van Dyke and Navajo Nation archaeologists. Vivian (1989,1990) and Throgmorton (2012) have posited that southern San Juan peoples also played a role in established ninth century Chaco – again, studies are ongoing and incomplete. The Pueblo I communities across the northern and southern San Juan Basin thus should reasonably be included in any conception of Chaco landscape

By the mid-late eleventh century, formal outliers appeared across northwest New Mexico as well as portions of northeast Arizona, southeast Utah, and southwest Colorado. Chaco seems to have been expanding (see discussion of sociopolitical issues below). The nature of the relationships between these various outlier communities and Chaco Canyon is a topic of ongoing research (see for example Cameron 2009; Kantner and Mahoney 2000; Lekson 1999; Reed 2008; Todd and Lekson 2010; Van Dyke 1999a, 1999b, 2003). This research is focused on scales that range from (1) the classic "outlier" communities themselves, which vary but form a recognizable pattern(s); (2) larger-than-community designed landscapes; (3) sub-regions, such as the Chuska Valley or the Totah; and (4) the entire Chaco world as represented by outliers and potential outliers extending from southern Colorado to southern New Mexico, central New Mexico to central Arizona. Outliers are bound to one another and to Chaco Canyon not just by architectural similarities but also by landscape features such as roads (Kincaid 1983; Nials et al. 1987), lines of sight (Freeman et al. 2007; Hayes and Windes 1975) and viewsheds (Van Dyke et al. 2016). With clear landscape references and physical connections to each other and ultimately to Chaco Canyon, it is parsimonious to posit that Classic and Late Bonito Chaco "diffused" from center.

The nature of that diffusion is a key question for the history and heritage of ancient North America. To a large extent answers to that question will be found in the Chaco landscape.

Boundaries of the Chaco region appear to shift or change at the later end of its history. To the south, Bonito style elements such as enclosed kivas, core-and-veneer masonry, multiple stories, planned layouts, and associated great kivas proliferate at major settlements that extend through the Cibola area during the 13th century and beyond (e.g., Duff 2005; Fowler et al. 1987; Fowler and Stein 1992; Reed 2013; Roberts 1932). To the west, Chaco may have contributed to events at Wupatki and Ridge Ruin (Gruner 2012). To the north, Chaco clearly gave rise to Aztec Ruins National Monument (Lekson 1999; Reed 2008) and influenced architectural and social developments for generations (Bradley 1996; Glowacki 2015; Van Dyke 2009). Lekson (1999) posits that Chaco ultimately stretched south along the Chaco Meridian as far as Paquime in northern Mexico. It should be clear from this brief overview that the boundaries of Chaco in time and space are not only far from settled, but are part and parcel of the larger sets of ongoing research issues detailed below. The Chaco landscape should at minimum encompass all sites in the San Juan Basin that date between AD 850-1150 – the Early, Classic, and Late Bonito phases. Failure to protect this landscape will forfeit our ability to understand what Chaco was.

Chaco and its landscape are inherently important, as part of Native, national and world heritage. But beyond the intrinsic historical significance, Chaco can be used to address wider issues of general interest (Lekson in prep.). Chaco offers a remarkably detailed record of a non-Western, pre-industrial society responding to environmental challenges, and to local and regional imbalances between populations and resources (e.g. famously and controversially, in Jared Diamond's 2005 *Collapse*; see also Stewart 2000). Chaco provides a case study in the need – real or perceived – for some degree of central governance (that is, the invention or avoidance of government; the origins and consequences of aggregation into towns and cities; and the interaction of a periphery or frontier societies with larger, older, more developed core civilizations (that is, Chaco and Mesoamerica) and the role of ideology and ritual in social change. Broad questions such as these can only be answered with landscape-scale data, ranging from the core "downtown" to the ecologically "contained" San Juan Basin to the largest expressions of Chaco. Chaco is truly an example of how archaeological heritage can help the human species understand our past to better plan for our future.

B. Sociopolitical Organization / Complexity

The question of Chaco's boundaries is inextricably bound up with the more fundamental anthropological issue of what Chaco actually was, in a social and political sense, and how this entity changed over time. Chaco holds fascination for anthropologists across the globe – and of course scholars in other disciplines, not to mention a large and deeply engaged public – because it seems to occupy a unique, or at least an unusual, place in our greater understanding of human sociopolitical organization. The Chacoan landscape is integral to this issue and yet much landscape-level work remains to be done.

Chaco was not an isolated canyon or small population of isolated, though major villages, scattered across the San Juan basin. It was a major regional political "event," a complex interaction and landscape phenomenon for over 300 years. But what was the nature of that event?

A key debate surrounds the nature and degree of Chacoan sociopolitical complexity. Scholars see great houses as part of the establishment and legitimation of political authority (Lekson 1999; Sebastian 1992; Van Dyke 2007; Wilcox 1993), places of worship, interaction, and education

(Judge 1989; Renfrew 2001; Toll 1984, 1985), with similarities to modern Pueblo villages (Heitman 2011, 2015; Vivian 1990; Wills 2012). Scholars agree that planned, massive Bonito style structures required a substantial investment of labor and design. But opinions differ as to whether or not there were institutionalized leaders in Chaco Canyon, what the nature of those leaders' power may have been, and to what extent those leaders controlled other people across the Chacoan world. The Chaco landscape is central to these debates.

Judge (1979, 1989; Judge et al. 1981) and other Chaco Center archaeologists (e.g., Powers 1984; Powers et al. 1983; Schelberg 1984) originally considered the canyon as the center of a redistribution network for subsistence goods; the system protected members in the system against crop shortfalls caused by rainfall fluctuations. Judge (1989) later modified this model to envision a "pilgrimage fair" at Chaco, in which materials were redistributed congruent with gatherings for ceremonial activities. Most proponents of the Chaco Center model envisioned outliers were linked to the canyon in a relationship that was primarily economic. Scholars expected critical resources such as corn, construction timbers, lithic material, turquoise, pottery, firewood, and wild game to move throughout the system. Thus, it became critical to identify sources for these materials and to be able to follow them across the landscape, into Chaco Canyon, and potentially back out after redistribution. These studies have been able to disprove the redistribution model, but it is clear that many goods moved into Chaco Canyon and that relationships with outliers were variable and complex (More on this under exchange and interaction, below).

Many current explanations for Chaco revolve around the idea of the canyon as a central place for ritual gatherings, with leaders' power legitimated through exclusive access to ritual knowledge (Judge 1989; Kantner 1996; Saitta 1997; Sebastian 1992; Toll 1985; Wills 2000; Yoffee 2001**)**, perhaps stemming from their antecedent, ancestral connections to the canyon itself (Heitman 2007; Plog and Heitman 2010). The Chacoan landscape, with its formally constructed, carefully situated architectural features, is charged with symbolism (Fritz 1978; Heitman 2011, 2015; Marshall 1997; Stein and Lekson 1992). Van Dyke (2007) posits that the carefully constructed, formalized Chacoan or Bonito style landscape, consisting of great houses, great kivas, berms, road segments, and visual connections, are key to understanding Chacoan politics. Outlier residents came to Chaco to participate in ceremonies, and their physical experiences in Chaco emphasized the canyon as the center of the world – the correct and balanced place in which to perform rituals – thus legitimizing social and political power of canyon ritual leaders. By understanding the nature and distribution of the Bonito style landscape elements in outlier communities, we can start to see which communities or subregions were closely involved with Chaco, and which were perhaps more loosely confederated. Outlier architecture looms large in the background of all these questions – were the great houses, great kivas, roads and earthworks all stages for ritual events?

C. Exchange & Interaction

Exchange and interaction across the regional landscape are key to evaluating Chacoan sociopolitical models. In the 1980s, ceramic and lithic studies discredited the redistribution model by demonstrating that although many goods travel into Chaco Canyon, they do *not* appear to have been redistributed across the basin (Cameron 1984; Toll 1985; Jacobson 1984). Material movements indicate that the residents of Chaco Canyon had particularly strong relationships with people living in outliers along the slopes of the Chuska Mountains, 75 km west of Chaco Canyon. Chuskan materials found in Chaco Canyon include trachyte-tempered ceramics (Mills et al. 1997; V. King 2003; Shepard 1954; Stoltman 1999; Toll 1981, 1984, 1985; Toll et al. 1980;

Windes 1977:299-328) and Narbona Pass chert (Cameron 1984, 1997; Jacobson 1984; Warren 1967, 1977). Some maize moved from the Chuskan slopes into Chaco (Benson et al. 2003; Cordell et al. 2001, 2008; Grimstead et al. 2015). Strontium isotope analysis indicates that the Ponderosa pine timbers used in canyon great house roofs were obtained primarily from trees which grew in the Zuni Mountains and later from the Chuska Mountains (Durand et al. 1999; English et al. 2001; Guiterman, Swetnam, and Dean 2016; Windes and McKenna 2001). Deer and antelope would have likely been hunted in the mountains (Vivian 2000:5; Vivian et al. 2006:19), and isotopic studies indicate the Chuska Mountains were a major source for artiodactyl fauna (Grimstead 2011).

Researchers discuss two general processes to account for the movement of Chuskan material to Chaco (Cameron 2001; Renfrew 2001; Toll 2001). The first of these involves simple exchange between residents of the two areas. The second process involves movement of the materials during visits made to Chaco Canyon by Chuskan residents (Renfrew 2001). Chuskans may have brought pottery for use while visiting Chaco Canyon, or they may have brought something to Chaco in the pots. Cameron (2001) suggests Narbona Pass chert may have been valued for color symbolism and may have been deposited in Chaco for votive purposes. Van Dyke (2008) has suggested that Chaco-Chuska relationships figured prominently in the rise of Chaco as a locus for elite power and regional ritual gatherings. Clearly, there was intensive movement of materials between Chaco Canyon and the Chuskan slopes, but we know remarkably little about the archaeology of the area between the two. Relative frequencies of Chuskan ceramics and Narbona Pass chert within outlier communities between the two areas are needed to test hypotheses about Chaco-Chuskan interaction.

Much of the archaeology done in the San Juan Basin has been directly or indirectly related to oil and gas development (e.g., Bradley and Sullivan 1994; Dykeman 2003; Hovezak and Sesler 2002, 2009; Kearns 1991, 1996; Plog and Wait 1982; Reher 1977; Wendorf et al. 1956). This work has been limited in areal scope. Although there are good data from some communities, sample sizes are small, and previous researchers did not always differentiate between Early and Classic Bonito contexts (Hensler 1997; Marshall and Sofaer 1988:60-61; Peckham 1969; Powers et al. 1983:342; Toll 1985:435-451; Ward 2004). Ongoing research projects in the area include Windes' work on Basketmaker III and Pueblo I communities to the west and south of Chaco (Windes 2015), and Marshall and colleagues' (Marshall et al. 1979; Marshall and Sofaer 1988) reconnaissance surveys. In a herculean effort, Barbara Mills and Matt Peeples currently are addressing the issue of outlier interaction by collating all existing artifact data from across the Chaco world to be used in Social Networks Analysis. Clearly much work remains to be done, and landscape-level pedestrian survey along with aerial reconnaissance in outlier communities would be the best way to gather data to begin to address these issues.

D. Indigenous Relationships to the Chacoan Landscape

Landscapes and identities are strongly connected in the indigenous Southwest, where past and present places are integral to religious practices, histories, and ethics (e.g., Anschuetz et al. 2001; Anschuetz 2007; Basso 1996; Ferguson and Colwell-Chanthaphonh 2006; Ferguson and Hart 1985; Kelley and Francis 1994; T. King 2003; Koyiyumptewa and Colwell-Chanthaphonh 2011; Linford 2000; McPherson 1992; S. Ortiz 2002; Snead 2008; Snead and Preucel 1999). We briefly review the role of landscape for historic and contemporary Pueblo and Navajo peoples in **Appendix IIIB**. Prominent peaks, springs, lakes, mesas, buttes, canyons, volcanic plugs, and other landscape features are key to indigenous histories and identities.

Chaco Canyon is itself an important place of pilgrimage for Pueblo peoples (Ellis and Hammack 1968:32). Pueblo oral traditions suggest there are strong relationships between Chaco and Hopi, Zuni, Acoma, Laguna, and the eastern Pueblos. Hopi, Zuni, and Eastern Pueblo oral traditions tell of an ancestral place called White House, where a series of seminal events transpired that relate to the development of Pueblo ceremonialism (Lekson and Cameron 1995:194-195; Lekson 1999:145-150; Stirling 1942:83; White 1942:145). For the Hopi, Chaco Canyon is Yupköyvi, a place where the Parrot, Katsina, Eagle, Sparrowhawk, Tobacco, Cottontail, Rabbitbrush and Bamboo clans gathered and shared their ceremonial knowledge before proceeding on their migrations to Tuuwanasavi (Kuwanwisima 2004). Many Hopi consider archaeological sites as tangible, intentional markers that ancestors left to connect the present with the past, and to indicate ongoing Hopi land stewardship (Colwell-Chanthaphonh and Ferguson 2006:156). Chaco also figures prominently in Navajo stories and ceremonies, including traditions surrounding the origins of the Kin yaa' áanii (Towering House Clan), the Tl'ízílání (Many Goats Clan), Ánaasází Táchii'nii (Red Running into Water Clan), and Tséńjíkiní (Cliff Dwelling Clan) (Begay 2004; Warburton and Begay 2005). Navajo stories tell about a Great Gambler, or Noqoilpi, who lived at Chaco and enslaved all the people before he was overthrown (Judd 1954:351-354; Matthews 1897; McPherson 1992:87-93).

The greater Chaco landscape is no less important to contemporary indigenous identities and oral traditions. For example, Chimney Rock and Companion Rock, twin spires on the Piedra River in southwest Colorado, are a shrine to the Twin War Gods of Taos Pueblo. Cabezon Peak, a volcanic plug in northern New Mexico near the outlier of Guadalupe, is the head of a slain giant in Diné stories. Mount Taylor, a prominent volcanic cone on Chaco's southern horizon, is Tzoodzil for the Navajo, home of Turquoise Boy and Yellow Corn Girl, decorated with turquoise, dark mist, and female rain. The same peak is Tsipaya for the Hopi, a home of katsinas, Kaweshtima for the Acoma, home of the rainmaker of the north, and Dewankwin K'yaba:chu Yalanne for the Zuni, locus of ceremonial activities and plants associated with the medicine and Big Fire societies.

Today, Navajo occupy much of the Chaco landscape, and many prominent places on the Chaco landscape are important for Navajo oral histories (see also **Appendix IIIB**). In addition to the places mentioned above, major peaks include: Hosta Butte ('Ak'iih Nást'ání); Shiprock (Tsé Bit' a'í), and Huerfano Mountain (Dzilth Ná'oodithlii) (Kelley and Francis 1994; Linford 2000; McPherson 1992, 2001); many additional locations remain unstudied. Navajo peoples have long lived in close proximity to Chaco outliers, and they have a range of beliefs and oral traditions about them. Dennis Fransted's (Fransted and Werner 1974; Fransted 1979) collections of Diné stories and place-names for Chacoan places remain unpublished. Although his work is a good start, the process is far from complete. Gilpin (2013, 2014) has been collecting Navajo oral histories as part of the Navajo-Gallup project. There is currently intense Navajo interest in landscape histories and the Chacoan past (Warburton and Begay 2005). This is potentially a very important contemporary focus for Chaco landscape studies, given intense Navajo interest in landscape histories and the Chacoan past (e.g., Kloor 2009).

Archaeologists post-NAGRPA have intensified collaborations with indigenous groups, and there is much good work happening with respect to landscape studies (see for example Begay 2004; Duff et al. 2008; Ferguson et al. 2009; Koyiyumptewa and Colwell-Chanthaphonh 2001; Kuwanwisisma 2004; Swentzell 1992) Any effort to think about the Chaco landscape should incorporate what people living on that landscape have to say about it. This is potentially

important for addressing research issues that encompass indigenous origins, identity, and place attachment.

E. "Dwelling in Places": the Ancient Experience of Chacoan Landscapes

Just as contemporary indigenous peoples are connected to landscape, researchers also seek to understand how ancient Chacoans interacted with landscape. As reviewed in **Appendix III**, people live and move not in a vacuum, but in places. This was no less true in the past than in the present. Julian Thomas exhorts us to strive to understand how past peoples "made themselves at home in their worlds" (Thomas 2006:22).

What aspects of landscape were important for Chacoans? For ancient farmers, critical resources obviously included water, arable land, and raw materials for technology. These aspects of the Chaco landscape are relatively well-studied (see for example Cully and M. Toll 2015; Force et al. 2002; Sebastian 1992; Vivian et al. 2006). But there were also meaningful, emotional and symbolic relationships between Chacoans and the world around them, just as the Navajo, for example, consider their home place to be bounded by four sacred mountains. For all Pueblo peoples, the idea of a center place, where directions and levels intersect, is an extremely powerful trope that connects identity with landscape. At Chaco, there are clear archaeological indicators that similar worldviews were present (Swentzell 1992). The Chacoan landscape can be understood as the large-scale spatial representation of a worldview, or way of dwelling in the world, shared by ancient inhabitants, builders, and visitors. Van Dyke (2007) has argued that this worldview revolved around landscape themes that are omnipresent at Chaco: balanced dualisms, directionality, visibility, and center place. When people moved through the buildings and across the modified landscape of Chaco Canyon, the experience re-affirmed their beliefs about the nature of the world and their place in it. It seemed inevitable and desirable to travel to Chaco for periodic ritual events, and to contribute labor and resources towards the ceremonies necessary for the continuation of the Puebloan way of life.

We are starting to get a clearer picture of how this worked in Chaco Canyon, but we have barely scratched the surface in terms of understanding the formal landscapes within outlier communities. Stein and Lekson's (1992) work have given us a good starting point. Kin Hoch'oi in the Puerco valley, for example, contains a formal berm breached by road segments that seem designed to facilitate processions, and a "road through time" connects Chacoan structures from late and early time periods (Fowler et al. 1987; Fowler and Stein 1992). It is likely that similar relationships are present in many outlier communities, but this has not been a primary focus of study. Mike Marshall and Phillip Tuwaletstiwa are working towards an understanding of processionways and formal avenues for movement in the western San Juan Basin, but their work is not complete. Anna Sofaer (1997, 2007) has demonstrated the relevance of astronomical alignments to Chacoans, but her work has focused in Chaco Canyon and the central San Juan Basin. Further study is needed to understand the occurrence of alignments within and between outlier communities.

Viewsheds and lines of sight are critically significant for understanding the Chacoans relationship to landscape. For Chacoans, as for all Southwest peoples, highly visible landforms would have been one way to establish emotional, cognitive, and symbolic connections to homelands, relatives, past events, oral traditions, and each other (Bernardini and Peeples 2015; Van Dyke 2011). Chacoans positioned great houses, tower kivas, shrines, stone circles, and other features to maximize line-of-sight connections across the landscape. These lines of sight would have anchored identities across time and space in multiple, overlapping ways. They also

could have been for communication and/or surveillance. Hayes and Windes (1975) demonstrated that shrines in Chaco Canyon created an intervisible signaling network. A local high school student (Freeman et al. 1997) used mirrors for a science fair project to demonstrate that Huerfano Mesa links the Chaco Canyon great house of Pueblo Alto to the outlier great house of Chimney Rock, 130 km to the northeast. Van Dyke and colleagues have recently completed an initial GIS-based viewshed and line-of-sight analysis of great houses, shrines, and related features across the greater Chacoan landscape (see **Appendix VIA**). We conclude that Chacoans clearly positioned shrines to facilitate intervisibility and signaling. Our study predicts places where archaeologists should logically expect to find shrines, but we have not yet looked. Van Dyke and colleagues have demonstrated the critical importance of viewsheds, but much work remains to be done identifying and documenting this significant element of Chacoan landscapes.

Viewsheds within outlier communities are another important and barely tapped focus of study. Where data are present, scholars have employed GIS line-of-sight and viewshed analyses in attempts to address these issues, with contradictory results (Dungan 2009; Ellenberger 2012; Kantner and Hobgood 2003; Robinson et al. 2007 – see expanded discussion in **Appendix VIA**.). Surveillance, communication, and a shared sense of identity are three possible reasons for local outlier great house visibility, and each has different implications for the nature of the Chacoan polity. At present we lack the high-resolution outlier community data that would be necessary to continue to evaluate these hypotheses.

VI. Defining the Chacoan Landscape: Part II - Experiences

Archaeology has made enormous strides in documenting Chaco landscapes. Of course, much remains to be done for basic discovery and documentation. But we have covered only part of the story. In **Part IV** (see particularly **Appendix IV**), we catalogued the material evidence needed to address the research issues outlined above. At minimum, these categories of evidence include (1) monumental architecture (great houses, great kivas); (2) roads and related features (staircases, earthworks); (3) outlier communities; (4) surface artifacts; (5) shrines and related features (stone circles, crescents, cairns); and (6) rock art. **In Part VI**, we address the experiential aspects of the Chaco landscape that we need to understand in order to address these research issues. If we want to understand landscape from an experiential perspective, one important collection of evidence should be indigenous oral traditions, stories, and histories, as discussed above in Section D. A minimal list of phenomenological evidence should include: (A) viewsheds; (B) day and night skies; and (C) soundscapes. We provide a brief summary below and refer the reader to **Appendix VI** for expanded discussion.

VIA. Viewsheds

On the Colorado Plateau, high places are visible and intervisible by virtue of the elevated topography and the clear and cloudless skies. Chacoans would have valued visibility over broad areas of landscape for reasons that included surveillance, communication, symbolism, and a shared sense of identity or history. Chacoans had the means as well as the motive to create a communication or signaling network involving great houses and shrines that drew together the greater Chacoan world. GIS databases and software are proving to be excellent tools for examining and modeling visible connections over large areas. Visibility studies based in GIS can determine potential and likely lines-of-sight (the reciprocal ability of people at two locations to see one another), viewsheds (the surrounding terrain and features that can be seen from a single location), and viewnets (networks of locations connected by lines-of-sight). Van Dyke et al.

(2016) have recently completed an initial GIS-based viewshed and line-of-sight study involving over 80 shrines and related features and over 230 great houses or related features. We determined that shrines do, in fact, facilitate intervisible connections. Importantly, our study predicts where we should look for unrecorded shrines across the Chaco landscape – work that has yet to be undertaken.

Viewsheds within outlier communities are another focus of interest. Many outlier great houses were situated on elevations above their associated community; that is, they were "the house on the hill." Great houses may have been intended to watch over, or to be seen by, the surrounding community. In four communities where fine-grained small site data are present, scholars have employed GIS line-of-sight and viewshed analyses in attempts to address these issues, with variable and contradictory results. Any energy development that negatively impacts air quality will directly affect our ability to see, study, and understand viewsheds on the Chaco landscape.

In addition to recognizing the cultural significance of viewsheds for ancient Chacoans, management should also consider the modern visitor experience at Chaco sites. Contemporary visitors come to Chaco for spiritual communion and aesthetic inspiration that depend on unimpeded access to the skies, vistas, and viewsheds. It is impossible to provide statistics that would purport to measure the aesthetic inspiration and spiritual solace visitors experience on the Chaco landscape, but some evidence of this is offered by the immense popularity of this landscape as a topic for black-and-white photography compendia. See for example David Noble's (2010) *In the Places of the Spirits*, Judy Tuwaletstiwa's (2007) *Mapping Water*, Jack Campbell's (2007) *The Great Houses of Chaco*, Mary Peck's (1994) *Chaco Canyon: A Center and Its World*, and Paul Logsdon's (1993) *Ancient Land, Ancestral Places*. Anecdotally, we can attest that visitors' experiences of the remote Pierre's site – a north road corridor and Chaco Protection Site – are negatively impacted by a well pad and clanking pump engine just outside the Protection Site boundary. We have visited Pierre's site repeatedly, with archaeological colleagues and with tour groups, and visitors have never failed to comment unfavorably on the viewshed and soundscape. "Wilderness values" are a management consideration at Chaco Culture National Historical Park, and should extend as a management concern throughout the Chaco region.

VIB: Day and Night Skies

It is not simply visibility that is an important component of the Chaco landscape experience – it is the sky itself. The directions and alignments so important to Pueblo cosmography derive some of their significance from the movements of celestial bodies, including the sun, the moon, and the stars. We have good evidence in the form of rock art and architectural alignments that Chacoans were concerned with all of these elements. That is, the dark skies were an integral element in the design and experience of Chacoan landscapes. Chaco Culture NHP is committed to protecting the quality of night skies inside the park; it recently was certified as an International Dark Sky Park by the International Dark-Sky Association (IDA). However, there has been virtually no research into celestial meanings, alignments, and associations at outliers on the Chaco landscape (with the exception of Chimney Rock, located NE of Chaco in Southern Colorado). Energy development creates a great deal of light pollution and thus would be potentially very harmful to Chaco's night skies, as well as daytime air quality.

VIC: Soundscapes

Sound is an understudied experiential aspect of the Chacoan landscape that begs for further attention. It is likely that Chacoan ritual involved songs, chants, drums, bells, flutes, and shell trumpets. Archaeologists and anthropologists have barely begun to undertake investigations into ancient soundscapes (see **Appendix VIC**). Experimental studies have focused on architectural spaces and natural places, but no work has been undertaken outside of the park. The Chaco soundscape, which is a major landscape feature and experience, is one of the most fragile aspects of this landscape to be threatened by energy development.

VII. Management Considerations

Chaco Culture National Historical Park was the center of a large region from A.D. 850 to 1150. Chaco's ancient history can only be understood in the context of that larger regional. Without knowledge of its region, Chaco would be like studying Washington D.C. without the rest of the USA.

Chaco's region, defined by approximately 230 "outlier" Great Houses and distinctive landscape features, covered 30,000-60,000 square miles in portions of New Mexico, Colorado, Utah and Arizona. Chaco's history played out over vast landscape scales.

Chacoan landscapes can be considered on three scales: Chaco Canyon itself, with its remarkable city-scape; individual "outlier" landscapes; and the larger regional landscape. The Canyon is protected as a National Park; a handful of "outlier" landscapes are protected as Chaco Protection sites; the larger regional landscape has not yet been considered for protection or management. All three scales were recognized in the original creation of the Monument and Chaco's later elevation to Park status; and in Chaco's inscription to the World Heritage List.

> The Canyon landscape is protected as a National Park and by proposed "buffer zones" for public land management. The management of non-Federal lands near Chaco, however, remains problematic.
>
> Outlier landscapes consist of material, physical elements and non-material elements. Material elements include Great Houses, Great Kivas, roads, berms, and multiple surrounding farmsteads. Non-material elements include internal viewsheds (Great House to farmsteads), external viewsheds (Great Houses to Great House and to significant peaks), night skies, soundscapes, and other experiential and oral historical elements. A relatively small number of outliers are protected and managed as part of the Park and as Chaco Protection Sites.
>
> The regional landscape has seldom been considered as a management unit, in part because it comprises multiple land statuses, multiple states, and multiple agency jurisdictions. Studies and documentation of its constitutent and contributing elements lag far behind the Canyon and outlier landscapes: roads, viewsheds, line-of-sight signaling systems, shrine networks, significant natural features.

A "resource" this diverse and wide-ranging demands a unified management approach, to Chaco itself, its outliers and region, and the natural environment that was integral to the Chacoan landscape, rather than the piece-meal approach by separate government entities. Such integrated management can benefit from both the explosion of new data on Chaco and its world, and from

recent substantive developments in how archaeology (and heritage management) view and understand landscapes.

Important new archaeological tools and methods for studying landscape have been developed in the Southwest since the 1990s. Many of these tools were not available prior to 2000 (Chaco Protection Sites Joint Management Plan 1983; BLM Farmington Resource Management Plan 2003).

A recognized Southwestern "school" of landscape archaeology developed from innovations and discoveries at Chaco landscapes on the canyon, outlier, and regional scales. Thus Chacoan landscapes are not only intrinsically significant, they are significant to the development of new scientific and humanistic knowledge in the past, present, and future.

Chacoan landscapes on all scales can be managed under existing historic preservation laws and regulations, if recognized as and afforded the National Register considerations of "historic planned landscapes" and "historic rural landscapes." By categorizing Chaco as prehistoric – that is, lacking history – these considerations are effectively foreclosed. It could be argued that such regulatory foreclosure reflects unfortunate colonial prejudices.

Appendices

Appendix I: Landscape in Canyon-Outlier Models

A number of models have been developed to explain the rather dramatic appearance of Bonito style architecture across an arid, agriculturally marginal landscape during the Pueblo II period. Early explanations focused on the canyon. More recent work has recognized that relationships between the Chaco Canyon and the outliers must have been an important part of the *raison d'être* of Bonito style architecture in both areas. However, Chaco scholars are still struggling to understand how and why great houses were built in outlier communities, and what this meant both for the communities themselves, and for their relationships with Chaco Canyon and with one another.

Lekson (1999) and Van Dyke (2007) have argued that landscape holds the key to understanding Chaco. Local Chacoan ritual and monumental landscapes in both the Canyon itself and at "outlier" communities have been recognized and documented by Fritz (1978), Stein and Lekson (1992), Fowler and Stein (1992), Sofaer (1997, 2007), Van Dyke (2004, 2007), and many others. At the largest scale, Chaco Canyon (ca. 850-1130) was directly followed in time by Aztec Ruins National Monument (ca. 1110-1280), a complex of monumental structures and landscape features comparable to (but half the size of) Chaco. Lekson (1999, 2015) suggested that Chaco in effect shifted due north, to a second, successor center. The meridian axis structured both the original landscape at Chaco and the "Great North Road" probably linking Chaco and Aztec. This meridian may have a deeper history, prior to Chaco as well as influenced the later foundation of subsequent regional centers. The importance of the meridian in Chaco Canyon's landscape has been studied by John Fritz, Ruth Van Dyke and others. The larger regional extension of the meridian is provisional, but largely accepted among archaeologists.

Van Dyke (2007) argues that the Chaco landscape embodies a worldview that emphasized dualism, cardinal and vertical directions (Marshall 1997; Stein and Lekson 1992). As outlier residents arrived for ceremonies at Chaco, their spatial experiences confirmed for them that the canyon was the center place – an appropriate location in which to conduct the rituals necessary to ensure agricultural success and to keep their lives – and the world – in balance. The North and South Roads at Chaco evoke, on a visceral, nonverbal level, a sense of the balance between the visible and the invisible, the celestial and the subterranean. Chaco Canyon is experienced as the fulcrum of this opposition – the place in which equilibrium can be maintained. Chaco Canyon is ideally situated to be a center place. The canyon itself represents a balanced dualism between vertical and subterranean, highly visible, and entirely hidden. The name Chaco Canyon suggests depth, but Fajada Butte and the mesas that form its walls are some of the highest points in the San Juan Basin. Chacra Mesa is intervisible with many locations across the San Juan Basin and with landforms along the Basin's edges, 50-100 km away. Places such as Huerfano Mountain and Hosta Butte may have represented particular directions or boundaries, or they may have been associated with particular myths or histories. Chacoans positioned some buildings and other features to create lines of sight with specific landforms, and they marked these high places with shrines.

Appendix II: Management Considerations

"Chaco Canyon National Park" was proposed in 1902, based on the report of GLO Agent Stephen Holsinger (Holsinger 1901). Holsinger had visited Chaco Canyon at the insistence of Edgar Hewett (Museum of New Mexico) to investigate the excavations and homestead claims of Richard Wetherill. Holsinger recommended that Chaco Canyon be protected from homesteading, and with it a sizable portion of the San Juan Basin – almost 750 square miles! He also listed several "outliers" that merited protection, beyond the limits of his expansive proposal. No action was taken until the passage of the Antiquities Act of 1906 (also promoted by Hewett). In March 11, 1907 Chaco Canyon was named a National Monument of about 32 square miles, but with several "outlier" units: Pueblo Pintado, Kin Bineola, Kin Ya'a, and the elusive Casa Morena (Holsinger never visited this site, and the land set aside for its protection contains no major ruins).

Importantly, the original evaluation of the ancient society centered at Chaco Canyon recognized its remarkable geographic scale. Management and preservation of Chaco archaeology required "thinking outside the box," far beyond the limits of Canyon. Holsinger's insights were affirmed in the 1920s and 1930s with excavations at several of Chacoan sites distant from Chaco Canyon: Aztec Ruins (50 miles N of Chaco), Lowry Ruin (110 miles NW), Chimney Rock (80 miles NE), and Village of the Great Kivas (85 miles SW).
Subsequent research has revealed at least 230 such Chacoan "outliers" at distances up to 150 miles from Chaco Canyon (Fowler et al. 1987; Kantner 2003; Kantner and Mahoney 2000; Marshall et al. 1979; Marshall and Sofaer 1988; Powers et al. 1983). Early research also revealed the existence of long, linear landscape features today called "roads;" subsequent research has confirmed the existence of "road" segments at many "outlier" sites, including the most distant in southeastern Utah. Research begun in the 1970s also documented an extensive line-of-sight communication system, linking distant "outliers" to each other and in some cases back into Chaco Canyon (Freeman et al. 2007; Hayes and Windes 1975).

Joint Management Plan -- 1983

The geographic scale of Chacoan society was recognized in the legislation that enlarged the old National Monument and created Chaco Culture National Park in December 19, 1980 (PL 96-550 Title V). This legislation also included "Thirty three outlying sites … hereby designated 'Chaco Culture Archaeological Protection Sites'" (Sec 502b), recognizing "…the potential for conflicts between resource preservation and energy development" (Joint Management Plan1983:1; hereafter JMP). The Protection Sites are jointly administered under a Joint Management Plan (JMP) by Federal and State agencies and the Navajo Nation (JMP 1983, amended 1990). The first of five goals of the Joint Management Plan was: "Identify, manage, protect, and interpret a representative sample of the prehistoric Chacoan cultural system" (JMP 1983:16); it is clear that "Chacoan cultural system" means archaeological sites and landscapes across the Chacon region. Four other goals included balancing energy development and site protection; resolving conflicts in protection and development; developing individual site management plans; and developing procedures for new discoveries (JMP 1983:16). While the original legislation named only "Protection Sites," we direct attention to the JMP's foresight in the protection of "the prehistoric Chacoan cultural system," to which we will return, below.

To select the "representative sample" of Protection Sites, the Chaco region was divided into six "pie slice" sub-regions with Chaco Canyon at center. These six sub-region represented

known or assumed "road system affiliation" – that is, "road" networks branching out from Chaco in each of the six defined directions. Within each "road system", sites were selected in reference to six criteria: "distance from Chaco", "vegetative context", "time period", "outlier type, "Chacoan structure size", and "unusual structural features" (JMP 1983:33-34). In light of these criteria, "a sample … [was] selected that will best represent the known diversity in the outlier system" (JMP 1983:33), listing thirty-three sites in parcels ranging in size from 10 to 1,565 acres. With one exception in Arizona, all Protection Sites are in northwestern New Mexico, with about two-thirds in the San Juan Basin. Most of the latter are in the southern San Juan Basin (that is, south of Chaco).

World Heritage -- 1987

This far-sighted legislative protection for "outliers" was followed on December 8, 1987 by Chaco's inscription on UNESCO's World Heritage List. The World Heritage listing acknowledged the geographic scale of ancient Chacoan society by including a small number of Protection Sites: Aztec Ruins, Kin Bineola, Kin Ya'a, Pueblo Pintado, Casamero, Kin Nizhoni, Pierre's, Twin Angels, and Halfway House (the latter three related to the ancient "North Road"). The World Heritage listing includes the following statement:

> "Further evidence of the Chacoan system, including road traces and outlier communities with 'great houses,' extends well beyond the property boundaries, but was not considered for inclusion at the time of inscription. There is no buffer zone. Since the property's inscription, efforts such as partial site reburial, fencing, and patrolling have dramatically slowed the rate of deterioration. However, threats to its integrity from adjacent development (including associated utilities and roads), energy exploration, extraction, as well as transportation projects and proposals have increased." (http://whc.unesco.org/en/list/353/, accessed Dec 22, 2015)

Chaco's World Heritage qualities were recently re-affirmed by the World Heritage Committee (2014), naming Chaco as a site of Outstanding Universal Value.

Only truly exceptional properties and landscapes make the list, with Chaco being one of only 10 World Heritage cultural listings in the US. It ranks with the Statue of Liberty, Independence Hall, Monticello, Cahokia, and Taos Pueblo. Chaco's significance, recognized in the World Heritage inscription, is unusual in that it is not a single property, but as a "network of sites" and a regional system. In some ways it is similar to the Hawaiian chain of islands and atolls called Papahānaumokuākea, which has deep ancestral/historic value for Native Hawaiians – a World Heritage listing encompasses an area of over 135,000 sq mi. Note that the World Heritage List recognizes the size and scale of the "Chacoan system" and allows for the inclusion of additional properties in the future as research develops and discoveries are made.

National Register Significance

National Register status is a key element of archaeological site management under NHPA Section 106 and other legislation and regulations. While National Register status is not addressed in detail in the text of Joint Management Plan, it is listed first in the table of Protection Site data (JMP 1983:31-32). As of 1983, sixteen of the 33 Protection Sites were listed, eight

were nominated, and the remainder were all deemed eligible. As a lynch-pin of cultural resource management, we review some aspects of National Register criteria and its tools, specifically Criterion D in relation to other Criteria; and District or Thematic multiple property nominations; and Register designation of "Cultural Landscape," with reference to "Traditional Cultural Properties."

Four criteria guide nomination and inclusion in the National Register (National Register Bulletin 15, 1997). The first three are historical or architectural: A. association with historic events; B. association with historically significant people; and C. important examples of architectural styles "that embody the distinctive characteristics of a type, period, or method of construction, that represent the work of a master, or that possess high artistic values." Criterion D is loosely inclusive for archaeology: "that have yielded or may be likely to yield, information important in history or prehistory." The first three generally represent the relatively recent Colonial and National past; the fourth, Criterion D, is a general criterion for prehistory and the least specific: "likely to yield information." Typically (but not exclusively) the potential for yielding information is equated with the presence of intact deposits, and thus is site-specific. If a site has or probably has intact sub-surface deposits, it is eligible for nomination to the National Register. It is "eligibility" that triggers Section 106 and its regulations, and subsequent management actions. In many ways, the bar is lower – or, rather, different – for archaeological sites than for places of conventional historical note, places associated with historically important people, or architectural masterpieces.

All known Chacoan Great Houses – which number between 200 and 230 –clearly are eligible for National Register Nomination under Criterion D. A strong case can also be made for nomination and inclusion under Criteria A, B, and C. As with Traditional Cultural Properties (Nat Reg Bull 38), this requires a more anthropological than conventional academic approach to "history."

Criterion A calls for association with events that contributed to broad patterns in history. It appears that Chaco Canyon and the Chaco cultural system (JMP 1983) was a watershed in Native history in the Southwest: what came before was very different than what came after. While there is debate about the exact nature of those changes, the fact of change – extraordinary historical change – is undeniable and accepted by most if not all archaeologists and historians. Native accounts also refer to Chaco as a place where both great and terrible things transpired, changing Pueblo life forever (accounts in Lekson 2009).

Criterion B requires association with persons significant in the past. A strong case can be made that Chaco Canyon and its outlying Great Houses were associated with rulers or leaders of considerable power. While the nature of that power is a matter for research – economic? political? military? ritual? all of the above? – the fact of power at Chaco is generally accepted. We may not know the names of all the individuals or families controlling this power, but the people of their times knew their names or titles. Indeed, from Navajo accounts, we have the name of Chaco's ruler: Noqoìlpi, "He-Who-Wins-You-Over" (often translated as "Great Gambler;"Judd 1954:351-354; Matthews 1897; McPherson 1992:87-93). Noqoìlpi lived at Pueblo Alto in Chaco Canyon and ultimately controlled the Chaco cultural system. He features in many Navajo traditional histories – some of which are significant to current Navajo policies and development (e.g., the development of casinos in the Navajo Nation came long after other regional tribes, in part due to the traumatic history surrounding the Great Gambler). Clearly, Chaco Canyon's Great Houses were associated with historically significant figures; the

associations of outlier Great Houses is less clear, but a strong argument can be made that they, too, were associated with persons of historical significance.

Criterion C focuses on architectural styles: "that embody the distinctive characteristics of a type, period, or method of construction, that represent the work of a master, or that possess high artistic values." Chaco landscapes are distinctive of a key era in the history of the ancient Southwest, and Chaco Great Houses are distinguished by their forms and methods of construction – beautifully detailed sandstone masonry that has inspired walls and veneers on modern structures. It could also be argued that Chaco Great Houses involved a creative role we would today call an architect, or architects: that is, an individual or small group which planned and designed the form of the buildings, cognizant of its exterior appearance, which were then built by others, and used (for centuries) by others. To quote National Register Bulletin 38: "A property identified in tradition or suggested by scholarship to be the work of a traditional master builder or artisan may be regarded as the work of a master, even though the precise identity of the master may not be known." We would add only that master may have been plural, that is a small group. But clearly one set of people designed Great Houses, while other people used them. And they designed them impressively: the "artistic values" of Chacoan Great Houses are routinely acknowledged in compendia of world architecture.

Chaco Canyon and archaeological properties associated with the "Chacoan cultural system" or region are clearly eligible under Criterion D. A strong case can be made for Criteria A, B and C as well. The Chaco cultural system, using the language of JMP 1983, was more than the aggregate of the central Canyon and outlier Great Houses. Clearly, the Chaco cultural system operated over long distances and large areas; those distances and areas are as critical to understanding, protecting, and managing the cultural system as are its nodes, the Great Houses and their communities (discussed below). Chaco and its outliers are obvious candidates for District or Thematic multiple property nomination to the National Register. The scale of such nominations is not limited, and can apply to "any geographical scale—local, regional, State or national." For example, the Zuni Salt Lake and Sanctuary District, a Traditional Cultural Property district in west-central New Mexico, is 182,000 acres in size. The Medicine Lake Highlands TCP district in northern California encompasses 73,000 acres of public land. Very recently, Mount Taylor in New Mexico was named a Traditional Cultural Property of over 400,000 acres, for its importance to Tribes today. Mount Taylor was almost certainly an element of the ancient Chacoan landscape.

Multiple property nominations can include transportation corridors (railroad rights-of-way, roads) as well as structures. They include provisions for future discoveries: "The geographical data define the limits of the area where properties included within the multiple property group exist or are likely to exist." Thus such a nomination would not be a limiting tool for successful management. The fact that Chaco "outliers" have not been nominated in a district or thematic nomination is, we think, simply a reflection of the amount of effort required for documentation.

"Cultural Landscapes" and Management

It has become increasingly clear that Chaco cultural system was not simply a series of isolated "sites" but rather a cohesive, inter-connected landscape. Thus the National Register categories of "Historic Landscape" and "Cultural Landscape" are almost certainly appropriate. The Chaco cultural system could be nominated under either or both of these categories; or landscapes at several scales could be part of a District or Thematic nomination.

"Cultural Landscapes" is a category for eligibility as defined by NPS, may be eligible for inclusion in the National Register, with or part of a District nomination. From an NPS on-line glossary:

> "Cultural landscape - a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes." (http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/index.htm, accessed Dec 22, 2015)

As with the four National Register criteria discussed above, "cultural landscapes" lean towards historic applications. The sub-category "Ethnographic landscapes" acknowledges Native American issues (although its application is not limited to Native Americans) but refers to landscapes in the present, not in ancient times. Therefore we look at "historic designed landscapes" and "historic vernacular landscapes." The latter refers to rural situations, and may be useful in mid-scale landscape situations, such as Chacoan communities (described below). As with the National Register interpretation of Traditional Cultural Properties (Parker and King 1998; hereafter, TCP), we believe it is useful to look at "historic designed landscapes" for application to the Chaco cultural system (Birnbaum 1995; Keller and Keller n.d.). Clearly, the designation was intended for gardens and estate grounds, but it is also applied to larger scales such as "city planning or civic design". "Cultural landscapes" are "features organized in space:"

> "Spatial Organization and Land Patterns refers to the three-dimensional organization and patterns of spaces in a landscape, like the arrangement of rooms in a house. Spatial organization is created by the landscape's cultural and natural features. Some form visual links or barriers (such as fences and hedgerows); others create spaces and visual connections in the landscape (such as topography and open water). The organization of such features defines and creates spaces in the landscape and often is closely related to land use. Both the functional and visual relationship between spaces is integral to the historic character of a property."

"Historic Landscapes" and Management

"Designed historic landscapes" specifically address "view and vistas into and out of the landscape" as well as "parkways, drives and trails", and "spatial relationships and orientations such as symmetry, asymmetry and axial alignment" – among other characteristics. Again, we acknowledge that this category was intended for historic landscapes in the European tradition. But the category also fits Native historical designed landscapes. Consider the remarkable 5th and 6th century Hopewell mound complexes, of huge geometric earthworks: Hopewell mound complexes were clearly designed with roads, orientations, symmetries; moreover, the landscape design carried over very broad geographic space.

We argue that the Chaco cultural system is eligible as both "Designed historic landscape" and "historic vernacular landscape," at different scales or levels. We offer examples that will be

further developed in the course of this project, at the levels of (1) Chaco Canyon, (2) Chaco Communities (of which there are over two hundred), and (3) the Chaco region.

Just as Chaco Great Houses were designed, so too the settlement in Chaco Canyon (hereafter, "Chaco Canyon"). Construction lasted several centuries. Clearly, however, there were designed "views and vistas into and out of the landscape" as well as "parkways, drives and trails", and – most importantly – "spatial relationships and orientations such as symmetry, asymmetry and axial alignment." North-south and east-west axes of design were first proposed John Fritz (1978), and dismissed by that era's archaeology as either coincidence or irrelevant. The north-south axis has since been confirmed (Lekson 1999; Van Dyke 2007) – and taken seriously. In the 1970s and 1980s, symbolism took a back seat to ecology: symbolism and design characters were not among the criteria for selection of the "representative sample" of the Chaco cultural system, but "vegetative context" was a deciding factor (quite properly, of course). We note that several of the archaeologists working on the Chaco Protection Site list were deeply engaged with symbolism and design (e.g., Stein and Lekson 1992) but it took the passage of several decades, the infusion of British landscape studies, and the passage of the American Indian Religious Freedom Act (1978) and NAGPRA (1990) for symbolism and design to rise in the consciousness of cultural resource management. Initially these ideas were incorporated in the management of TCPs of current Tribes, but increasingly management now acknowledges that ancient Natives also invested meaning into their buildings and landscapes. Thus, more recent researchers have demonstrated a range of plans and alignments for Chaco Canyon, reflecting cosmologies of lunar, solar, and cardinal alignments (Van Dyke 2007; Sofaer 2007). Indeed, the sky was a key element of the Chacoan Designed Historical Landscape; while treasured as a Dark Sky Park, the management of Chaco Canyon (and its region, discussed below) should also acknowledge that the night sky was fundamental aspect of Chaco's designed landscape. As noted above, alignments and design underlay the forms of Great House buildings and other elements comprising Chaco Canyon. It is widely accepted that the Canyon itself, at least in its central span of seven miles, was designed and planned with many characteristics of a "Historic Designed Landscape" – and should be eligible under that National Register category. The full civic plan would include the "halo" of buildings surrounding the present National Park (for example, on Escavada Wash) which may extend for some distance. A full analysis of the "Designed Historic Landscape" of Chaco has yet to be completed.

The level of "Chaco Community" represents both "Designed Historic" and "Historic Vernacular" landscapes. The notion of "Chaco community" is formal, not sociological (although a sociological community is sometimes implied): a repeated pattern of a small Chacoan Great House (often atop a rise or eminence) with attendant earthen monuments and "road" segments; one or more Great Kivas; and a scattering of much smaller homesteads, clustered around the Great House and typically intervisible with it (Marshall et al 1979; Lekson 1991; Kantner and Mahoney 2000). There are over two hundred known communities, and of course they exhibit a wide range of variation in both Great House form and community structure. No two Great Houses are exactly alike (not surprisingly); and some communities have a half-dozen small homesteads, while others have scores; some communities are tight and dense, others more scattered. Regardless of variation, the reality of the landscape pattern is widely accepted, even if its social correlates are matters of discussion and debate. The Community level best demonstrates the Native vernacular tradition by contrasting the homesteads – relatively simple, user-built, vernacular folk housing – versus the "polite" or "high style" architecture of Chaco Great Houses. Conventionally, non-European tradition architecture is automatically (and

dismissively?) termed "vernacular." The clear contrast between Great House and homestead architecture demonstrate that Chaco Great Houses (like Hopewell monuments) cannot properly be called "vernacular." They were designed by architects (or individuals filling the role of architects) and suffused with symbolism; they were built as monuments for the long term; and they expressed an easily comprehended architectural order that transmitted meaning and aesthetic quality to the observer. Thus, the Chaco Community as a landscape type includes both "Designed" and "Vernacular" themes. Civic planning of various Chaco Communities is a topic which has not had the study it deserves. For example, we suggest that the location of the Great Kiva – near or at the Great House versus out in the community of homesteads – was either planned or negotiated. The alignments of road segments, most evident near the Great House, continue through and perhaps structure the community of homesteads. These and other design possibilities can be suggested with some degree of confidence, and (although understudied) must be considered in management. Several of the Chaco Protection Sites include the surrounding community; we are uncertain how many, if any, of the Sites exclude the community.

At the very largest level is the Chacoan region. As defined by the distribution of "outlier" Great Houses, the region is very large, at least 30,000 square miles and up to 60,000 square miles. As might be expected, the Chacoan region has been a matter of contention and territorial dispute. Early efforts (in the 1970s) ran into political boundaries; "there are no Chaco Great Houses in Arizona," for example. The weight of the data has, over the years, put such issues largely to rest; however, the meaning of this broad distribution remains very much a matter of debate. We are not so concerned here with the ultimate answers to that question – beyond the simple fact that the resources to answer that question remain in and on the ground, and should be managed accordingly. For current management purposes, we noted above that the whole distribution of Great Houses constitutes an obvious, eligible District or Thematic nomination; but beyond that, we argue that the region may also constitute both "Designed Historic" and "Historic Vernacular" landscapes, perhaps nested and overlapping.

As the Chaco cultural system, the entire region is a Historic Vernacular landscape – although not as understood in European-tradition terms. Chacoan communities were not contiguous, but scattered and distributed over a large area to reflect the "patchy" occurrence of good farmlands. Northwest New Mexico is not Iowa; farmlands (absent modern irrigation) are seldom contiguous and continuous. A rural landscape in the European tradition is largely impossible in the Southwest, outside the irrigated river valleys of the Rio Grande, Salt River, Gila River and so forth. Modern and historic Navajo settlement reflected the same "patchiness" of resources, and indeed many Chaco Communities were located at places favored by Navajo farmers – or vice versa, perhaps. Thus the overall distribution of settlement was "Vernacular" in the widely understood sense of architecture reflecting or responding to local conditions, local needs, local materials and local traditions. Taken to landscape scales, the Chacoan region was thus a "Vernacular historic landscape."

This assessment could be dismissed, perhaps, as reading too much into an adaptive, ecologically-determined pattern of villages and settlements – were it not for a "Designed Historic landscape" overlying and literally overarching the "vernacular." This Designed Historic Landscape is evident in three realms: (1) Great Houses themselves; (2) architectures of distance – designs intended to link the region; and (3) the cosmology and history Chaco expressed as a monumental Designed Landscape.

First, of course, are the Great Houses at the core of most communities; the Great Houses vary in form, but share canons of Chaco's "high style" design. Architectures of distance were

developed to link the region: (1) viewsheds in which "outlier" Great Houses were often intervisible; (2) a sophisticated infrastructure for a line-of-sight communication system which linked "outlier" Great Houses with each other and with Chaco Canyon; and (3) the enigmatic Chacoan "roads."

Great Houses were placed (sited) with great attention to their view sheds, and intervisibilities with other Great Houses and with important landscape features (see **Appendix VIA**). While most "outlier" Great Houses today are reduced to mounds of a ten or twelve feet height, it is instructive to note that the Bluff Great House – in every way a "typical" low mound, originally stood at least three and perhaps four stories tall (Cameron 2009). Other "outlier" Great Houses may have similarly emphasized the vertical both as features designed to impress viewers and viewshed multipliers.

The Chacoan line-of-sight communication system is well documented in some areas; for example, Chimney Rock to Chaco via a "repeater" station at Huerfano Butte (Freeman and others 1997). That system linked Chimney Rock to Chaco. Other systems have been suggested for other parts of the Chaco region, but work on key aspects of the Designed Historic Landscape is only beginning. If the extent of the line-of-sight system was in fact regional – as we and others think likely – then it was a network connecting the far-flung elements of that landscape in ways not considered by historic European traditions of landscape architecture.

Chaco "roads" are at once the most evident but least obvious architecture of distance. Some "roads" continued, uninterrupted, for scores of miles (for example, the North Road). Others may be evident only near Great Houses. While it is possible that alignments evident on the current surface continued great distances, it is also possible that only the initial (or terminal) alignment was necessary to express in landscape architecture; the intervening distance was simply understood. For example, a highly visible road segment at the Bluff Great House pointed fairly accurately toward the Great House Community at Teec Nos Pos, some 35 miles toward the Southeast; continuing that alignment from Teec Nos Pos another 85 miles on the same bearing reaches, fairly accurately, Chaco Canyon. There is no evidence (yet) of a continuous road linking those three places, but "road" segments easily visible at Great Houses may have carried sufficient symbolism – with "outlier" Great Houses and the line-of-sight communication system – for an architecture of distance, a key element of Chaco's Designed Historic Landscape.

At an even higher (if perhaps spatially smaller) level, Designed Historic Landscapes structured and commemorated Chacoan cosmology and history. The best-known instance is the Chaco Meridian (Lekson 1999), controversial when first proposed but today widely accepted, at least in part: Chaco moved North to Aztec (a distance of 50 miles), and commemorated or structured that event with a major landscape monument, the "North Road." The full argument is far too long and complicated for presentation here, but the basic idea has been independently supported by artifact and other studies (Reed 2008) and landscape analysis (Van Dyke 2007). The scale of the Designed Historic Landscape represented by Chaco and Aztec is commensurate with other known Native landscapes; for example, the "Great Hopewell Road" links two major monumental centers at Newark and Chillicothe, over a distance of 60 miles. It seems clear that Chacoan Designed Historic Landscapes imposed a cardinal structure on the natural landscape, and that structure was profoundly important in Chacoan history.

Finally, the Chacoan Designed Historic Landscape incorporated prominent natural features (allowed in "Designed Historic Landscapes"). Field studies have demonstrated the alignments and viewsheds of the Chacoan landscape reference prominent peaks, buttes and the like (Van Dyke 2007).

Architect Dennis Doxtater (University of Arizona) has proposed and published (in peer-reviewed journals) his observations that axes defined between and among prominent mountain peaks played a role in the rise of Chaco at Chaco Canyon, and in its subsequent historical development (Doxtater 2002). This suggestion is congruent with Pueblo place-making, which typically references mountain peaks in four (or more) directions. Modern Pueblo practices may reflect an earlier, perhaps more precise "geomancy" (Heitman 2011). Doxtater suggests emplacement of Chaco in what we would today call a "natural" environment, but which for Pueblo people today is an active living landscape, and for Chacoan architects in ancient times the context or parameters for Designed Landscapes.

In summary, the individual "outlier" Great Houses and their communities are clearly eligible as a multiple property, District or Thematic nomination. But we argue that protection and management of the "Chacoan regional system" calls for more: a landscape management approach -- identifying, protecting, and managing the Vernacular and Designed Chacoan landscapes. Not just the constituent "sites" and the buildings, but the spaces, distances, viewsheds, alignments, and night skies that constituted ancient Chaco.

Appendix III: Landscape: Theoretical Background

Appendix III A. Settlement Pattern Studies & GIS

Settlement pattern studies have enjoyed a long run of popularity in cultural ecology and processual archaeology (Ashmore 2002). Horizontal and vertical measurements describe relationships between people and natural or cultural resources, and landforms provide raw materials or opportunities to engage in various kinds of subsistence behavior. Traditional settlement pattern studies tend to view space as a neutral container for action. Maps, aerial photographs, GIS databases, and other kinds of large-scale, top-down representations of space are important tools of the landscape scholar. GIS databases and software are proving to be excellent tools for examining and modeling visible connections over large areas (Bernardini et al. 2013; Bernardini and Peeples 2015; Connolly and Lake 2006; Exon et al. 2000; Fisher et al. 1997; Johnson 2003; Kay and Sly 2001; Kay and Witcher 2005; Lake 2007; Llobera 1996, 2003, 2007; Waldron and Abrams 1999; Wheatley 1995; Wheatley and Gillings 2002). Visibility studies based in GIS generally focus on determining lines-of-sight (the reciprocal ability of people at two locations to see one another), viewsheds (the surrounding terrain and features that can be seen from a single location), and viewnets (networks of locations connected by lines-of-sight).

Geographic Information Systems are the standard by which land management agencies and academics present and analyze geospatial data such as site locations. Despite the general fluency and ubiquity of these technologies, it became clear to the authors of this report that various management agencies (including the BLM Farmington Field Office) and different Chacoan research groups were using disparate geospatial data sets of variable quality. We are in the process of aggregating and reconciling existing datasets on great house community locations, but even the best available data are in many cases limited and imperfect. Efforts to improve and augment these data are ongoing. Without accurate site locations and the geographic extent of Chacoan landscape features, we cannot expect to adequately understand, much less protect the greater Chaco landscape.

Appendix III B. Cultural Landscapes

While maps of physical distances among populations and resources are important information, reducing landscape to material patterning leaves the meaningful and experiential aspects of place unexplored. People have reactions, perceptions, opinions, and experiences of their constructed and natural spatial surroundings. Maps do not show us the landscape as Chacoans would have seen it. "Distanced, geometrical, 'outsider's' approaches to space can claim no priority over the social and the experiential" (Thomas 1993: 27). During the 1980s and 90s, geographers, philosophers, and anthropologists began to think of landscapes as socially produced, relational fields vital to the construction of identity and society (e.g., Altman and Low 1992; Lefebvre 1991). Many past peoples have imbued features of the natural landscape, such as boulders, caves, springs, and mountain peaks, with meaning. Ethnographically, landforms tend to be ascribed special significance when they take unusual shapes, or are framed by other landforms, or dominate the horizon from a particular direction (Boivin 2004; Taçon 1999; Williams and Nash 2006). Examples worldwide include Mayan caves (Brady and Ashmore 1999), and the association of a temple complex with a distinctive mountain at My Son, Vietnam (Sharma 1992). Natural places become focal points for the construction of meaning when they are places of unusual drama, reminding people to step out for a moment from the ordinary, quotidian scale of life -- like ritual events, marked off as symbolically meaningful and separate from daily life, focusing peoples' attention and preparing them for emotionally powerful experiences (Cohen 1979:98; Geertz 1980).

The concept of "place" encompasses both the built environment and the natural world – indeed, recent critical perspectives point out that separation of the two is a relatively recent, post-Enlightment, Descartian construct (Thomas 2004). "Landscape" in archaeology provides an ontological framework for thinking about difficult and slippery issues such as memory, emotion, and meaning (Kus 1992; Tarlow 2000). Meaningful places are not only seen – they are felt, experienced, and remembered (Webmoor 2005; Witmore 2005). Stories, histories, and oral traditions create emotional connections and social memories, attaching peoples to places (Schachner 2011; Silko 1977). The theoretical roots of this perspective are found in Bourdieu's notion of habitus – a set of durable dispositions reflexively created through bodily movement within the physical world (Bourdieu 1977; see also Merleau-Ponty 1962).

Archaeologists working on monumental landscapes in Mesoamerica (Ashmore 1989), Roman Greece (Alcock 1993), and Neolithic Britain (Bradley 1998, 2000; see **Appendix V**) turned their attention to landscape as a way to think about ancient ideologies, worldviews, and power relationships. Landscapes comprise the spatial milieu within which bodies and the social and material worlds interact and intersect. Landscapes also constrain and order, as both the site and the stake of social struggle (Foucault 1977; Harvey 1989, 1996; Smith 2003). Archaeological sites can themselves become the loci of social memories and meanings that are continually constructed, obliterated, altered, and reconstructed over time (see authors in Van Dyke and Alcock 2003). Stonehenge (Bender 1993) is an excellent example of this.

Indigenous groups clearly have relationships with landscape that transcend Western ideas about resources or distances. Indigenous peoples of the Southwest use landscape features as metonyms to evoke stories and values (Basso 1996; Young 1988:4-9). By the 1990s, Southwest archaeologists began to focus on cultural landscapes as a way to integrate human perceptions and relationships into the picture (Anschuetz et al. 2001). Southwest archaeologists collaborated with Native Americans to identify cultural landscapes along the San Pedro River corridor, for example (e.g., Ferguson and Colwell-Chanthaphonh 2006). The concept of cultural landscapes

weaves together oral histories, migrations and traditional land use (e.g., Ferguson and Colwell-Chanthaphonh 2006). Prominent visual landmarks helped with wayfaring and contributed to the creation of a sense of community (Bernardini and Peeples 2015). Natural and archaeological places are inextricably connected to memories, histories, religious practices, and cosmologies. As Basso (1996) demonstrated for the Western Apache, storied places are woven into the social fabric, maintaining morality, conveying wisdom. Mountain peaks, buttes, mesas and canyons are more than locations in stories, or backdrops for historical events. They are integral to the identities of those who live within their viewsheds.

All indigenous groups in the Southwest inscribe landscape features with social, religious, and political meanings. For Pueblo people, mountains are home to katsinas—cloud beings or ancestral spirits—that bring rain. Mountains also are important directional markers in a complex cosmography defining the pueblo as the center of a bounded, nested, hierarchical world.

The Keres, who inhabit Acoma, Laguna, and five pueblos along the northern Rio Grande, conceive of the world as a series of nested, interrelated regions focused on the central village (White 1942, 1960). Sacred mountains topped with shrines mark the outermost level of the contemporary world. Similarly, four sacred mountains associated with cardinal directions delimit the Tewa world. Each is associated with an earth navel or opening between worlds, a lake, a color, and various supernatural beings. People go to these distant, high mountains to hunt, gather, or make pilgrimages. Concentric tetrads of shrines and natural features have counterparts in the horizontal and vertical divisions of Tewa society (Ortiz 1969, 1972).The Zuni world is also one of hierarchical, symmetrical divisions connected at a center place (Ferguson and Hart 1985; Ladd 1979). There are six cardinal directions (including up and down), each associated with colors, fetishes, and animals. These intersect at the center, the Zuni village itself, called Itiwanna or "Middle Place. Many ritual activities are carried out at particular sacred sites—archaeological sites, shrines, mountain peaks, springs, and other natural places. Shrines—which can be as simple as a single stone, or as complex as a coursed masonry enclosure—delineate boundaries and mark sacred places.

The Navajo homeland also traditionally is delineated by four sacred mountains: Tsis Naasjini (White Shell Mountain), or Sierra Blanca Peak in south-central Colorado; Tsoodzil (Turquoise Mt), or Mount Taylor in central New Mexico; Doko'oosliid (Abalone Shell Mt), or the San Francisco Peaks in northern Arizona; and Dibe Nitsaa (Big Mountain Sheep), or Mt Hesperus in the La Plata Mountains of southwest Colorado (McPherson 2001:5). Many other high or unusually shaped peaks across the Colorado Plateau are storied places for the Navajo. Hosta Butte, a flat-topped mesa framed through South Gap to the south of Chaco Canyon, is called 'Ak'iih Nást'áni (Mountain Sits On Top of Another Mountain); this is the mythic home of Mirage Boy and Mirage Girl. Huerfano Mountain is a distinctive, ripple-backed, isolated, sandstone mesa on the horizon north of Chaco Canyon. The Navajo call this hogan-shaped mesa Dzilth Ná'oodithlii. It is one of the homes of First Man and First Woman, and it figures prominently in oral history as the place where Changing Woman gave birth to the warrior twins. Shiprock—a dramatically shaped volcanic plug with great fin-like dikes—resembled a clipper ship in European eyes, but the Navajo consider Tsé Bit' a'í to represent a large bird. Cabezon Peak, a knoblike volcanic plug in the Middle Rio Puerco Valley, is the head of a slain giant in Navajo stories (Kelley and Francis 1994; Linford 2000; McPherson 1992,

Indigenous peoples in the Southwest each have an origin story that involves emergence from below followed by migrations to a center place where the people are destined to live (Parsons 1939:215, 230). Archaeological sites mark the path of migration from Zuni's place of

emergence in the Grand Canyon to Itiwanna (Ferguson and Hart 1985:20-23). Hopi clans left their footprints in the form of archaeological sites as they wandered the earth on their migrations (Colwell-Chanthaphonh and Ferguson 2006); at last they arrived at Tuuwanasavi, the center place (Dongoske et al. 1997:603).

Ethnographies and oral traditions provide a wealth of information about indigenous Southwest sacred geographies in the present and the recent past. However, sacred landscapes present challenges for archaeological study. People can interact with sacred places just by knowing about them, telling stories about them, or seeing them. Many storied places are not materially marked at all, or are marked by shrines that consist of one or two stones. Others are signified by formal shrines, rock art, votive deposits, or trails. Buildings and roads sometimes point toward topographic features that carry special meaning. It can be very important to visit sacred places, sometimes leaving offerings (such as turquoise or prayer sticks) or taking materials home (such as salt). Because of the materially subtle and often culturally sensitive nature of sacred geographies, archaeological research into ancient Southwest lansdscapes should be grounded by the direct historical approach.

Appendix III C. Phenomenology

The Chacoan landscape provides a case study that is of great value for scholars interested in theorizing the lived human experience within space and place. In this section we review some of the contemporary anthropological and archaeological literature to illustrate the depth and breadth of these inquiries across the discipline. Much of the potency of spatial experiences for enhancing or challenging power relationships comes from the fact that landscapes are also inherently sensual. Place-making – the construction of a meaningful landscape – involves sound, smell, taste, touch, sight, and emotion. Tuan's (1974) *Topophilia*, today a classic geography text, was the first book of its kind to deal with the aesthetic and sensual dimensions of landscape. Tuan (1974:27) pointed out that spatial experiences can elicit powerful emotions, particularly when multiple senses are involved. Archaeologists are at present working towards archaeologies of the senses, encompassing sights, smells sounds, and tastes (Day 2013; Hamilakis 2013; Houston et al. 2006; Skeates 2010).

Lefebvre (1991:38-46) proposes a useful organizational scheme for thinking about interrelated dimensions of landscape. For Lefebvre, space is a tri-partite concept that includes the material world, spatial representations, and spatial perceptions. Smith (2003:73-75) has helped translate these ideas into archaeological terms. The material world is the archaeologically familiar patterning of sites, features, topography, and resources. These physical landscapes are invested with meaning through representations and perceptions. Spatial representations refer to the ways people draw, describe, and imagine landscape, through art, texts, photographs, maps, or cosmographic schemes – this dimension may be accessible to Southwest archaeologists through rock art, pottery motifs, and Indigenous oral traditions and histories. Spatial perceptions encompass the sensual, emotional, aesthetic dimensions of landscape, involving such archaeological factors as visibility, memory, and iconic symbolism. Investigations into past perceptions pose no small challenge for archaeologists.

With theoretical roots in Bourdieu (1977), Merleau-Ponty (1962), and Heidegger (1962), archaeologists including Ashmore (1989; Ashmore and Knapp 1999) Bender (1993, 1998), Bradley (1998, 2000), Thomas (1996), Tilley (1994), and Van Dyke (2007) have followed the lead of geographers such as Harvey (1989) and Soja (1988, 1996), and anthropologists such as

Low (1997; Lawrence and Low 1990) and Basso (1996) to recognize that humans construct meanings through our experiences in places.

Phenomenological archaeologists such as Tilley (1994, 2004, 2008) have used the commonalities in all human spatial perception as a starting point for exploring the ways in which ancient peoples might have experienced landscape and architecture. Phenomenological methods– walking where past peoples walked, experiencing the same sights – are one way to work towards an understanding of past spatial experiences (Brück 2005; Hamilton and Whitehouse 2006; Thomas 2004). Some aspects of the contemporary and the ancient Chacoan spatial experience are likely to be similar. All humans know the world through bodily experience, so all humans share body-relational perceptions such as directionality and scale. Phenomenologically-oriented archaeologists often focus on the visual dimensions of past places (e.g., Barrett and Ko 2009; Brück 2005; Cummings et al. 2002; Cummings and Whittle 2004; Day 2013; Hamilton and Whitehouse 2006; Scarre 2002; Tilley 1994, 2004, 2008, 2010; Van Dyke 2007). Of course, the contemporary archaeological landscape is but a distorted remnant of the ancient landscape, and interpretations of both are and were culturally situated. We can never replicate the perceptions and reactions of past peoples, and we cannot help but bring our own subjectivities to any experience. Nevertheless, phenomenology provides us with one route of ingress into the ideologically charged, complex social and physical landscapes of the past. The on-the-ground perspective afforded by phenomenology can be complemented by regional-scale GIS analyses (Hacigüzeller 2012).

Clearly, ancient Chacoans possessed their own senses of place and bodily experiences of dwelling in the world. For scholars interested in these philosophical and theoretical issues, the Chacoan landscape – where movement, vision, monumental architeture and the cyclical experience of time were of great importance -- offers an ideal laboratory.

Appendix IV: Defining the Chacoan Landscape

Across the greater San Juan Basin's buttes, dunes, and drainages, Chacoans built Bonito style architecture at over 200 outlier communities. The collapsed remains of some outlier great houses, like Red Willow and Whirlwind, form mounded silhouettes against the sky. At others, like Kin Bineola and Kin Ya'a, multistoried sandstone walls rise tenaciously from the basin floor. Often, outliers include great kivas, earthworks and road segments. There is usually (but not always) a surrounding community of 30-40 or more small, domestic sites.

Scholars have long recognized the existence of outliers (Gladwin 1945; Martin 1936; Morris 1939; Roberts 1932), but these extra-canyon communities and their relationships to Chaco remain poorly explored. In the late 1970's and early 1980's, several major survey projects systematically documented outliers across the San Juan Basin (Fowler et al. 1987; Marshall et al. 1979; Marshall and Sofaer 1988; Powers et al. 1983). Today, archaeologists have excavated a handful of outlier great houses, and research is ongoing in a number of communities (Cameron 2002; Irwin-Williams and Shelley 1980; Kantner 2003; Kantner and Mahoney 2000; Pippin 1987), but most outliers remain unexcavated. Outlier great houses and associated Bonito style features are generally well-described, but information for the surrounding communities often tends to be sketchy at best.

The most recent large-scale pedestrian survey of the central Chaco Canyon region was conducted in 1983-1984. This full-coverage survey was conducted in the Chaco Culture National Historical Park for management and research purposes, to inventory cultural resources on new

lands added to the park in 1980. The areas surveyed included new lands around Kin Bineola, Kin Klizhin, Chacra Mesa, Upper Kin Klizhin, and the South Addition (Powers and Van Dyke 2015:Figure1.1). Under the direction of Robert Powers, the goal was also to cover any areas previously not surveyed within the 17,000 acres of the park boundaries. Approximately 956 archaeological sites were documented as part of this project. Forty percent of those sites (380 out of 956) were classified as explicitly Chacoan.

As part of the Chaco Culture National Historical Park Museum Collection, the Chaco Research Archive (chacoarchive.org) has digitized significant portions of data created by the Additional Lands Archaeological Survey (ALS). This process included the digitization and transcription of all original site survey forms. The data from the ALS is relevant to the current discussion for multiple reasons. Archaeologists on the ALS project identified 380 Chacoan sites (typically in the Culture/Tradition field on the form). The following site types from the survey were identified as "Chacoan:" Atalayas; Great Houses; Herraduras; Isolated Great Kivas; Petroglyphs; Quarries; Roads; Stone Circles; Shrines. This variety of site type classifications provide one method of identifying specific archaeological features of the Greater Chaco Landscape.

Classification of material features clearly poses a challenge in itself. In what follows, we sort the material traces of Chaco across the landscape to include great houses, great kivas, earthworks, roads, shrines, and rock art. In **Appendix IV**, we provide a brief review of what we know, and what we don't know, about these features. **Appendix IVA** consists of a list of known Chaco outliers, and illustrates how few of them have been intensively investigated. **Appendix IVB** provides examples of the range of outlier diversity. In **Appendix IVC** we discuss Chaco roads, in **Appendix IVD** shrines and in **Appendix IVE**, rock art.

Appendix IVA: An Outlier List and Map Example

The following list of 230 known Chaco outliers was compiled from Van Dyke et al.'s (2016) database, available from Van Dyke et al. in GIS and GoogleEarth formats. This list does not include great houses within "downtown" Chaco Canyon. Cursory maps exist of all of the great houses, but the range of additional work is highly variable. Most communities remain largely unexplored. To give some sense of just how much work remains to be done, we have noted where archaeologists have excavated some portion of outlier great houses (E), and/or where they have conducted intensive survey (S). Out of n=230, we have excavation data from 23 outlier great houses (10%) and intensive survey coverage of 32 communities (13%); both kinds of data are available for only 11 out of 230 outliers (5%). In quantitative terms, then, our lack of knowledge about the Chaco landscape far exceeds our knowledge.

Site Name	**Site Number(s)**	**Significant Research?** E = great house excav S = community survey	**Google Earth Visible?**
10-Acre Ruin	42SA7217		X
5-Acre Ruin			X
Albert Porter	5MT123		X
Allentown	NA 4119	E	X
Andrews	LA 17218	S	X

Ansell Hall			X
Antelope House			X
Arch Canyon	42SA5271		X
Atsee Nitsaa	LA 1507		X
AZ K:3:I3-2			X
AZ P:16:160	AZ P:16:160		X
Aztec	LA 45, LA 5603	E, S	X
Bad Dog Ridge	AZ P:36:44		X
Badger Springs			
Bean Patch	AZ Q:8:12		
Bee Burrow	LA 13163		X
Bent Knee Wash			X
Bis sa'ani		E	X
Black Creek Flats			
Black Mesa Ruin			X
Blackrock Gaddy			X
Blue J	LA 18795	E, S	X
Bluewater Spring			
Bluff	42SA22674		X
Bosson Wash	LA 61165		X
Burnt Corn	AZ J:58:62		
Canyon Butte			X
Carhart Ruin		E	X
Carvell Ruin			X
Casa Cielo	LA 17081		X
Casa del Rio	LA 17221	S	X
Casa Escondida	LA 5334		X
Casa Estrella			X
Casa Mosca	LA 1341		X
Casa Negra	5MT3925		X
Casa Patricio	LA 34208		
Casamero	LA 8779	E, S	X
Cerro Pomo	LA 31803		X
Cerro Prieto	LA 48656		X
Chaco East	29MC560	S	X
Chambers/Padre Mesa	AZ P:53:83		X
Chimney Rock	5AA83	E, S	X
Church Rock	LA 47123		X
Coalbed Village	42SA920		X
Comb Wash	42SA24756		

Coolidge	LA 17289		
Cottonwood Falls	42SA5222		X
Cottonwood Seep	LA 14762		X
Cove	AZ I:26:44	S	
Cox Ranch Pueblo	LA 13681	E, S	X
Coyotes Sing Here			X
Crumbled House			X
Cuatro Payasos	LA 25903		X
Dalton Pass			X
Dancing Rocks	AZ E:6:30		
Danson 202	LA 56160		
Decker Ruin	42SA16962		X
Deer Springs	LA 47858		X
Devil's Highway			
Dittert Ranch	LA 11723		X
Dye Brush/Dzil Nda Kai			
Eagle Crag			X
Eagle Nest	CGP 652		
Edge of the Cedars	42SA700	E	X
El Malpais	LA 685	E	
El Rito			X
Escalante	5MT2149	E, S	X
Escalon	LA 51152, LA 51153		X
Et Al. Site			X
Far View House	5MV808	E, S	X
Fenced-Up Horse Canyon	LA 16279		X
Figueredo	LA 2024		X
Fort Defiance			X
Fort Wingate	LA 2690		X
Ganado			
Garcia Ranch	AZ Q:8:5		X
Goesling Ranch	LA 4026		X
Gonzales Well	LA 49192		
Greasewood Flat	42SA18100		X
Greasy Hill	LA 42282		X
Great Bend	LA 6419		X
Great Bend West	LA 6420		X
Great Houselet	AZ P:61:186		

Greenlee	LA 35418		X
Grey Hill Spring	LA 18244		X
Grey Ridge			
Guadalupe	LA 2757	E, S	X
H-Spear			X
Halfway House			
Hammond Canyon	42SA23616		
Hartman Draw	5MT8888		
Haynie	5MT1905		X
Haystack	LA 6022, LA 12573A		X
Hedley Ruin	42SA22760		
Hinkson Ranch	LA 11439, NM M:1:6-32, Spier 169		X
Hogback			X
Holmes Group	LA 1916		X
Houck	LA 8440		X
Hubble Corner	LA 8112		
Hunter's Point	AZ P:25:1		X
Hurley Site	LA 10959		X
Ida Jean	5MT4126	E	X
Indian Creek: Casa Abajo	LA 17083		X
Indian Creek: Casa Chiquita	29SJ1167		X
Jackrabbit Ruin			X
Jackson Lake	LA 1921		X
Jacquez	LA 2609		X
JR's Entremetido	LA 78187		X
Kello Blancett	LA 59967		
Kin Bineola	LA 18705	S	X
Kin Cheops	LA 48030		X
Kin Henio	LA 51448		X
Kin Hocho'i	LA 6541	S	X
Kin Indian Ruin	29SJ402, LA 40402		X
Kin Klizhin	LA 4975	S	X
Kin Lichee	LA 8022		
Kin Niiyahk'eed			X
Kin Nizhoni (Lower)	LA 68896		X
Kin Nizhoni (Upper)		S	X
Kin Sani A			

Kin Tl'iish	LA 68896		X
Kin Trinklebert	AZ P:62:21		X
Kin Ya'a		S	X
LA 11670	LA 11670		
LA 17226	LA 17226; LA 10716		
LA 17257	LA 17257		
LA 2520	LA 2520		X
LA 38012	LA 38012		
LA 38113	LA 38113		X
LA 40081	29MC184, LA 40081		
LA 4030	LA 4030		
LA 59282	LA 59282		X
LA 72343	LA 72343		X
LA 8240	LA 8240		
LA 8620	LA 8620		X
La Plata	LA 39112		X
Lake Valley/Kin Lani	LA 18755		X
Lancaster	5MT4803; 5MT3805		X
Largo Gap	LA 3918		X
Las Ventanas/Candelaria	LA 1328	S	X
Los Gigantes	LA 56159	S	
Lower Greenlee	LA 35419		X
Lowry/Pigg	5MT1566, 5MT839	E, S	X
Lukachukai			X
Mac-Stod			X
McCarty's GH			X
McCreery	AZ K:13:41		X
Mesa Tierra	LA 17220		X
Mitten Rock			X
Moki Island Unit 8	42SA17347		X
Montezuma Bench	42SA5034		X
Montezuma Creek	42SA822		
Morefield Canyon	5MV1928, 5MV1927,5MV1067		X
Morris 20	Morris 20		
Morris 39			X
Morris 41			X

Morris' Old Fort	LA 61051		X
Mud Springs--Northern San Juan	5MT4466A		X
Mud Tank			
Muddy Water	LA 10716		
Nancy Patterson	42SA2110	E	X
Naschitti A & B	LA 14779, LA 14780		X
Navajo North	AZ P:52:32		
Navajo South	AZ P:61:224		
Navajo Springs	AZ P:53:43	S	X
Newcomb			X
North Pasture	LA 11651		
Oak Wash	LA 49800, NM 12:K3:101		
Owen Site	42SA24584		
Padilla Well	LA 40352	S	X
Parker Site			
Peach Springs		S	X
Pierre's A & B	LA 16508, LA 16509	S	X
Point Pueblo		E, S	X
Pueblo Cerrito	LA 11663		X
Pueblo Pintado	LA 574	S	X
Ram Mesa	LA 89484		X
Raton Well	LA 14354		
Red Knobs	42SA259		X
Red Pottery Mound	5MT2363		X
Red Willow		S	X
Redonda	LA 20520		
Reservoir Ruin	LA 15278, CM100		X
Reservoir--Northern San Juan	5MT4450		X
Rocky Point	AZ K:15:21		
Round Rock	AZ I:37:9		X
Salina Springs	AZ I:63:9		X
Sally's Site 17			
Salmon	LA 8846	E	X
San Mateo			X
Sanders	AZ K:15:16		
Sanostee	LA 7292		X

Skull Site	LA 11664		
Skunk Springs		S	X
Spier 81	ZAP-NM-12-J3-147		X
Squaw Springs/Morris 40			
Standing Rock	LA 18232		
Sterling		E, S	X
Sundown	LA 9093		
Sunrise Spring	LA 2358		X
Swamp Tank	AZ P:61:185-NN		
Teec Nos Pos	AZ I:8:23		X
The Twins NE & SW			X
This Isn't It			
Three Kiva Ruin	42SA863		X
Tocito	LA 7603		
Toh Lakai			X
Toms Rock			X
Toyee	AZ P:15:23		X
Tse Bee Kintso/Thoreau	LA 51382		X
Tse Chizzi			
Tse La Vie	LA 35623		
Tse Lichii	LA 35421		X
Tse Taak'a			
Tseyatoh			X
Tsintaa Yitilii			X
Twin Angels	LA 5642	E	X
Twin Lakes			X
Upper Kin Klizhin	LA 34245		X
Ute Gravel Pit			
Village of the Great Kivas		E	X
Wallace Ruin	5MT6970	E	X
Weber Canyon	MV155		
Whirlwind Lake	LA 18237	S	X
White House			X
Willow Canyon	LA 18235	S	X
Wolye Adin	LA 47505		X
Woosh Clo Dee Toh			
Yellow Jacket	5MT5	E	X
Yucca House	5MT4359	S	X

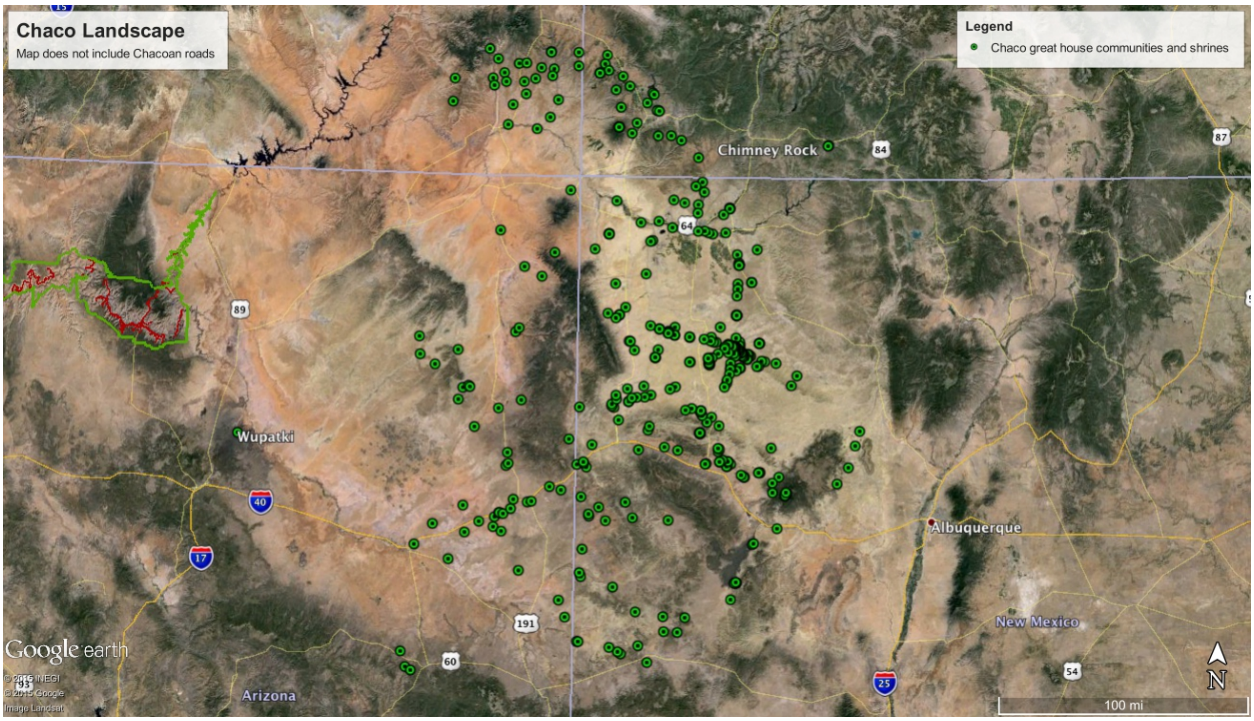

Figure IVA.1 Example of map generated by on-going GIS reconciliation, University of Nebraska, July 22-25, 2015

Appendix IVB: Examples of Outlier Diversity

Although all Classic Bonito outliers contain some kind of Bonito style architecture, they are tremendously variable in terms of such things as great house sizes, number of rooms, and locations, great kiva numbers and locations, and configurations of additional features such as roads or earthworks. Surface ceramics and architecture tell us that in some instances, eleventh century people constructed Bonito style architecture in a pre-existing community. In others, people erected new outlier great houses in previously unoccupied places. Some of these people were probably colonists from Chaco, some were locals emulating Chaco, and sometimes both colonists and locals were involved. Archaeologists have spilled much ink over the past decade in an attempt to understand these relationships (e.g., Hurst 2000; Kantner 2003a; Reed 2008; Van Dyke 1999b, 2003). Here, we demonstrate the range the variability amongst great house communities through the following examples: Peach Springs (a textbook outlier); Skunk Springs (a sprawling community with a deep history); Andrews & Casamero (ancestral and scion communities); Escalon (Bonito-style architecture without a community); and Section 8 (a black box). We believe this sample is representative of the overall variability evident in the greater Chaco landscape and argue against using a "one size fits all" approach to great house site protection buffer zones. Peach Springs is the only one of these for which one could draw a circle a mile in diameter around the great house and catch most of the associated significant Chacoan landscape.

Peach Springs is a good example of an outlier community with all the characteristic features contained within a relatively circular area 1 mile in diameter (Powers et al. 1983:55-93; Gilpin and Purcell 2000). Peach Springs is located on the South Chaco slope near a spring along the foothills of Lobo Mesa, on the Navajo Nation. On a sandstone ridge just south of the spring, eleventh century builders erected a formal, Classic Bonito great house with an adjacent great kiva, and an encircling berm. There is a surrounding community of 25 small sites, as well as an associated road segment. Although Peach Springs is unexcavated, looters have exposed Type 1 masonry walls at the rear of the great house, indicating the structure's tenth century origins.

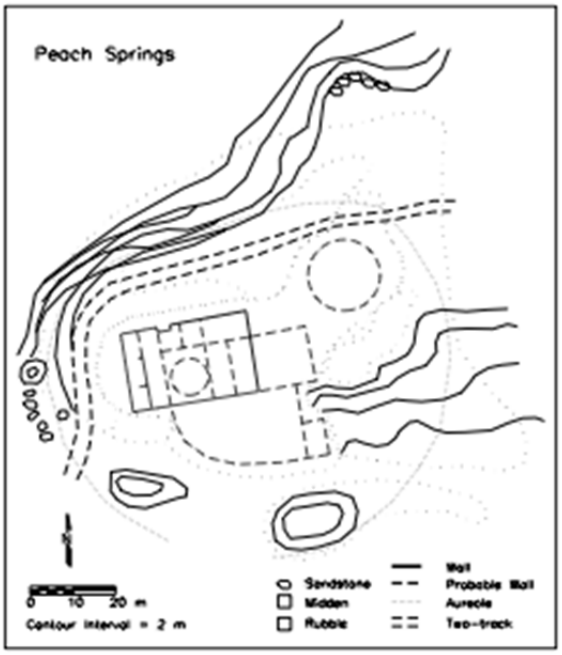

Figure IVB1. Peach Springs Great house, after Powers et al. (1983:70, Figure 23), drafted by Molly O'Halloran.

Powers et al. (1983) surveyed over an area 1 km in diameter surrounding the great house and found most of the community along the drainages to the north and west. Many of the community sites have occupations that extend back into the tenth century. Powers et al. also sampled the greater area for another kilometer beyond their survey radius, as shown in their map below. They were able to demonstrate that most of the associated community was "captured" within the 1 km area around the great house.

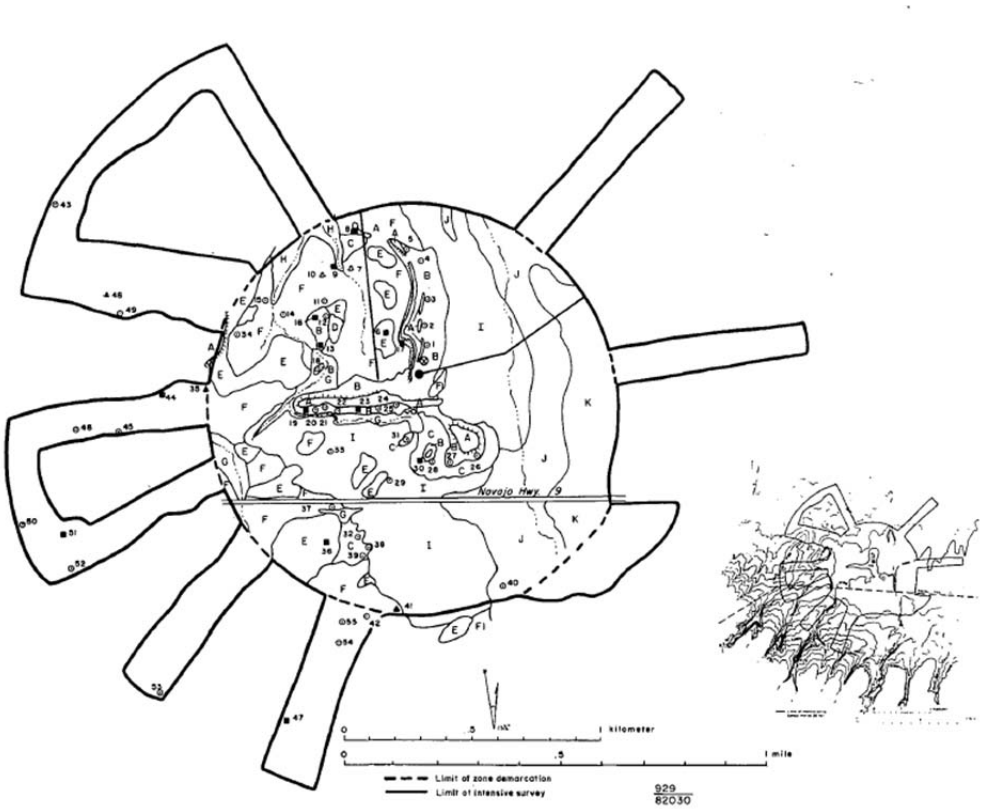

Figure IVB2. Powers et al.'s (1983:57, Figure 21) Peach Springs community survey area.

Skunk Springs is a good example of a sprawling outlier community with a large, multi-component great house and an occupation spanning at least three centuries. Skunk Springs is located on a broad mesa top along the eastern slopes of the Chuska Mountains approximately 75 km west/northwest of Chaco Canyon. Peckham (1969) initially mapped the community. It was revisited and the great house re-mapped by Marshall et al. (1979:109-113) and again by Stein and Friedman for the Chaco Protection Sites project (but we do not have access to these data). The great house is located on the mesa top near the eastern end of the community. The great house exhibits at least three construction phases; all three sections together cover an area of approximately 2670 m^2 but they are not contemporaneous.

The western, Early Bonito phase portion of the great house consists of a crescent shaped, 20-room block associated with a 16 m diameter great kiva in the center of an open plaza. The central and east portions date to the Pueblo II - Early Pueblo III periods. The central section of the house contains approximately 10 rooms and 2 enclosed kivas in a T or irregular shape. Some of the rooms may have been two stories in height. An enclosed plaza south of the central section has walls ranging in thickness from 60 cm to 2 m. The plaza contains a great kiva 17 m in diameter and has an entryway facing south. The east section of the house consists of a linear block 2-4 rooms wide with an associated enclosed plaza and a 11 m diameter great kiva. This area is estimated to contain 20 ground floor rooms and 12 second story rooms. The plaza is surrounded by a wall 1.5 m thick and has an entryway facing south.

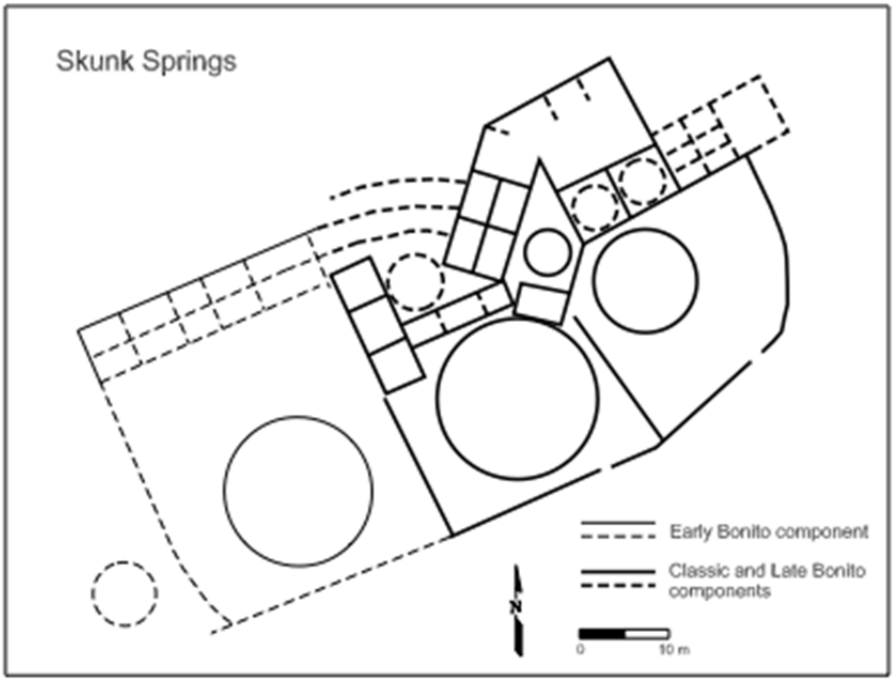

Figure IVB3. Skunk Springs great house, after Marshall et al. (1979:112); drafted by Molly O'Halloran.

The Skunk Springs great house is located near the east end of a community of at least 65 sites which extend southwest along the top of the mesa and cover a 1.3 km2 area. Sites in the community are ceramically dated between the Basketmaker III and the Pueblo III periods. Seventeen of the sites are assigned to a single temporal period, and 49 have date ranges that span more than one period. Among the 65 community sites, there are a total of 4 Basketmaker III components, 50 Pueblo I components, 53 Pueblo II components, and 12 Pueblo III components. Stein and Friedman have reportedly also documented road segments in and around the community.

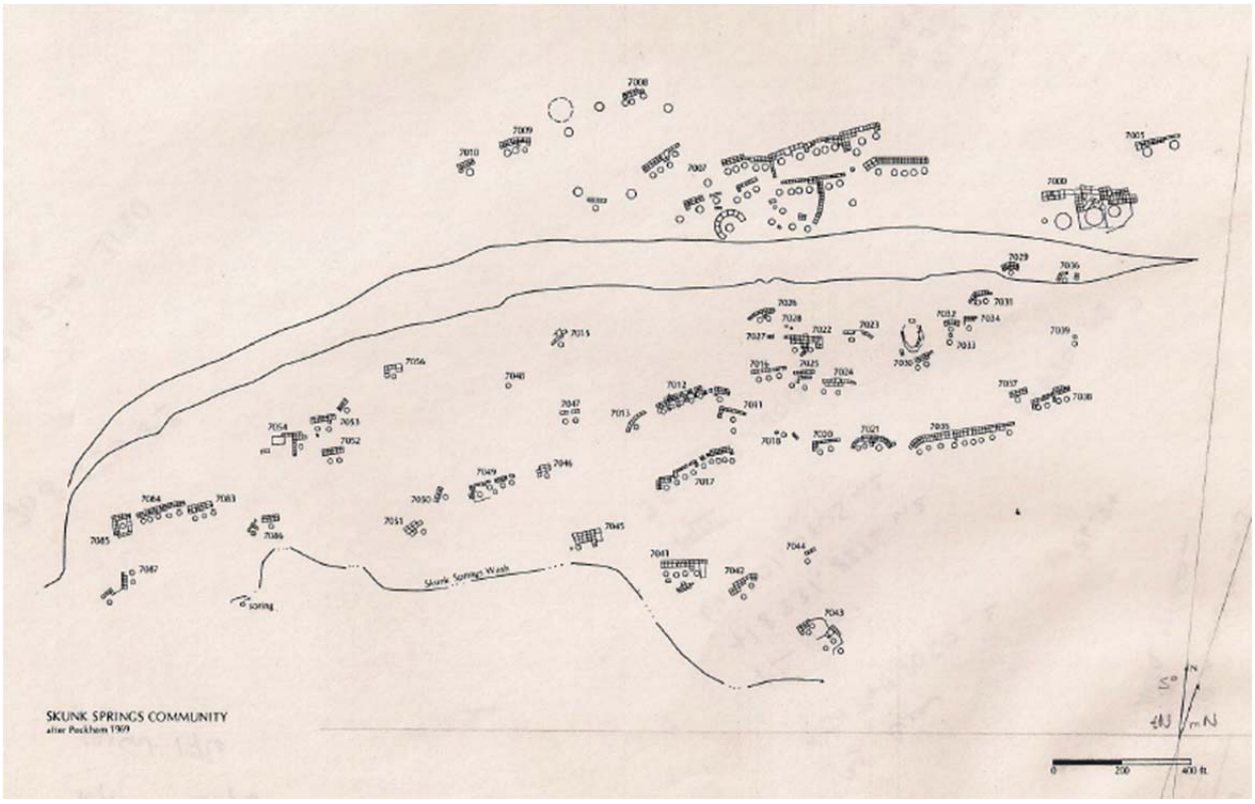

Figure IVB4. Skunk Springs community (Marshall et al. 1979:110).

Andrews & Casamero are good examples of a complicated outlier landscape that is not well-represented in either time or space by a circle around a great house. These two outliers are located in the Red Mesa Valley approximately 75 km south of Chaco Canyon. The Andrews and Casamero great houses are about 5 km apart, facing one another across the Casamero Draw. Both are situated on colluvial ridges near the base of escarpments with highly visible features. Both great houses are on lands owned by the BLM, but the land status of the surrounding communities is checkerboarded with state and private ownership. Intensive survey in both surrounding communities have yielded a complicated picture of the two communities' time depth, relationship to one another, and relationship to Chaco. A Late Basketmaker and Pueblo I settlement above Casamero gave rise to Early Bonito phase settlement at Andrews. The surrounding topography at Andrews dictated that the community spread south and west into the associated valley, rather than radiating outwards in a circle as at Peach Springs. Eleventh century people built Classic Bonito great houses at both Andrews and Casamero, with community sites and a road segment in the valley between them, and a reservoir on the mesa above Andrews.

The Casamero great house (LA 8779) was excavated by a group of avocational archaeologists in the early 1980s (Sigleo 1981). The great house and the surrounding community were investigated by Marshall et al. (1979:131-140) and were intensively surveyed by the Office of Contract Archeology (OCA) of the University of New Mexico (Harper et al. 1988). The L-shaped great house is located on a southeast-facing slope below a reddish sandstone escarpment on the west side of the broad valley drained by Casamero Draw. Two

large wind-carved depressions in the reddish sandstone escarpment – resembling owl eyes – have lent the name Tecolote Mesa (Owl Mesa) to the landform above the great house. The great house ground floor contains at least 20 rooms and a single kiva; an additional nine rooms may have been present in a second story. Both core-and-veneer and compound masonry construction techniques were employed. Walls were constructed using local limestone and sandstone and exhibit banded facing (Sigleo 1981:2-3). A great kiva with a diameter of 21 m is located 65 m south of the great house (Marshall et al. 1979:134). A second great kiva (LA 67158) with a diameter of 18 m was identified 75 m north of the great house (Harper et al. 1988). The Casamero great house and the great kivas date to the eleventh century (Neller 1978:24, cited in Marshall et al. 1979:133; Harper et al. 1988). Harper et al. (1988) recorded 36 sites, including 23 roomblocks, 12 artifact scatters, and 1 rockshelter in the surrounding community, ranging in age from the Basketmaker III to the Early Pueblo III periods.

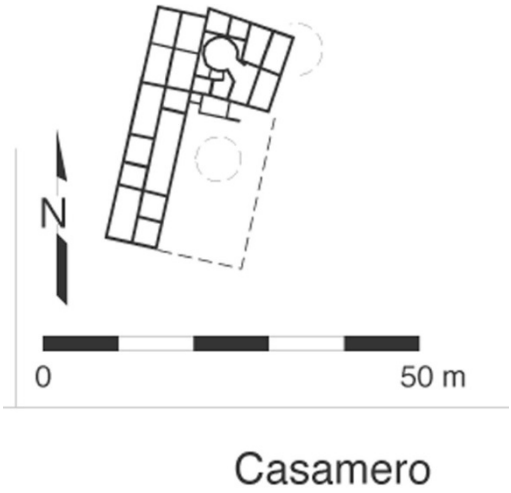

Figure IVB5. Casamero great house.

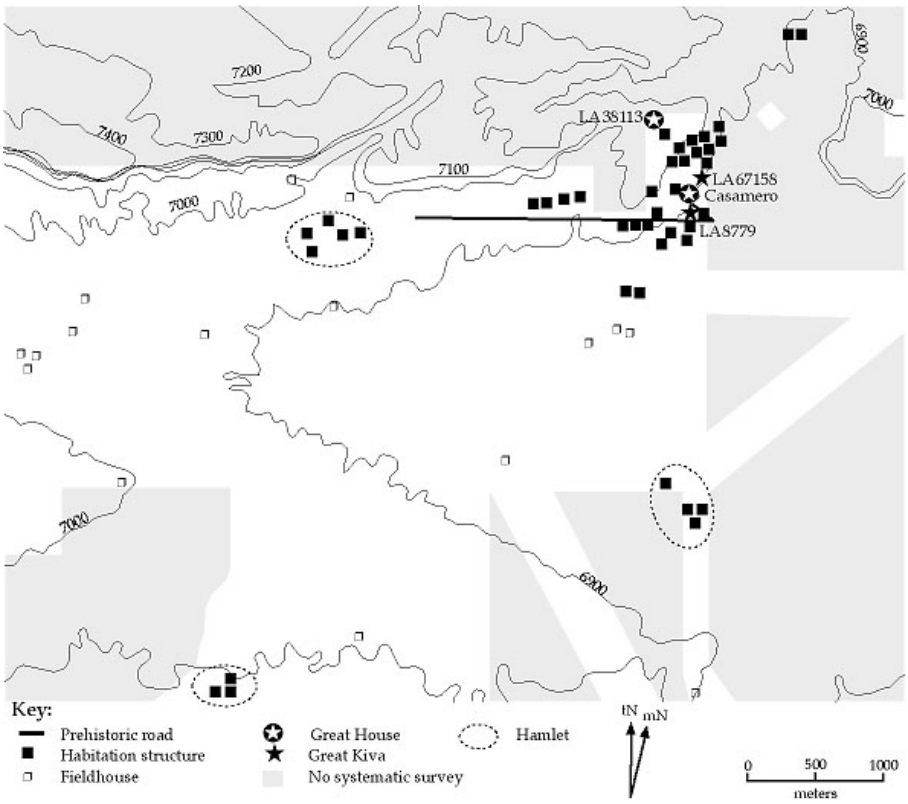

Figure IVB6. Casamero community map

The Andrews community was initially recorded by Marshall et al. (1979) and then by Van Dyke (1999, 2000). During the tenth century, Andrews was an insular community clustered around two great kivas along a series of finger ridges at the base of an unnamed mesa. In the early 1000s, inhabitants erected a great house and a new, Bonito style great kiva on a colluvial ridge northwest of the tenth century great kivas (Van Dyke 1999a). Like the Casamero great house, the Andrews great house was positioned directly below a highly visible geologic juncture in the mesa behind it. Here, smooth red Wingate sandstone meets the blocky brown sandstone of the Entrada formation, and this disjuncture enhances the local visibility of the great house. The Andrews great house, with two stories and 20 rooms, is not particularly large compared to canyon great houses, yet it dwarfs the local small sites. Some 40 community sites, dating from the late ninth through the late eleventh century, are dispersed across 2-3 km of valley floor to the southwest of the great house. The average small site at Andrews is one story high with 4-6 rooms. There are no small habitation sites on the mesa above Andrews, but there are artifact scatters and architectural features indicating Chaco-era occupation. A stone circle (LA 13801) is positioned directly above one of the great kivas. From this spot, a "floating" road segment in the valley below is on a direct line between the stone circle and Hosta Butte (Nials et al. 1987). Ancient inhabitants modified a bedrock fault to create a large rectangular reservoir on the mesa top that is littered with whiteware jar sherds. Rock art and pot drops in the vicinity attest to historic use of the community by Acoma and Navajo peoples.

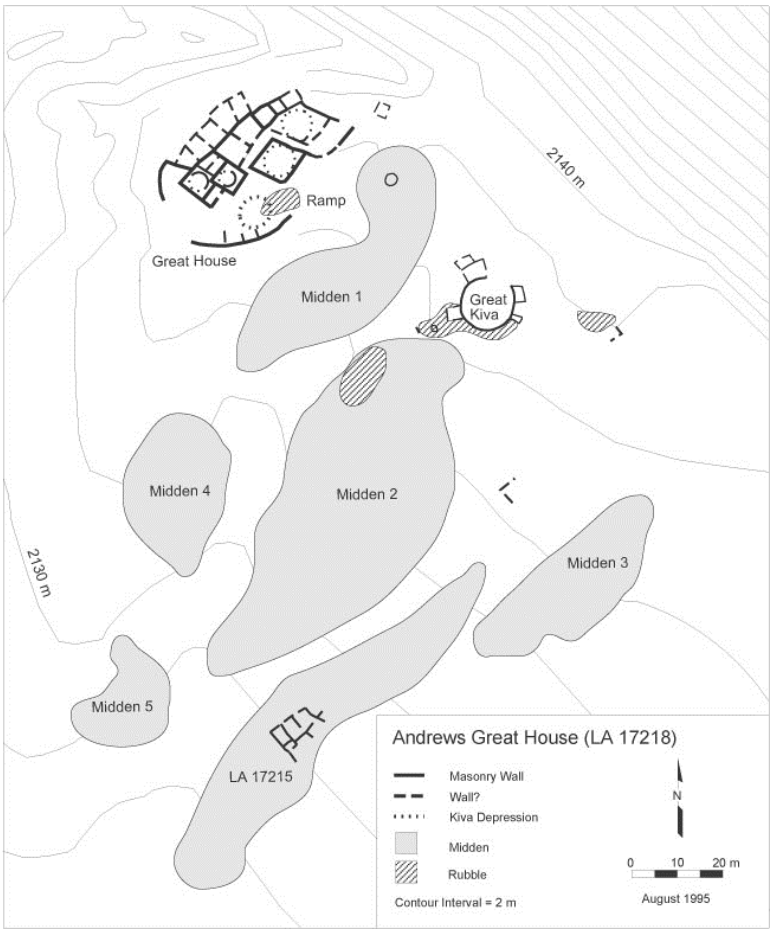

Figure IVB7. Andrews Classic Bonito phase great house and associated great kiva (Van Dyke 1999).

Escalon is an example of an eccentric outlier. Located in the badlands of the Indian Creek drainage, 35 km west of Chaco, Escalon was first documented in 1984 (Marshall and Sofaer 1988:46-70). An associated Chacoan road segment, the Escalon West Road, was recorded by the Division of Conservation Archaeology (Hancock 1990). Escalon and a nearby, earlier community of El Llano was investigated as part of the Transwestern Pipeline Extension project in 1992 (Marshall 1994). The focus of Escalon is a tall, mushroom-shaped butte. Atop the butte, there is an "atalaya" – a series of 14 compound or core-and-veneer masonry enclosures. Rather than using a ladder or hand-and-toe holds to access the top, builders constructed a massive platform and stairway complex 8-10 m high against the south face of the butte. This massive stairway lends the outlier its name. Platform and stairway complexes are known from other Chacoan locations (Marshall and Sofaer 1988), but Escalon offers the best-preserved example found to date. Marshall believes processions may have been staged to proceed up the stairway. However, any activities taking place atop the butte would have been hidden from the view of spectators immediately below by the steep angle of the butte's edge.



< Figure IVBX. Escalon Atalaya, with person standing on lower reach of massive collapsed staircase. Photo by Ruth Van Dyke.

On the valley floor, a small, single-storied core-and-veneer great house consists of 6 large rooms and an attached great kiva. An additional four to six rooms may have been present on the east side of the roomblock, but the stone appears to have been removed in the past, possibly for use in historic Navajo buildings in the area. The great house and the atalaya are ceramically dated by Marshall to ca. A.D. 1000-1050. The El Llano community, 2 km southeast of Escalon, dates to the Basketmaker III and Pueblo I periods Marshall (1994:323-324, Table 44). By the Early Pueblo II period, the focus of settlement had shifted to the Escalon community, with 13 small house sites dating between A.D. 1000-1050. A relatively low average midden volume at Escalon is interpreted by Marshall (1994:347) to indicate a short occupation span for the sites in the community. Occupation ceased at Escalon by A.D. 1075, although three Pueblo III sites in the neighborhood post-date A.D. 1175.

The Escalon community is associated with a Chacoan road segment extending 4 km west from Escalon to the Willow Canyon community (Hancock 1990). The Escalon atalaya and stairway complex may be the eastern end or a station along this road. Ceramics found along the road date to the Late Pueblo I and Early Pueblo II periods. The road's presence suggests that "the summit of Escalon Butte can be considered to be an important location in the sacred geography of Chacoan Anasazi" (Marshall 1994:347). Research into these kinds of odd, highly visible Chacoan structures along the west road corridor is ongoing (Tuwaletstiwa and Marshall, personal communication, August 2014).

Section 8 is a good example of a “black box” outlier – we know it exists, but there is a great deal that we do not know about it, thus requiring further research. Marshall et al. (1979:227-229) documented Section 8 on Navajo Nation land. They described and mapped this outlier as a small great house with two roughly symmetrical roomblocks with enclosed kivas, connected by something they termed an “elevated passageway.” They ceramically dated the site to 1050-1125. They did not identify an associated community, but they did note a possible road segment. Marshall et al. also noted that Section 8 might be the same site that Fewkes (1917) had described as Ruin B near Crown Point; the topographic description roughly matches Section 8, but Fewkes’ map does not. Marshall et al. conclude that there are issues here that cannot be resolved “until an adequate reconnaissance of the Crownpoint region is conducted” (Marshall et al. 1979:229).

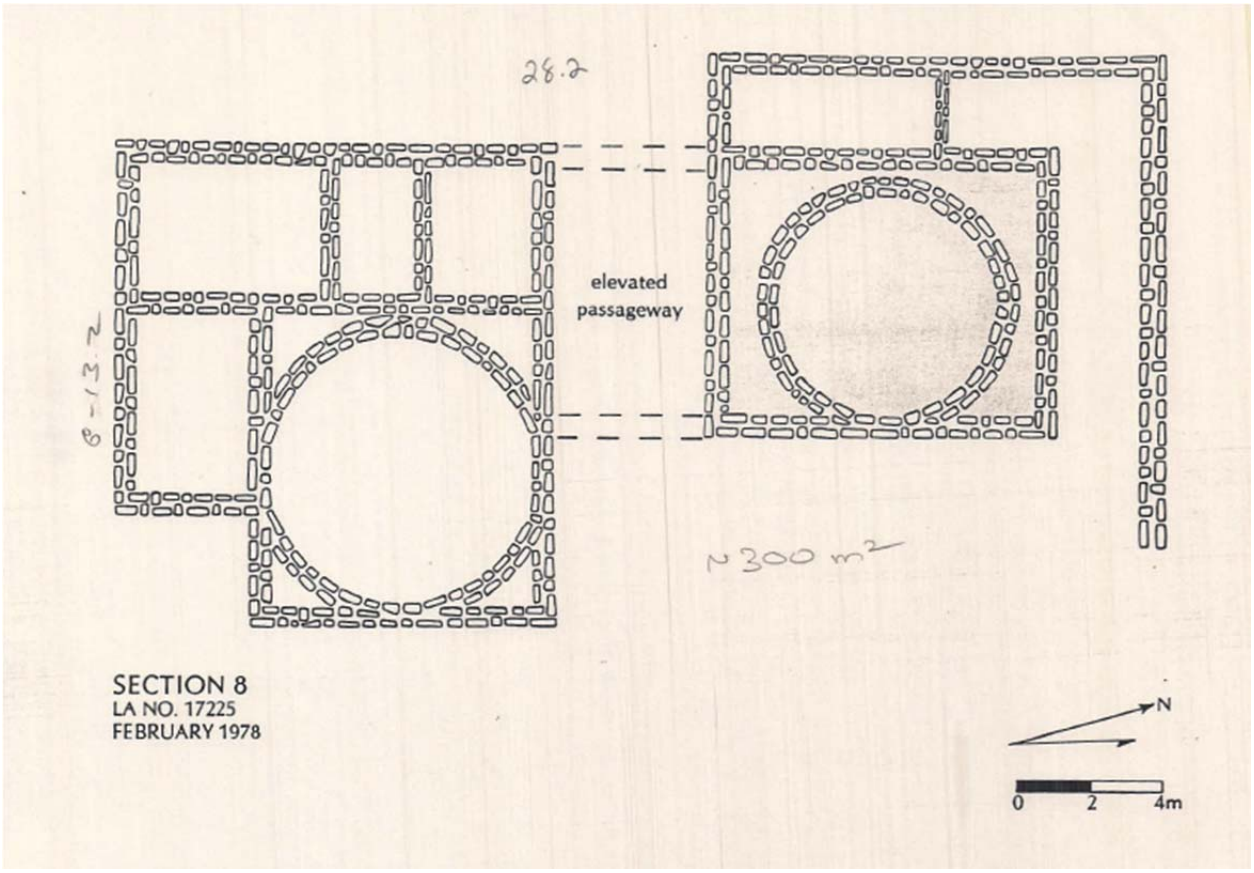

Figure IVBX. Section 8 great house (Marshall et al. 1979: 228).

Appendix IVC: Roads

Chaco roads consist of cleared, linear alignments radiating out from great houses or landscape features, sometimes but not always connecting sites and/or prominent landforms. Road construction minimally involved the clearing of stones and earth out of the roadbeds. Much of what we currently know about Chaco roads is the result of ground-verification efforts by the BLM (Kincaid 1983; Nials et al. 1987). Chacoan engineers sometimes created staircases, causeways, ramps, and grooves. Formal surfacing is rare, and road depressions may be as shallow as 30 cm. Roads usually average about 9 m wide, but width can range from 3 to 12 m. Wide, major segments sometimes split into narrow "spur roads." Major directional changes are angular and occur at points of topographic change, intersections, or sites. Alignments could have been maintained with simple survey techniques such as backsighting (Lekson 1999:117-118; Nials 1983:6-27). Road-related features include herraduras and shrines. Herraduras are a road-related feature often found atop major topographic breaks with good visibility. These horseshoe shaped, low-walled masonry structures range from 5-7 m in diameter and open to the east (Lekson 1999:117-118; Nials et al. 1987). J-shaped "Windes' shrines" also are often found along Chacoan roads (Kincaid et al. 1983:20; Windes 1991:118).

Roads are notoriously difficult to date – the best methods involve absolute dates gleaned from articulated endpoints such as great houses (Vivian 1997b:14). Although some scholars believe Chacoans were experimenting with roads during the Pueblo I period (e.g., Windes 2006), most indications are that road construction began in earnest in the Classic Bonito phase. In the canyon, despite the effects of ranching, erosion, and other recent disturbances, road segments are associated with all Classic Bonito phase canyon great houses (Vivian 1983, 1997b). Windes (1987:529-555) determined that 14 segments in Chaco Canyon date between 1050 and 1140. At least eight road segments extend outward from Chaco Canyon (Vivian 1997b). The two major road segments – the North Road, and the South Road – meet at Chaco Canyon as center place. Roney (1992) confirmed approximately 305 km of ground-verifiable Chacoan roads and road segments at 41 locations across the San Juan Basin. The four longest segments verified by Roney are the North Road (50.5 km), the South Road (51.0 km), the Ah-Shi-Sle-Pah Road (11.5 km), and the Coyote Canyon Road (11.5 km). The first three radiate out from Chaco Canyon, and the latter connects the Peach Springs outlier to the Grey Ridge community (Figure 6.3). Many road segments originate or terminate at great houses or great kivas, then disappear into difficult terrain.

The idea of transportation is embedded in the very term "road." Many archaeologists assume that the roads functioned to facilitate travel for economic, ritual, or political purposes (e.g., Judge 1979; Judge et al. 1981; Powers et al. 1983:262; Schelberg 1984; Vivian 1983; Wilcox 1993). The roads' relatively compacted surfaces provide easier walking than the stabilized dunes that comprise much of the basin floor. We often think of Chaco roads as extending outward, connecting Chaco Canyon to surrounding outlier communities. However, it is equally likely that the roads were important connections moving inward, prescribing formal routes of access for visitors and pilgrims into Chaco Canyon. The tracks may have been used for ceremonial races or ritual processions (Judd 1954:350; Judge 1989). Roads were particularly likely to have been used as routes of travel at the final stage of approach to Chaco and to outlying great houses, where they are best elaborated. The roads condition approaches to Chaco Canyon and to specific buildings both within and outside of the canyon (Ware and Gumerman

1977). Roads may have been yet another way Chacoan leaders manipulated the landscape, prescribing access routes that directed visitors towards specific spatial experiences.

The North Road constitutes the best evidence for a Chacoan concern with cardinal directions (Lekson 1999; Marshall 1997; Marshall and Sofaer 1988; Sofaer et al. 1989; Sofaer 1999). The North Road bears north from Chaco for 50.5 km, extending from Pueblo Alto past the outliers of Pierre's and Halfway House to the badlands at the edge of Kutz Canyon, where there is an earth and juniper log stairway (Stein 1983; Sofaer et al. 1989:367-368). En route, there are a number of jogs, gaps, and parallel segments. Upper Twin Angels mound, a prominent, symmetrically shaped pinnacle topped with a shrine, is nearby (Sofaer et al. 1989), and the Late Bonito phase Twin Angels outlier is on the canyon rim 6.5 km to the northwest (Carlson 1966).

From this point, the North Road probably continued down Kutz Canyon to the outlier of Salmon Ruin on the San Juan River, then headed north from Salmon Ruin to the Aztec outlier on the Animas River (Lekson 1999; Stein and McKenna 1988). The North Road as a link from Chaco Canyon to Aztec is a major lynchpin of Lekson's (1999) argument in *Chaco Meridian*. Sadly, energy development in the 20th century has destroyed virtually any traces of the North Road between Kutz Canyon and Aztec. And, the areas around Salmon and Aztec have been heavily farmed and otherwise modified over the past century, potentially obliterating road evidence there.

The North Road is also considered a symbolic statement of the importance of the direction north for Chacoans. Keresan emergence stories describe a sipapu to the north, where the people came forth into this world. The people then migrated south to find the center place (White 1942:177, 1960:89). For Hopi, a road to the sipapu represents life's journey. Infant souls travel along this path from the sipapu to the center place at birth, and souls return along this path to the sipapu at death (Parsons 1939:310). At Acoma, offerings that represent the soul of a deceased person are deposited in a canyon or crevice in the north (White 1973 [1932]:137). Building upon these ideas, Marshall (1997) and Sofaer et al. (1989) have interpreted the North Road as a symbolic pathway linking Chaco Canyon, and more specifically Pueblo Alto, with a place of emergence represented by or near Kutz Canyon or the San Juan Mountains beyond.

In dualistic balance with the North Road, the South Road extends for 51 km from Chaco Canyon south-southwest toward the Dutton Plateau. The BLM Roads project traced a total of 39 km along the South Road, beginning just south of the park service boundary and extending past Bee Burrow and Kin Ya'a. The South Road stops 5 km short of Hosta Butte, a prominent landmark on the southern horizon rising 300 m above the Dutton Plateau (Marshall 1997:71; Nials et al. 1987:18). More important than creating a true southerly orientation may have been the desire to symbolically connect the canyon with Hosta Butte.

Many scholars, especially Marshall (1997), Sofaer (Sofaer 1999; Sofaer et al. 1989), and Lekson (1999) have recognized that the North and South Roads not only express a Chacoan concern with directionality but also fix Chaco Canyon as a center place. The Great North and the South Road counterpose not only north and south, but also the subterranean and the vertical (Marshall 1997:71). The North Road begins at a high place – Pueblo Alto, on the north rim of Chaco Canyon – and leads to a low place – Kutz Canyon. By contrast, the South Road begins at a low place – Pueblo del Arroyo, on the floor of Chaco Canyon – and leads to a high place – Hosta Butte. Not only do the two roads form opposing pairs of north/south and down/up, they are of equal length, balancing the canyon like a fulcrum between them, intersecting at Chaco Canyon – the center place.

Some evidence exists for East and West roads. An East Road may have run down the length of the canyon for approximately 25 km from Fajada Butte to Pueblo Pintado (Windes et al. 2000:42-43). A West Road is represented by short segments near Peñasco Blanco and the outliers of Lake Valley and Escalon (Hancock 1990; Nials et al. 1987; Windes (1987:97); research into the West Road is ongoing (Tuwaletstiwa, personal communication).

Other road segments connect Chaco Canyon to unusual landforms or springs (Sofaer et al. 1989). The 11.5 km-long Ah-shi-sle-pah Road originates at Peñasco Blanco (Stein 1983; Nials et al. 1987:120-126). A stairway leads north into the Chaco/Escavada Wash confluence below Peñasco Blanco, and a matching modified path known as Vivian's Staircase climbs up the north side of the confluence. From the north rim of the wash, a road extends to a series of bedrock tanks (Los Aguages), then can be traced through sherd scatters over slickrock to a masonry ramp descending into Ah-shi-sle-pah Wash. An additional 2 km are visible past this point, and the northern terminus of the road is thought to be a shrine-like site at Black Lake (Marshall and Sofaer 1988; Roney 1992).

For the past several years, a team of researchers led by John Roney and Anna Sofaer have been investigating and documenting road segments across the San Juan Basin using a combination of LiDAR and other photogrammetry techniques. Sofaer is working on a new film focused on the roads. Initial, unpublished results from the work of Richard Friedman indicate that Chacoan roads can be located using LiDAR data. There is clearly great potential for using this method and to identify additional roadways and segments that have been previously undocumented.

We do not currently have a GIS database for known Chacoan roads. The data exist largely in piecemeal fashion or on paper maps. Spurred by imminent land management decisions in the San Juan Basin, an effort is underway to aggregate existing Chacoan roads data into a GIS. This project, based at the University of Nebraska-Lincoln, has gathered some of the few existing digital datasets and a graduate student is in the process of plotting known road segments from topographic maps into a GIS. For now, we have no single GIS of known Chacoan roads which means land managers in the region are also operating without this critical dataset.

Appendix IVD: Shrines and Related Features

Shrines exist in a wide range of forms and purposes across the Southwest landscape. In the Pueblo world, shrines may take the form of small piles of stones denoting meaningful places or directions. Chaco scholars have described the following shrines or shrine-like features: J or box-shaped "communication" shrines (Hayes and Windes 1975); stone crescents (Marshall and Sofaer 1988); stone circles (Windes 1978); herraduras, or horseshoe-shaped features associated with Chacoan roads (Kincaid 1983; Nials et al. 1987); and cairns, or simple piles of stacked rock. These features are notoriously difficult to date, because they frequently lack associated artifacts, and some remain in active use. To further complicate the picture, scholars have been less than systematic with these labels and categories, often conflating shapes, locations, and assumed functions. For example, on the Chaco Additions survey, Powers defined shrines as "ceremonial or other apparently esoteric sites including Anasazi (sic) C or fishhook shaped enclosures formed by a masonry wall, stone circles, and possible signaling sites at locations of high topographic prominence or visibility (Powers and Van Dyke 2015: 31, Table 1.1). A comparative study would be useful to assess similarities and differences in shrine configurations. Meanwhile, we offer the following brief review.

Box or J-shaped Chacoan shrines are low, masonry-walled enclosures that sometimes contain turquoise beads, turquoise chips, or other offerings. The first shrine discovered in Chaco Canyon was a Classic Bonito phase J-shaped feature erected atop 29SJ 423, the Basketmaker III village above Peñasco Blanco (Hayes and Windes 1975; Windes 2015:95–100, 692). Similar J-shaped "Windes' shrines" are often found along Chacoan roads (Kincaid 1983:20; Windes 1991:118). Hayes and Windes (1975) argued that these "Windes' shrines" functioned primarily for communication. These and other shrines might also be marking places of cosmographic, mythic, or ritual importance. Since the 1970s, Windes (e.g., Windes 1978, 2015:692; Windes et al. 2000:43) and others have documented over 40 shrines on high places across the greater Chacoan world (Van Dyke et al. 2016)

Across the greater San Juan Basin, shrines are documented in association with many outlier great houses. Many of these create line-of-sight connections with Chaco Canyon (Hayes and Windes 1975; Van Dyke et al. 2016). Places marked by Chacoan shrines are often significant in terms of visibility. For example, two shrines on Chacra Mesa and South Mesa bracket Fajada Butte, iconic symbol of central Chaco, and home of the Sun Dagger petroglyph. Hayes and Windes (1975) demonstrated that builders strategically placed shrines to facilitate intervisible links among fifteen great houses. The Kin Ya'a tower kiva is visible from shrine 29SJ706 on South Mesa, 43 km to the northeast, through a small notch in the broad ridge north of Crown Point. The intervisibility is contingent on the tower kiva's precise positioning in front of the notch. Hayes and Windes (1975:154–155) suggest that this "impressive bit of engineering" indicated that signaling and communication between the two areas was one of the functions of shrines and tower kivas.

Stone circles are an enigmatic Chacoan landscape feature consisting of compound, core-and-veneer, or upright slab masonry. They are nearly always constructed on slickrock, on high points or benches that provide good vantage points, and they range in size from 9–32 m along a long axis to 7–20 m along a short axis. Most stone circles contain one or more circular or rectangular basins pecked or ground into the interior slickrock. Although associated ceramics are scarce, sandstone abraders are common. During the Chaco Project, Windes (1978) identified 16 stone circles on the north rim and four on the south mesas of Chaco Canyon. Windes and other

researchers have located additional circles at outliers across the San Juan Basin, including Andrews, Kin Bineola, and Twin Angels (Marshall and Sofaer 1988; Van Dyke 2001; Windes 1978). Ancient builders seemed concerned with visibility when they positioned these enigmatic features. For example, from a stone circle on the north rim of Chaco Canyon (29SJ1572), a viewer sees Pueblo del Arroyo, South Gap, and Hosta Butte in perfect alignment along the trajectory of the South Road (Van Dyke 2007:Figure 6.6). Viewsheds from stone circles always include one or more great kivas, but the closest great houses are usually hidden beneath the canyon rim. If the circles were moved only a few meters, these dual attributes of visibility and invisibility would be lost. Windes (1978) suggests the dual visible/invisible quality of circles might have made them ideal places for the manufacture of ritual items, or preparation for ceremonies.

Herraduras are horseshoe shaped structures defined by their association with Chacoan roads (Kincaid 1983:9–14; Lekson 1999:117–118; Marshall and Sofaer 1988; Nials et al. 1987). These features are often found atop major topographic breaks with good visibility. The horseshoe shaped, low-walled masonry structures range from 5–7 m in diameter and usually open to the east.

Cairns also dot the high places across the San Juan Basin. For example, the Chacoans marked the southern and western tip of West Mesa with a dozen barrel-shaped cairns and a circular masonry enclosure (29SJ1088, hereafter Site 1088; first recorded in about 1901 by Wetherill and the Tozzer Expedition; Hovey 1902) (see Windes 2015:692). From Site 1088, it is possible to see most of the western half of the San Juan Basin — a region that contained nearly 60 Classic Bonito phase outlier communities (Figure 4). If someone standing at Site 1088 can see most of the Chacoan world, it follows that many inhabitants living in outlier communities could also see West Mesa (and therefore Chaco). Other cairns, associated with Navajo homesteads, were built in the recent past by Navajo shepherds. Many cairns lack associated artifacts or datable wood. Thus, archaeologists must base temporal and cultural affiliation on masonry style, the presence of fill, or associations with nearby features.

Appendix V: Chaco Landscapes - Some Suggestions from the Old World

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The Chaco Culture National Historical Park is a World Heritage Site, inscribed in 1987 as "Chaco Culture World Heritage Site." While many such sites are composed of single buildings (Aachen and Chartres cathedrals, Rohtas fort, Tugendhat villa, Hal Saflieni hypogeum), townscapes (Dubrovnik, Valetta, New Lanark) or areas of natural beauty and scientific interest (the Everglades, the Blue Mountains, the Galápagos Islands), a smaller number are composed of sets of archaeological sites dispersed in a wider landscape. In this respect, the comparison between Chaco and the Stonehenge and Avebury World Heritage Site in the United Kingdom, which was inscribed in 1986, may prove instructive.

Stonehenge and Avebury are both located in the modern county and Wiltshire, and in each case a single important monument lies at the core of the World Heritage Site. In the case of Stonehenge, the monument concerned has an internationally iconic status, which has positioned it as a focus of cultural struggles between a number of different constituencies (archaeologists, national and local government, druids, pagans, new age travelers, the military and conservation bodies) (Bender 1999; Worthington 2004). The situation is complicated by the patchwork of land ownership in the immediate vicinity of Stonehenge, split between English Heritage, the National Trust, the Ministry of Defence and numerous private landholders. While the majority of visitors to the Stonehenge and Avebury WHS are only motivated to see the two eponymous sites, each area contains a very large number of prehistoric structures, including Neolithic long barrows, causewayed enclosures, cursus monuments and henge monuments, and cemeteries of Bronze Age round barrows. Although Stonehenge is instantly recognisable from its arrangement of sarsen trilithons, the enclosure in which it stands is dwarfed by the nearby Great Stonehenge Cursus (three kilometres long) and the Durrington Walls henge (half a kilometre in diameter) (Thomas et al. 2009).

Stonehenge can be seen as one element of an integrated monumental landscape that developed over a period of several millennia, beginning with a series of massive postholes of Mesolithic date (c. 8000 BC). These may have been positioned in relation to a series of periglacial subsoil fissures that are fortuitously aligned on the midsummer sunrise and midwinter sunset, and would have been visible as variations in the surface vegetation (Parker Pearson 2013). In this way, natural topographic features established the conditions for the location of Stonehenge itself, centuries later (Richards and Thomas 2012). Similarly, Stonehenge and Durrington Walls are connected to each other by their respective avenues and by the River Avon, linking them into a single pattern of movement (Thomas 2007). Phenomenological landscape analysis conducted by Chris Tilley has demonstrated that many of the Neolithic and Bronze Age monuments of the Stonehenge are located so as to have a view of Beacon Hill, the tallest eminence in the area, which has none the less no prehistoric structures on top of it (Parker Pearson et al. 2008). So in the Stonehenge landscape, natural and cultural features are tightly integrated, and it would be unhelpful to isolate and protect the latter without reference to the former.

The Stonehenge and Avebury WHS is composed of two bounded areas, making up a total of 12,850 acres (Darvill 2005). For some while there has been a recognition that during the Neolithic and Early Bronze Age (4000-2000 BC) a series of discrete monumental landscapes developed on the chalk uplands of Wessex (Renfrew 1973). While Stonehenge and Avebury have been granted WHS status, it is arguable that Cranborne Chase in north Dorset and the Dorchester area in south Dorset are equally important: the former contains the massive Dorset Cursus and the cluster of henge enclosures at Knowlton, while the latter has the Maiden Castle causewayed enclosure and the Mount Pleasant henge. Each of these areas is thus distinguished by a series of monumental structures that are readily visible on the surface, and each has a history of antiquarian and archaeological investigation that stretches back for centuries. Yet the work of the Stonehenge Riverside Project has demonstrated that even in what amount to the most intensively studied archaeological landscapes in Britain, new work can bring entirely unexpected sites and structures to light, often in the areas between the monuments (Parker Pearson et al. 2008).

The Stonehenge and Avebury landscapes are appreciably smaller than the Chacoan cultural area. None the less, it seems likely that like each of the Wessex monumental complexes, the Chaco landscape represented an integrated social entity, distinguished by reciprocal relationships between the Chaco Canyon Downtown 'core' and the many outlier communities. One definition of landscape is that it represents a 'life-world', the culturally integrated dwelling space of a particular extended community. Chaco is an extended landscape, as demonstrated by roads, signalling systems, the circulation of particular artefact types and materials, and shared architectural styles. As such it represents an important case study for the investigation of the *scale* of past social entities. The Wessex landscapes were small and tightly integrated units, but they can be contrasted with enormous entities such as the European Neolithic *Bandkeramik* (spreading from the Ukraine to the Paris Basin, but composed of a series of much smaller 'settlement cells'), or the Pacific Lapita Culture. The question of the scale of archaeological entities is one that is still poorly understood, and while Chaco represents an outstanding case in which these issues can be addressed, preserving the integrity of the whole is essential to understanding how it operated. It is the very fact that Chacoan communities were scattered and dispersed over a relatively large area that makes the phenomenon so fascinating, prompting questions of how relationships of various kinds were maintained over both time and space.

In terms of management, the history of the Stonehenge landscape in particular represents almost a mirror image of the Chaco WHS: threats are receding rather than encroaching. Stonehenge is located close to a number of modern settlements of various sizes: Amesbury, Larkhill, Durrington and Bulford. A major arterial road, the A303 runs immediately to the south of the monument. In addition, during the earlier part of the twentieth century a clutter of huts and other buildings, mostly associated with military activity, was concentrated in the immediate area. In 1966, somewhat brutalist concrete visitor facilities were constructed, including an underpass connecting Stonehenge with a nearby car park. Recent alterations to the visitor experience have been addressing many of the concerns raised in this white paper: removing intrusive structures, enabling people to walk across the landscape, emphasising the relationship between Stonehenge and the other monuments, moving visitor facilities to a respectful distance, considering both the visual envelope of the site and its soundscape. The recognition that the Sarsen arrangement at Stonehenge has quite unusual auditory characteristics, in particular, provides an imperative to reduce the traffic noise at the site (Watson and Keating 1999). Particularly significant has been the removal of the A344, a small road that ran immediately to the north of Stonehenge, effectively placing the monument within a 'traffic island'. The debate over the much larger A303 continues, with general recognition that the road should be put into a tunnel, but disputes arising over the probable expense. Most archaeologists prefer the option of a long, bored tunnel. A shorter, cut-and-cover tunnel would be much cheaper, but would undoubtedly result in the destruction of much as-yet undiscovered archaeology.

The management of the Stonehenge and Avebury WHS has two distinct elements: a management plan (Simmonds and Thomas 2015) and an archaeological research framework (Darvill 2005). Both are recognised as iterative phenomena, and both have gone through a number of revisions, and in the more recent versions Stonehenge and Avebury have been treated separately, with distinct management and research communities. In both cases, there is an explicit recognition that what is being designated, preserved and investigated is an integrated landscape, rather than an assembly of separate sites. The management plan addresses the educational and research

value of this landscape, and stresses the need for stringent control over development, as well as the management of potentially damaging activities that are not normally subject to planning control. The archaeological research framework, by contrast, identifies a series of outstanding research issues and priorities, with the aim of channelling investigation toward particular lacunae of knowledge.

It is possible that some of the developments in the Stonehenge and Avebury WHS might prove of interest to professionals engaged in research and management at Chaco. However, what is more likely is that a dialogue between archaeologists working in on the Chacoan phenomenon in the US and the Neolithic in the UK would prove mutually enriching. There are very many themes that are common to both: viewsheds and soundscapes; collective acts of construction; linear monuments and human movement; the role of group ancestors; feasting and collective consumption; the night sky and the movement of the heavenly bodies; the circulation of exotica and the role of heirlooms; the creation of collective history and identity.

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Appendix VI: Defining the Chacoan Landscape: Part II - Experiences

The Chaco landscape includes nonmaterial dimensions that archaeologists are only beginning to study. These experiential aspects of landscape include viewsheds, night skies, soundscapes, and oral histories.

Appendix VIA: Viewsheds

On the Colorado Plateau, high places are visible and intervisible by virtue of the elevated topography and the clear and cloudless skies. As discussed in **Appendix III**, contemporary indigenous peoples structure cosmologies and oral traditions around highly visible, uniquely shaped landforms. Past inhabitants similarly would have valued visibility over broad areas of landscape for reasons that could have included surveillance, communication, symbolism, and a shared sense of identity or history. Intervisibility — when visibility extends in both directions – connotes some kind of exchange. This exchange could be symbolic, as when inhabitants construct an iconic building to project a particular identity to viewers who in turn feel some sense of connection or alienation when viewing the building (Carr and Neitzel 1995), or it could be functional, as in signaling for purposes of communication.

Chacoans had the means as well as the motive to create a communication or signaling network involving great houses and shrines that drew together the greater Chacoan world. They clearly possessed the technology. Fire at night is particularly visible over long distances, and the Chaco Project used flares at night to demonstrate that signaling among shrines and great houses in high places is possible. Archaeologists have identified the presence of large hearths or fire pits at the canyon great houses of Tsin Kletzin and Pueblo Alto, and the outlier great houses of Chimney Rock, Pierre's, Bis sa'ani, the Poco Site, and Guadalupe (Breternitz et al. 1982; Drager and Lyons 1976; Eddy 1977; Harper et al. 1988; Pippin 1987; Powers et al. 1983). Gwinn Vivian and Doug Palmer have used mirrors to establish line-of-sight connections between the outlier of Pierre's and the canyon great houses of Pueblo Alto and Tsin Kletsin. Vivian suggests Chacoans may have used selenite for signaling between high places (Gwinn Vivian, personal communication, November 2006). Anthropologists have documented the use of selenite for signaling among the Eastern Pueblos, and they have successfully employed selenite in signaling experiments (A. Ellis 1991; Haas and Creamer 1993). Selenite is widespread in the Menefee formation across the San Juan Basin and has been found in association with some outlier great houses (Mathien and Windes 1989:27).

We have long known anecdotally that such a signaling system was possible. A communication system using thirty heliograph stations on high peaks was employed by the U.S. Army across southern Arizona and New Mexico during the Apache Wars in the 1880s and 1890s (Basso 1971:314 fn 110). Hayes and Windes (1975) established the role of shrines in visually linking great houses (see **Appendix IV – Shrines**). Shrine-topped prominent landforms are visible from many outliers: for example, Cabezon Peak, above the outlier of Guadalupe, is

topped by a prehispanic shrine and is within sight of shrines adjacent to and east of Fajada Butte. A local high school student (Freeman et al. 1996, 1997) used mirrors for a science fair project to demonstrate that Huerfano Mesa links the Pueblo Alto to the outlier great house of Chimney Rock, 130 km to the northeast. In the 1980s, Windes noted that a person standing atop Huerfano Mesa can see the top of the Knickerbacker Peaks, east of Aztec Ruins, thereby connecting Chaco Canyon with the Aztec outlier settlement.

We are only beginning to have the technology to systematically chart the existence of a Chacoan signaling system across the greater landscape. GIS databases and software are proving to be excellent tools for examining and modeling visible connections over large areas (Bernardini et al. 2013; Bernardini and Peeples 2015; Connolly and Lake 2006; Exon et al. 2000; Fisher et al. 1997; Johnson 2003; Kay and Sly 2001; Kay and Witcher 2005; Lake 2007; Llobera 1996, 2003, 2007; Waldron and Abrams 1999; Wheatley 1995; Wheatley and Gillings 2002). Visibility studies based in GIS generally focus on determining lines-of-sight (the reciprocal ability of people at two locations to see one another), viewsheds (the surrounding terrain and features that can be seen from a single location), and viewnets (networks of locations connected by lines-of-sight). GIS-based analyses are an ideal way investigate whether Chacoans intentionally established a network that tied together the Chacoan world through intervisibility. Van Dyke et al. (2016) have recently completed a GIS-based viewshed and line-of-sight study involving 87 shrines and related features, and 258 great houses or related features over a 60,000 sq mi area centered on the greater Chacoan world. We determined that shrines do, in fact, facilitate intervisible connections.

Cumulative viewshed analysis or CVS (Wheatley 1995) allowed us to identify places on a landscape that are covisible to one or more Chacoan great houses, shrines, or great houses plus shrines. The figure below illustrates the results of the CVS analysis, with colors that show how many great houses or shrines can see each pixel in the GIS-generated topography. In this image, at least one great house can see the yellow locations, and many great houses can see the red locations (the darkest red areas can be seen by 64 great houses). At least one shrine can see the yellow locations, and multiple shrines can see the blue locations (the darkest areas can be seen by 49 shrines). The central map combines these two CVS analyses to show areas that are covisible to both great houses and shrines — red areas can be seen only by great houses; blue areas can be seen only by shrines; and yellow areas can be seen by both. Places that are exceptionally covisible from great houses and/or shrines include those on the Chuska rim, the Carrizo Mountains, Hosta Butte, Shiprock, Huerfano Mountain, Fajada Butte, the north and west flanks of Mount Taylor, the rims of Chaco Canyon, the La Plata Mountains, Ute Mountain, and an uplift south of Black Mesa (northeastern Arizona) and west of El Malpais. Many San Juan Basin viewsheds intersect and overlap at well-acknowledged high places such as Huerfano Mountain, White Rock, and Hosta Butte — prominent, shrine-topped peaks that are visible from many locations. Other prominent places that are likely locations for shrines have not been systematically surveyed and recorded, including Shiprock, points along the Chuska Mountains, and Sleeping Ute Mountain.

Despite the incomplete nature of the shrine data, the visual coverage from recorded shrines clearly enhances intervisibility across the Chaco World. Shrine viewsheds are extensive in the Chaco basin and in the eastern portion of our study area, while coverage of great houses extends far to the west and north, beyond the locations of recorded shrine sites. About 14,000 sq mi of the landscape shown in Figure VIA1 is visible from one or more Chacoan great houses, and about 7,700 sq mi are visible from one or more shrine. Visibility from shrines and great

houses complement one another to cover over 21,000 sq mi of Van Dyke et al.'s (2016) 60,000 sq mi study area.

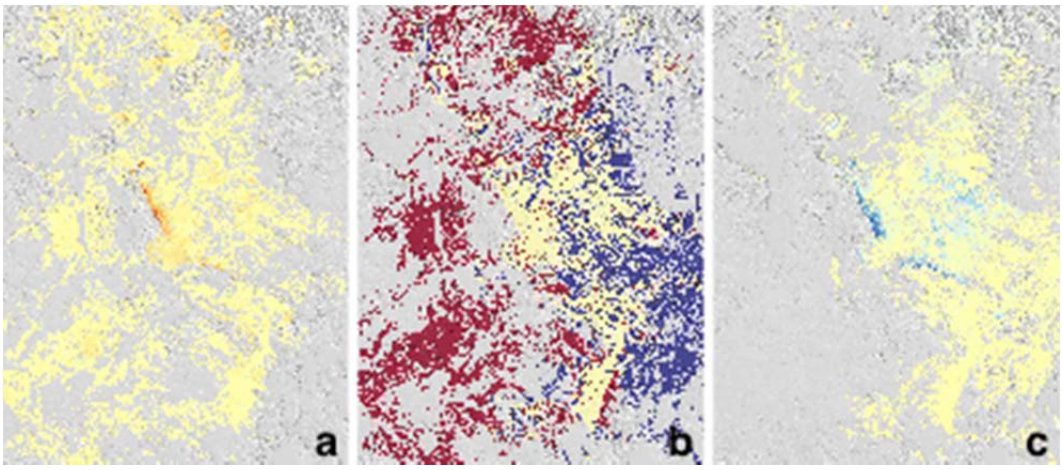

Figure VIA1: Cumulative viewsheds from great houses (a), shrines (c), and both combined (b), from Van Dyke et al. (2016:Figure 5).

The Van Dyke et al. (2016) study also demonstrates how valuable it would be for us to systematically look for shrines in specific areas of the Chaco landscape. High places where viewsheds intersect have not yet been examined to see whether shrines are present. Shrines can be difficult to recognize, and it is very likely that there are many shrines on the Chacoan landscape that have not been recorded. If we knew the location of every shrine in the San Juan Basin, we would be able to take this study to the next level – we would potentially be able to see "holes" in the viewshed, where some outlier communities perhaps were not linked in to the system. This information would enable us to address our major research issues re: Chaco's boundaries in time and space, Chaco's sociopolitical organization, and exchange and interaction.

Viewsheds within outlier communities similarly are of great importance. As noted in the discussion of great houses (Appendix IV), many outlying great houses are situated in highly visible locations. The great houses may have been intended *to see* (as in surveillance) and/or *to be seen* (as in signaling group membership or political authority) by the surrounding community. In four communities where fine-grained small site data are present, scholars have employed GIS line-of-sight and viewshed analyses in attempts to address these issues, with variable and contradictory results. In the Kin Bineola outlier community, Dungan (2009) found that the massive great house was positioned to be seen within the surrounding community but did not facilitate long-distance visibility. This contrasts with the situation at Whirlwind Lake, where a great house is perched on a high mesa overlooking a valley containing some 20 contemporaneous small sites (Kearns 1996; Marshall et al. 1979:87–89). The Whirlwind Lake great house cannot be seen from most of the community small sites, but it does have line-of-sight connections to many distant prominent peaks, suggesting builders were interested in regional rather than local visual relationships (Robinson et al. 2007). Long before the days of GIS analyses, Hayes and Windes (1975:154–155) noted that the Kin Ya'a tower kiva was built at the right spot and at the right height to allow it to be seen over the ridge from a point atop South Mesa at Chaco Canyon, marked by a shrine (29SJ706). Hayes and Windes concluded that communication with Chaco Canyon was a primary function of tower kivas, However, Kantner

and Hobgood (2003) recently revisited this idea using GIS analysis and found that the Kin Ya'a tower kiva's extra height did not increase its long-distance visibility (in other words, it was not necessary to build a tower kiva to see Chaco). Because the tower kiva's height did increase visibility within the immediate Kin Ya'a community, Kantner and Hobgood concluded that Kin Ya'a tower kiva's primary viewing audience was local. At Kin Klizhin, another well-known outlier tower kiva, Ellenberger's (2012) viewshed analysis similarly determined that the Kin Klizhin tower kiva neither enhanced nor detracted from intervisibility with Chaco Canyon. However, by contrast with Kantner and Hobgood, Ellenberger (2012) found that the Kin Klizhin tower kiva did *not* facilitate intervisibility with the surrounding community sites, which already could see one another quite well. Clearly, if we had better and more comprehensive data on the positions of small sites across the Chaco landscape, it would be very informative to conduct some large-scale comparative studies of the viewsheds of different kinds of outlier communities. However, we lack such data at present.

While GIS and photogrammetry are powerful tools, they cannot replace the eyes people on the ground. Photogrammetric techniques are good at finding roads and buildings, but as of yet they lack the resolution to allow us to see small features such as shrines. GIS analyses can identify visual connections, but the software cannot tell us whether visibility was meaningful. Just because high places can be seen from an archaeological location does not mean that ancient inhabitants valued the visual stature of those places (Frieman and Gillings 2007; Llobera 2007); Fitzjohn (2007), for example, found that although a major geological formation dominated the viewshed of an Italian valley, local residents did not "see" it as important. Thus, it is important to have eyes on the ground to assess the importance of viewsheds identified through technological means.

And, viewsheds cannot be studied where air quality is poor. The air pollution contributed by coal-burning power plants near Farmington over the past 30 years has resulted in a noticeable decrease in visibility across the Chacoan landscape. In 1985, people standing at Pueblo Alto could clearly see the snow-topped peaks of the San Juan and La Plata Mountains some 150 km to the north. Today, on most days, visitors to Pueblo Alto merely see a band of haze on the horizion. Any energy development that negatively impacts air quality will directly affect our ability to see, study, and understand viewsheds on the Chaco landscape.

Appendix VIB: Day and Night Skies

It is not simply visibility that is an important component of the Chaco landscape experience – it is the sky itself. All Pueblo agriculturalists follow with interest the peregrinations of the sun and moon (McCluskey 1977; Parsons 1939, 212, 493-497, 554-589; Stevenson 1894, 29; Tedlock 1983). In Tewa pueblos, a sunwatcher is appointed to keep track of the sun's position on the horizon (Harrington 1916:47; Parsons 1939:555). The winter solstice – when the sun turns back from its southerly course – is an important turning point in the ceremonial cycle (Parsons 1939:554). Solstice ceremonies such as the Zuni Shalako are held to ask the sun to return to the north. Solstice ceremonies usually begin before the actual solstice date, and this is, in part, to coordinate this solar event with an important moment in the lunar cycle – the full moon (White 1962, 227; Zeilik 1986). The moon is also associated with women, with the womb, and with the circular subterranean ritual chamber called a kiva (Young 1988:114).

The directions and alignments so important to Pueblo cosmography derive some of their significance from the movements of celestial bodies. Cardinal directions are also solar alignments – on equinoxes, when the sun has traveled halfway between its northern and southern

extremes on the horizon, it rises directly to the east and sets directly to the west. Cardinal, solar alignments at Classic Bonito great houses suggest that periodic gatherings at Chaco followed the movements of the sun. The North Star represents a fixed point around which the stars appear to revolve. North is the "heart of the sky" (Lekson 1999:86), bisecting the daily movements of the sun. At midday, when the sun is halfway across the sky, any shadow will be cast directly along a north-south meridian. North has particular symbolic significance for Tewa and Keresan speakers as the mythic location of the sipapu, the connection to previous worlds, through which ancestors emerged long ago (Benedict 1931:249; White 1960:85). The Sun Dagger petroglyph atop Fajada Butte indicates Chacoans marked solstices, equinoxes, and possibly lunar standstills (Sinclair et al. 1987; Sofaer 1997; Sofaer et al. 1979; Sofaer et al. 1982). The winter solstice – when the sun appears to pause on its southward journey and to turn back on the horizon – was likely the ceremonial high point at Chaco. The winter solstice corresponds to critical events in many Pueblo ceremonial cycles (Parsons 1939:554). In Zuni cosmography, the winter solstice is associated with the middle place, and the Zuni village itself (Young 1988:103-104).

Like solar orientations, lunar orientations would have emphasised the great houses of Chaco as center places around which celestial bodies seemed to revolve. Recent work by Sofaer (1997, 1999, 2007) and others suggest that Chacoans observed phenomena known as lunar standstills. Moonrise on the horizon shifts gradually from a northern to a southern extreme each month, and the width of this envelope expands and contracts over an 18.6 year cycle. At the major lunar standstill, moonrise positions are at their maximum width – the moon swings exuberantly between its northernmost and southernmost positions on the horizon. At the minor lunar standstill, moonrise positions are at their minimum width, shifting only within a narrow envelope. Chacoans could have obtained knowledge of major and minor lunar standstills by watching the moon rise and set on the horizon over 18.6 years. Lunar standstill knowledge would have been of little practical utility, but it might have constituted esoteric ceremonial lore seen as the exclusive property of particular groups or individuals. A fixed landmark is required in order to appreciate the importance of a lunar standstill moonrise. As Chacoan ritual and political hegemony expanded across the San Juan Basin during the eleventh century, Chacoans could have imported this information from the outlier of Chimney Rock.

Chimney Rock, along the Piedra River approximately 130 km (80 miles) northeast of Chaco Canyon, serendipitously provides an ideal location from which to view, and mark, the major lunar standstill (Malville 2004; Malville et al. 1991). Twin vertical stone pillars – Chimney Rock, and Companion Rock – reach over 400 m above the surrounding terrain, and a narrow ridge to the southwest of the pillars gives a view of the full moonrise during the major lunar standstill. In the late eleventh century, Chacoans built an outlier great house on the prime lunar standstill viewing location, atop the ridge southwest of the twin pillars. Clusters of tree-ring dates for the great house in the 1070s and 1090s correspond with major lunar standstills in 1076 and 1093.

Chacoans may have incorporated this lunar knowledge into the orientations of great houses in Chaco Canyon. Sofaer (1997, 1999, 2007) argues that the orientations of non-cardinal canyon great houses, including Chetro Ketl, Pueblo del Arroyo, Una Vida, and Peñasco Blanco, relate to major or minor lunar standstills. The rear wall of Chetro Ketl is one of the most convincing examples, as it aligns precisely with the rising full moon at the minor lunar standstill. If Chacoans did orient some great houses to embody lunar standstill knowledge, this would have been one more way to construct an experience of the canyon as centre place – the location around which the moon, as well as the sun, revolves.

Chaco has long been considered by night sky enthusiasts to be one of the best places in America to stargaze. Located far from modern urban light pollution, the night skies at Chaco are alive with galaxies, stars, comets and meteors. The park has made a commitment to keep light pollution at a minimum and to educate the public about night skies. As a result, Chaco Culture NHP recently was certified as an International Dark Sky Park by the International Dark-Sky Association (IDA). Chaco is the fourth unit in the National Park System to earn this distinction.

We know that the ancient Chacoans watched the night skies as well – not only the moon, but also the stars. Researchers have long hypothesized that the "Supernova" petroglyph on the south canyon wall near Penasco Blanco may represent the appearance of the Crab Nebula in the night skies over Chaco in A.D. 1054. At present there has been virtually no research into celestial meanings, alignments, and associations at outliers on the Chaco landscape other than Chimney Rock. Energy development creates a great deal of light pollution and thus would be potentially very harmful to Chaco's night skies, as well as daytime air quality. This less tangible "resource" is not well-protected by Section 106.

Appendix VIC: Soundscapes

Sound is an understudied experiential aspect of the Chacoan landscape that begs for further attention. In Pueblo and Navajo ritual, sound is very important. Ritual practices involve songs, chants, drums, bells, flutes, and shell trumpets (Parsons 1966; Mills and Ferguson 2008). It is difficult to study sound in the ancient past, but we have many clues. Archaeologists have recovered shell trumpets, flutes, and copper bells from great houses (Pepper 1920; Neitzel 2003). The shallow trenches in great kiva floors may have been plank-covered foot drums.

Cutting-edge and experimental archaeological work is in its infancy with regard to the study of ancient sounds (e.g., Day 2013; Skeates 2010). Archaeologists have undertaken experiments to evaluate the acoustic properties of enclosed architectural spaces such as kivas. In the reconstructed Great Kiva at Aztec, Loose (2002, 2009) measured the sound waves produced by flutes, trumpets, computer-generated sounds and contemporary music – he found that the space has ideal acoustics for public performances. The north cliff face between Pueblo Bonito and Chetro Ketl shelters an area described as a natural amphitheatre. Navajo ritual practitioners use shell trumpets, bone flutes, and reed whistles in this space to communicate with spirits (Blackhorse and Williams 2002). Loose (2009) and Stein et al. (2007) have conducted experiments in this space and have again determined that acoustics there are ideal for large public performances. Pueblo drums resonate particularly well against the cliff walls. Van Dyke (2015) has noted another striking natural sound in Chaco Canyon. When it rains in the summer, spadefoot toads emerge from the mud and fill the canyon for about 48 hours with strident, rasping mating sounds. These sounds resemble the sound of corn grinding, and in fact the rasps used by Hopi katsinas to emulate women grinding corn are decorated with carvings of toads or frogs. Van Dyke suggests that it is not just images of toads or frogs that represent water and fertility, but also the sounds they make.

This brief review encompasses all the published work done to date on acoustics on the Chaco landscape. It would be extremely important and interesting to conduct similar experiments and make similar observations in outlier communities. Unfortunately, soundscapes – as less tangible than architecture or artifacts – are not well-protected by Section 106. The Chaco soundscape is one of the most fragile aspects of this landscape to be threatened by energy development. Trucks, wells, and fracking could forever destroy our ability to study and understand the relevance of acoustic properties to Chacoan ritual and identity.

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October 20, 2017

VIA E-MAIL (NMleasesalecomments@blm.gov)

Mr. Ross Klein
BLM New Mexico State Office
301 Dinosaur Trail
Santa Fe, NM 87502

Re: Comments on the Draft EA for New Mexico BLM's March 2018 Oil & Gas Lease Sale

Dear Mr. Klein:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for New Mexico's March 2018 oil and gas lease sale. In the Draft EA, the Bureau of Land Management (BLM) is proposing to offer several oil and gas leases that could adversely affect traditional cultural properties (TCPs), cultural landscapes and other significant historic properties in the Farmington Field Office (FFO). Of particular concern, one of the proposed leases is located immediately north of Pierre's Site and a few miles south of Halfway House, both of which are part of the Chaco Culture World Heritage Site. This lease also borders (or practically borders) the Great North Road, which is a significant cultural resource in its own right and connects Pierre's Site and Halfway House to Chaco Canyon and other important components of the Greater Chaco Landscape.

Archaeology Southwest, The Wilderness Society and the New Mexico Wilderness Alliance believe this leasing proposal underscores why a new management approach is needed for the Greater Chaco Landscape. As explained below, BLM simply cannot fulfill its obligations under the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act (FLPMA) by attempting to address the impacts of leasing on a lease-by-lease basis. A broader evaluation of the Greater Chaco Landscape is necessary, as requested by the All Pueblo Council of Governors (APCG) on several occasions and as recently as September 21, 2017. Resolution No. APCG 2017-12; *see also* Resolution No. APCG 2016-17; Resolution No. APCG 2015-17; Resolution No. APCG 2014-04. We fully support APCG's request that BLM "immediately institute a moratorium on all oil and gas related permitting and leasing" in the Greater Chaco Landscape until such an evaluation takes place, which must include ethnographic work and visual and auditory analyses of impacts on important cultural resources within that landscape, in conjunction with the Farmington Oil and Gas Resource Management Plan (RMP) Amendment.

I. BLM Is Not Complying with Its Duties Under Section 106 of the NHPA.

BLM is not fulfilling its duties under section 106 of the NHPA. Under section 106, federal agencies must evaluate "undertakings" that may affect historic properties in accordance with the section 106 process. 54 U.S.C. § 306108; 36 C.F.R. Part 800. Federal "undertakings" include the issuance of oil and gas leases. Mont. Wilderness Ass'n v. Fry, 310 F. Supp. 2d 1127, 1152 (D. Mont. 2004). As indicated in the Draft EA, this lease sale could affect significant cultural resources within the Greater Chaco Landscape. Draft EA at 37-39. Consequently, BLM must comply fully with section 106.

While it appears that BLM is using the NEPA process as the vehicle for section 106 compliance, it is not adhering to several of the applicable requirements, including identification of consulting

parties, identification of historic properties, consultation with Indian tribes and assessment of effects. 36 C.F.R. §§ 800.8(c)(1)(i)-(v).

A. BLM has neither identified nor consulted with interested parties.

BLM has not identified and consulted with consulting parties, as required by 36 C.F.R. § 800.8(c)(1)(i), (ii), (v). To the extent this is because BLM believes that engaging the public through the NEPA process fulfills this requirement, that belief is not supported by section 106, which makes a clear distinction between involving the public and consulting with parties that possess a "demonstrated interest" in an undertaking. Compare 36 C.F.R. § 800.8(c)(iv) (allowing agencies to involve the public in the section 106 process through the NEPA process) with § 800.8(c)(i) (requiring agencies to identify and consult with consulting parties, even if they are complying with section 106 through the NEPA process); see also Mid States Coalition for Progress v. Surface Transp. Bd., 345 F.3d 520, 553 (8th Cir. 2003) (explaining that an agency has both a general duty to involve the public and a duty to identify consulting parties to be more formally involved).

The Advisory Council on Historic Preservation (ACHP), which administers the section 106 regulations, also draws a clear distinction between involving the public through the NEPA process and identifying consulting parities, which "are provided a more active role . . . than the general public." Council on Environmental Quality, Executive Office of the President and ACHP, NEPA and NHPA: A Handbook for Integrating NEPA and Section 106 at 15 (Mar. 2013); see also Nat'l Trust for Historic Pres. v. U.S. Army Corps of Eng'rs 552 F. Supp. 2d 784, 791 (S.D. Ohio 1982) (affording "great deference" to ACHP, "[a]s the agency created to administer Section 106").[1]

Yet, the Draft EA provides no discussion of the whether BLM has attempted to identify consulting parties beyond the New Mexico State Historic Preservation Officer and Indian tribes, and if any consulting parties have been identified, how BLM is engaging with them concerning the identification of historic properties, assessment of effects and other mandatory steps in the section 106 process. This is not a case where members of the public and individuals with relevant expertise and knowledge have failed to demonstrate an interest in undertakings within the Greater Chaco Landscape. To the contrary, and as BLM is well aware, there has been significant interest concerning oil and gas leasing in the Greater Chaco Landscape, including from the academic and professional archaeological communities. In fact, less than a month ago, several leading Chaco scholars released a report summarizing recent research and findings concerning the Greater Chaco Landscape, with a focus on identifying how past, present and future oil and gas development has affected resources and attributes of that landscape. Archaeology Southwest, Recent Efforts to Research, Preserve, and Protect the Greater Chaco Landscape. These are the very sort of individuals with a "demonstrated interest in the undertaking" who BLM is obligated to identify and consult with under section 106. 36 C.F.R. § 800.2(c)(5). BLM's failure to do so violates the NHPA.

B. BLM has not made a "reasonable and good faith effort" to identify TCPs and other historic properties.

BLM has not made a "reasonable and good faith effort" to identify TCPs and other historic properties with the area potentially affected by the proposed leases. Under section 106, BLM must make "a reasonable and good faith effort" to identify historic properties located within an undertaking's area of potential effects (APE). 36 C.F.R. § 800.4(b)(1). To satisfy this requirement, BLM must, "at a minimum, [conduct] a review of existing information on historic properties that are

[1] *Available at* http://www.achp.gov/docs/NEPA_NHPA_Section_106_Handbook_Mar2013.pdf.

located or may be located within the APE. . . ." ACHP, Meeting the "Reasonable and Good Faith" Identification Standard in Section 106 Review at 2.[2] Additional identification efforts, including "consultation, oral history interviews, sample field investigation, and field survey", are also required, in particular when tribes have "indicated the existence of traditional cultural properties. . . ." Pueblo of Sandia v. U.S. Forest Serv., 50 F.3d 856, 860 (10th Cir. 1995). In several respects, BLM has failed to satisfy section 106's identification requirement.

1. BLM has failed to account for the Great North Road.

BLM has failed to acknowledge the existence of the Great North Road, which either borders or runs in close proximity to parcel 30. In the immediate vicinity of parcel 30, the Great North Road becomes

> a set of four 'almost perfectly parallel' roads extending for 1.5 km. . . . Recent reevaluation of the aerial imagery . . . has revealed further portions of the road in previous gaps to the north of Pierre's Complex. . . . Many of these segments consist of two parallel roads. (The new portions lie on the straight line determined by the sections found earlier and thus further emphasize the overall linearity of the road.) There is no satisfactory functional explanation for these redundant features. Yet the effort devoted to achieving them indicates they are not casual expressions of the Chaco culture.

Anna Sofaer, Mike Marshall & Rolf Sinclair, The Great North Road: a Cosmographic Expression of the Chaco Culture of New Mexico. However, the Draft EA fails to identify this apparently unique segment of the Great North Road in the context of identifying and evaluating impacts on cultural resources. This omission is compounded by the fact that only 10 percent of parcel 30 (and an unknown percentage of the surrounding area) has ever been surveyed for cultural resources, Draft EA at 32, and BLM acknowledges that in the Farmington Field Office

> [o]il and gas development may include constructing a well pad, access road, pipeline, and facilities, drilling a well using a conventional pit system or closed-loop system, hydraulically fracturing the well, installing pipelines and/or hauling produced fluids, regularly monitoring the well, and completing work-over tasks throughout the life of the well. In the FFO, typically, all of these actions are undertaken during development of an oil or gas well; it is reasonably foreseeable that they may occur around the leased parcels.

Id. at 19 (emphasis added). This raises the very real possibility that the Great North Road and/or shrines, earthworks and other road-related features, could be harmed – without any consultation taking place or measures adopted to address any harm – by the issuance and subsequent development of parcel 30. *See, e.g.*, John Kantner, Chaco Roads (listing various features often associated with Chacoan roads). This is the precise result that section 106 is designed to avoid.

2. BLM has failed to account for TCPs identified by the APCG.

BLM has failed to account for specific TCPs identified by APCG within the Greater Chaco Landscape. Under section 106, TCPs are a type of historic property that BLM must identify and evaluate. 54

[2] *Available at* http://www.achp.gov/docs/reasonable_good_faith_identification.pdf.

U.S.C. § 300308; *see also* Pueblo of Sandia, 50 F.3d at 859 (recognizing TCPs as historic properties under section 106); National Park Service, National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties (same).[3] According to National Register Bulletin 38,

> [a]n early step in any effort to identify historic properties is to consult with groups and individuals who have special knowledge about and interest in the history and culture of the area to be studied. In the case of traditional cultural properties, this means thos individuals and groups who may ascribe traditional cultural significance to locations within the study area, and those who may have knowledge of such individuals and groups. Ideally, early planning will have identified these individuals and groups, and established how to consult with them.

National Register Bulletin 38 at 7. "[A] mere request for information is not necessarily sufficient to constitute the 'reasonable effort' section 106 requires." Pueblo of Sandia, 50 F.3d at 860. Because BLM has limited its TCP identification effort here to "mere requests for information," it has not complied with section 106.

As noted, APCG has passed four resolutions over the past four years where it has pointed to the existence of TCPs within the Greater Chaco Landscape, including at specific locations. In 2014, APCG stated that

> the issuance of oil and gas leases, drilling permits and approvals for oil and gas roads, pipelines and other types of oil and gas infrastructure in the landscape surrounding Chaco Canyon, which includes traditional cultural properties and sacred sites, . . . threatens irreparable degradation and impairment to that landscape and to the traditional cultural values and sacred sites present within that landscape.

Resolution No. APCG 2014-04. In 2015, APCG went one step further and identified specific locations within the Greater Chaco Landscape that it considered to be TCPs and/or sacred sites, "including, but not limited to, the Great North Road, the West road, and Pierre's Site." Resolution No. APCG 2015-17. APCG reiterated this declaration in the 2016 and 2017 resolutions, stating that

> preserving the traditional cultural properties and sacred sites that exist in Chaco Canyon and in the Greater Chaco Region, including, but not limited to, the Great North Road, the West Road, and Pierre's Site, along with protection of the night skies, soundscapes, view shed and sight-lines within and surrounding Chaco Canyon is essential to the culture and traditions of APCG members. . . .

Resolution No. APCG 2017-12 (emphasis added); *see also* Resolution No. APCG 2016-17. Yet, in keeping with past practice, BLM has "initiated [consultation] by mail regarding each lease sale activity. A second request for information will be sent to the same recipients if there is no response to the first inquiry. If no response to the second letter is received and no other substantial conflicts or issues are identified, the proposed leasing of parcel(s) may go forward." Draft EA at 10. This in no way satisfies what is required by section 106 when, as here, tribes have identified specific TCPs and alluded to the existence of others within a specific geography.

[3] *Available at* https://www.nps.gov/nr/publications/bulletins/pdfs/nrb38.pdf.

In many respects, BLM is committing the same errors that invalidated the section 106 consultation in Pueblo of Sandia. There, the U.S. Forest Service knew in advance of initiating consultation that the pueblo had identified a specific location as "an area of great religious and traditional importance. . . ." Pueblo of Sandia, 50 F.3d at 860 (internal quotations omitted). Further, the pueblo had, in the past, asked the U.S. Forest Service to manage the area in a manner "it believed would be most likely to permit Sandia members to perform secret, traditional activities in more seclusion." *Id*. (internal quotations omitted).

BLM now finds itself in exactly the same position. In advance of consultation commencing on this lease sale, APCG publicly identified specific TCPs within the Greater Chaco Landscape and indicated that others existed. It also called on BLM to adopt a moratorium on oil and gas leasing and permitting in order to afford greater protection to TCPs and sacred sites within the Greater Chaco Landscape and to allow adequate time for consultation to take place between BLM and the pueblos. Yet, BLM is proceeding as if none of those things had happened. For that reason, and in accordance with the Tenth Circuit's decision in Pueblo of Sandia, BLM's identification effort in regard to TCPs is per se unreasonable.

C. BLM has failed to fully assess the potential for adverse effects.

BLM has failed to fully assess the potential for adverse effects on Pierre's Site, the Great North Road and Greater Chaco Landscape. Under section 106, BLM must "apply the criteria of adverse effect to historic properties within the area of potential effects." 36 C.F.R. § 800.5(a). Those criteria include "cumulative" effects, as well as effects on "the property's setting that contribute to its historic significance" and "visual, atmospheric or audible" effects "that diminish the integrity of the property's significant historic features. . . ." *Id*. § 800.5(a)(1), (a)(2)(iv), (v). In several important respects, BLM has failed to correctly apply these criteria to the proposed lease sale.

1. BLM has not engaged in consultation over adverse effects.

BLM has failed to engage in consultation, in particular with interested tribes, over the application of the adverse effect criteria. Instead, and in the absence of consultation, BLM has determined that the proposed action, including the leasing of parcel 30, will have no adverse effects on historic properties. Draft EA at 37. BLM supports this determination by suggesting that "BMPs or mitigation (e.g., muffler) could be necessary to achieve *no adverse effect*" for certain properties, including Pierre's Site. *Id*. (emphasis in original). However, this places the cart before the horse. Because BLM has not adequately consulted with the pueblos over TCPs within the Greater Chaco Landscape, which include Pierre's Site, it does not know whether and what attributes of those TCPs render them eligible for the National Register.[4] And because BLM has yet to gather this necessary information, it cannot apply the adverse effect criteria, at least in a defensible way.

Moreover, the pueblos have repeatedly voiced their belief that oil and gas development in the Greater Chaco Landscape, as presently administered by BLM, "threatens irreparable degradation and impairment to that landscape and to the traditional cultural values and sacred sites present

[4] *See* National Register Bulletin 38 ("To assist in determining whether a given activity outside the boundaries of a traditional cultural property may constitute an adverse effect, it is vital that the nomination form or eligibility documentation discuss those qualities of a property's visual, auditory, and atmospheric setting that contribute to its significance, including those qualities whose expression extends beyond the boundaries of the property as such into the surrounding environment.").

within that landscape. . . ." Thus, it seems highly unlikely that the pueblos would concur with BLM's no adverse effects determination for the leasing of parcel 30.

2. BLM has failed to fully assess the potential for visual and auditory effects.

BLM has failed to fully evaluate the potential for visual and auditory effects on Pierre's Site, the Great North Road and the Greater Chaco Landscape. In the Draft EA, BLM indicates that parcel 30 is "outside the modeled viewshed" of Pierre's Site. Draft EA at 37. But BLM provides no further information about how it conducted that analysis or reached that conclusion. Further, while BLM acknowledges the potential for auditory impacts on Pierre's Site, it provides no information on the degree of those impacts and whether they rise to the level of significant. The viewscape and soundscape analysis recently conducted by Ruth Van Dyke suggests strongly that nearby oil and gas development can in fact have a significant impact on Pierre's Site:

> Despite the efforts of the Bureau of Land Management and the National Park Service to jointly minimize the ground footprint impacts of oil and gas drilling on the Pierre's community, there have been significant impacts to the viewscape and the soundscape. No less than 12 pumpjacks and at least 5 drilling containers are visible from the high places in the community. Pumpjacks . . . are prominently visible on the skyline from Houses A and B as well as the pinnacle sites. Noise from the nearest pumpjack . . . is audible from throughout the community.

Ruth Van Dyke, Impacts of Oil and Gas Drilling on Viewscapes and Soundscapes at the Chaco Outlier of Pierre's, San Juan County, New Mexico 15 (Feb. 16, 2017). This phenomenon – the degree to which oil and gas development can impact cultural resources in the Greater Chaco Landscape because so many of those resources were intentionally located to achieve maximum visibility – has been noted by other many other scholars and researchers. See, e.g., Ruth Van Dyke, Stephen Lekson and Carrie Heitman, Chaco Landscapes: Data, Theory and Management at 65-66 ("The Chaco soundscape is one of the most fragile aspects of this landscape to be threatened by energy development. Trucks, wells, and fracking could forever destroy our ability to study and understand the relevance of acoustic properties to Chacoan ritual and identity.").

Further, as discussed above, BLM does not even mention the Great North Road in the Draft EA. As a consequence, there is no analysis whatsoever of visual and auditory effects on this important resource. For all of these reasons, BLM has failed to adequately evaluate the visual and auditory effects of this lease sale.

3. BLM has failed to evaluate cumulative effects on Pierre's Site, the Great North Road and the Greater Chaco Landscape.

BLM has failed entirely to evaluate the cumulative effects of leasing parcel 30 in conjunction with past, present and reasonably foreseeable future activities. Under section 106, BLM must identify "reasonably foreseeable effects caused by the undertaking that may occur later in time, be father removed in distance or be cumulative." 36 C.F.R. § 800.5(a)(1).

Here, BLM fails to discuss and evaluate the leasing of parcel 30 in conjunction with existing oil and gas development in the immediate vicinity of and surrounding Pierre's Site. This development has

already caused "significant impacts to the viewshed and the soundscape." Van Dyke at 14. There are at least

> 12 pumpjacks and at least 5 drilling containers [that] are visible from the high places in the community. Pumpjacks labeled #1,#2, #7 and #9 are prominently visible on the skyline from Houses A and B as well as the pinnacle sites. Noise from the nearest pumpjack (#6), Dugan Production Corp Hoss Com #95, located approximately 600 m southwest of Pierre's butte, is audible from throughout the community. Although this pumpjack was positioned to be perpendicular in the line of sight from Houses A and B (Viewscapes 1 and 2), it is NOT perpendicular to the line of sight from El Faro (Viewscape 4) and the atalaya (Viewscape 5). Looking south towards Chaco Canyon, numerous pumpjacks (#3, 4, 5, 10, 11 & 12) dot the valley floor. Rather than a sacred landscape and part of a UNESCO World Heritage Site, the Pierre's community today has the feeling of an industrial park.

Id. Yet, BLM does not acknowledge or discuss these impacts in the Draft EA or disclose how they would cumulatively effect Pierre's Site, as well as the Great North Road and Greater Chaco Landscape, with the leasing and development of parcel 30.

Further, BLM fails to evaluate the cumulative effects of future development in the vicinity of Pierre's Site. Much of the area surrounding the site, and indeed the site itself, is already leased for oil and gas development. And there is at least one pending drilling proposal – for "a vertical, 750 feet deep, natural gas well, as well as multiple access roads and pipelines" – within one mile of Pierre's Site. DOI-BLM-NM-F010-2017-0042-EA, Flats #1 Natural Gas Well and PGA Unit Access Road and Pipeline Development Project. Yet, in the Draft EA, BLM fails to disclose the existence of this proposal, as well as the potential for development on other leased lands in the vicinity of Pierre's Site. As a consequence, and for this additional reason, the Draft EA lacks an adequate assessment of the cumulative effects of this lease sale and whether they are adverse.

II. BLM Has Not Complied with the National Environmental Policy Act.

A. The Draft EA lacks a reasonable range of alternatives.

The Draft EA lacks a reasonable range of alternatives. NEPA generally requires the lead agency for a given project to conduct an alternatives analysis for "any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). The regulations further specify that the agency must "rigorously explore and objectively evaluation all reasonable alternatives" including those "reasonable alternatives not within the jurisdiction of the lead agency," so as to "provid[e] a clear basis for choice among the option." 40 C.F.R. § 1502.14.

The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." New Mexico ex rel. Richardson v. BLM, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice from the spectrum of reasonable options. By contrast, in evaluating lease sales, including this one, BLM frequently evaluates only two alternatives: a no action alternative, which would exclude all lease parcels from the sale; and a lease everything alternative, which would offer for lease all nominated parcels. An EA offering a choice between leasing every parcel nominated, and leasing nothing at all, does not present a reasonable range of alternatives. See TWS v. Wisely,

524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-ground compromise between the absolutism of the outright leasing and no action alternatives"); Muckleshoot Indian Tribe v. US Forest Serv., 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives").

For this lease sale, BLM has not considered any alternatives that fall between the two extremes. There is no alternative that evaluates additional protections for Pierre's Site, for example, in spite of the potential for adverse effects from the leasing and development of parcel 30. Such protections include the deferral of parcel 30, as well as any other parcel that could cause adverse effects on the Greater Chaco Landscape, to allow for additional consultation to take place with tribes and others. Because BLM has not evaluated any "middle-ground" alternatives, it has violated NEPA.

B. BLM has failed to take the necessary "hard look" at impacts on the Greater Chaco Landscape.

BLM has not taken the required "hard look" at impacts on Pierre's Site, the Great North Road and the Greater Chaco Landscape. Under NEPA, BLM must evaluate the "reasonably foreseeable" site-specific impacts of oil and gas leasing, prior to making an "irretrievable commitment of resources." New Mexico ex rel. Richardson, 565 F.3d at 718; see also Sierra Club v. Hodel, 848 F.2d 1068, 1093 (10th Cir. 1988) (agencies are to perform hard look NEPA analysis "before committing themselves irretrievably to a given course of action so that the action can be shaped to account for environmental values"); Sierra Club v. Peterson, 717 F.2d 1409, 1411 ([o]n land leased without a No Surface Occupancy Stipulation the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operations.). Courts have held that BLM makes such a commitment when it issues an oil and gas lease without reserving the right to later prohibit development. New Mexico ex rel. Richardson, 565 F.3d at 718.

Here, BLM is in fact making an "irretrievable commitment of resources" by offering oil and gas leases, including parcel 30, without reserving the right to prevent future development. Further, as discussed above, BLM has failed to evaluate the direct, indirect and cumulative impacts of leasing on Pierre's Site, the Great North Road and the Greater Chaco Landscape. These impacts are "reasonable foreseeable," given existing development and the likelihood of future development in the area, which BLM acknowledges in the Draft EA. Draft EA at 19 ("[I]t is reasonably foreseeable that [development] may occur around the leased parcels."). Thus, BLM's failure to take a "hard look" at the impacts of leasing violates NEPA.

C. BLM is risking prejudicing management alternatives under consideration in the Farmington RMP Amendment process.

Pursuant to applicable regulations, BLM should not approve actions that would limit the choice of alternatives under consideration in the ongoing amendment to the Farmington RMP. 40 C.F.R. § 1506.1 (Limitations on actions during NEPA process). The RMP Amendment process is analyzing impacts to a wide range of resources and uses, including cultural resources, from oil and gas development and considering how those resources could be protected. *See*, Notice of Intent, 79 Fed.Reg. 10548 (February 25, 2014). In addition, according to BLM's Analysis of the Management Situation, the vast majority of the field office has already been leased for oil and gas development. AMS, p. 2-109. Consequently, the range of alternatives to protect cultural resources in the ongoing

RMP amendment is already very limited and BLM should not issue these leases without protecting its decision space, as envisioned by NEPA.

III. BLM Is Violating the Federal Land Policy and Management Act.

Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. n43 U.S.C. § 17732 (2012). As the Supreme Court has noted, "[m]ultiple use management is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values." Norton v. S. Utah Wilderness Alliance, 542 U.S. 55, 58 (2004) (internal quotations omitted).

In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that under FLPMA's multiple use mandate, development of public lands is not required, but must instead be weighed against other possible uses, including conservation to protect environmental values. See, e.g., New Mexico ex rel. Richardson, 565 F.3d at 710 ("BLM's obligation to manage for multiple use does not mean that development *must* be allowed. . . . Development is a possible use, which BLM must weigh against other possible uses — including conservation to protect environmental values, which are best assessed through the NEPA process."); Rocky Mtn. Oil & Gas Ass'n v. Watt, 696 F.2d 734, 738 n.4 (10th Cir. 1982) ("BLM need not permit all resource uses on a given parcel of land."). And, just as BLM can deny a project outright in order to protect the environmental uses of public lands, it can also condition a project's approval on the commitment to mitigation measures that lessen environmental impacts. See, e.g., Pub. Lands Council v. Babbitt, 167 F.3d 1287, 1300-01 (10th Cir. 1999) ("FLPMA unambiguously authorizes the Secretary to specify terms and conditions in livestock grazing permits in accordance with land use plans"); Grynberg Petro, 152 IBLA 300, 306-07 (2000) (describing how appellants challenging conditions of approval bear the burden of establishing that they are "unreasonable or not supported by the data").

The multiple use framework's emphasis both on environmental resources and on the need to balance between present and future generations are highly relevant to consideration of climate change-related impacts. For example, multiple use includes "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources . . . ; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. . . ." 43 U.S.C. § 1702(c).

Here, the Farmington Field Office has already leased approximately the vast majority of its lands for oil and gas development, and there is already significant development throughout the field office, as evidenced by the thousands of wells in-production and thousands of miles of access roads and pipelines. Given the need to balance development with "nonrenewable resources" under the multiple-use mandate, and the sensitivity and international significance of cultural resources within the Greater Chaco Landscape, BLM's decision to offer parcel 30 violates that mandate.

IV. Conclusion

Thank you again for the opportunity to comment. Please let us know if you have any questions or concerns regarding these comments.

Sincerely,

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Attachments

1. Resolution No. APCG 2017-12
2. Resolution No. APCG 2016-17
3. Resolution No. APCG 2015-17
4. Resolution No. APCG 2014-04
5. Archaeology Southwest, Recent Efforts to Research, Preserve, and Protect the Greater Chaco Landscape
6. Anna Sofaer, Mike Marshall & Rolf Sinclair, The Great North Road: a Cosmographic Expression of the Chaco Culture of New Mexico
7. John Kantner, Chaco Roads
8. Ruth Van Dyke, Stephen Lekson and Carrie Heitman, Chaco Landscapes: Data, Theory and Management
9. Ruth Van Dyke, Impacts of Oil and Gas Drilling on Viewscapes and Soundscapes at the Chaco Outlier of Pierre's, San Juan County, New Mexico
10. DOI-BLM-NM-F010-2017-0042-EA, Flats #1 Natural Gas Well and PGA Unit Access Road and Pipeline Development Project

From: Ben-Horin, Dan
To: Nada Culver
Subject: Fwd: Automatic reply: Devil"s Canyon Cabin Restoration
Date: Friday, October 20, 2017 12:54:36 PM
Attachments: DOI-BLM-CO-S081-2017-0005-EA_DevilsCynEagleScoutProject_preliminary_EA.pdf

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Good morning Nada,
I just received an auto-reply from Juli, and it appears she will not be back in the office for a few weeks. Last month, her and I briefly discussed a project in Black Ridge Canyons Wilderness, and I want to get a copy of a preliminary EA over to TWS for review. A copy of the EA is attached, please feel free to get in touch if you have any comments or concerns - Dan

Dan Ben-Horin

Project Manager - Gunnison Sage Grouse RMPA/EIS
Bureau of Land Management
Colorado State Office
(p) 970-244-3006
(e) dbenhorin@blm.gov

---------- Forwarded message ----------
From: Juli Slivka <jslivka@tws.org>
Date: Fri, Oct 20, 2017 at 10:44 AM
Subject: Automatic reply: Devil's Canyon Cabin Restoration
To: "Ben-Horin, Dan" <dbenhorin@blm.gov>

Hi,

I'm out of the office and away from email and phone until Nov. 3. Please contact Nada Culver with anything urgent at nada_culver@tws.org.

Thanks,

Juli

BLM

United States Department of the Interior
Bureau of Land Management

Environmental Assessment
for the Devils Canyon Cabin Rehabilitation Project

McInnis Canyons National Conservation Area
2815 H Road
Grand Junction, Colorado 81506

DOI-BLM-CO-S081-2017-0005-EA

OCTOBER 2017

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based on the principles of multiple-use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation, rangelands, timber, minerals, watershed, fish and wildlife, wilderness, air, and scenic, scientific, and cultural values.

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CHAPTER 1 – INTRODUCTION

1.1 IDENTIFYING INFORMATION

BACKGROUND: The Bureau of Land Management (BLM) prepared this EA to analyze the proposed rehabilitation of the Devils Canyon Cabin. This historic resource is a sheepherding line cabin that was probably constructed by John G. Beard and/or his ranch hands in the 1920s or 1930s. John Beard homesteaded the area to the north of the cabin in 1927 and ran sheep through the area well into the mid-20th century. Although it has been modified over the years, the cabin retains the distinctive characteristics of historic period architecture found in the area and is associated with ranching and the broader economic development and settlement of the Grand Valley. Because of these characteristics, the site is determined eligible for listing on the National Register of Historic Places (NRHP). No other similar buildings or structures with the same associations have survived in the Devils Canyon area.

This cabin is located at the southern-most end of a recreation trail loop, and the public frequently visits the site. Repeated alterations to the structure over the years has led to patchwork tar-paper on the roof and graffiti and trash left in and around the structure. Natural processes have also led to the deterioration of the sheep pen attached the cabin. Finally, several years ago, the wood stove in the cabin was removed.

The BLM is proposing rehabilitation of the cabin as part of an internal or partner project. The proposal is to repair the roof and sheep pen, remove trash and graffiti, seal the cold storage box, and replace the wood stove with the door welded shut.

PROJECT NAME: Devils Canyon Cabin Rehabilitation Project

PLANNING UNIT: McInnis Canyons National Conservation Area

1.2 PROJECT LOCATION AND LEGAL DESCRIPTION

LEGAL DESCRIPTION:
6th Principal Meridian, Township 11 South, Range 102 West, Section 14, Mesa County, Colorado
See Appendix 1 for maps.

1.3 PURPOSE AND NEED

The purpose of the project is to rehabilitate the Devils Canyon Cabin structure located in the MCNCA. The project is needed to address the disrepair and deterioration of the cabin structure caused naturally over time as well as by vandalism, structural modification, and neglect. The project need is established by Section 110 of the National Historic Protection Act of 1966 (54 U.S.C. 306101 & 54 U.S.C. 306201) that requires historic properties (eligible sites) to be managed in consideration of their historic, archaeological, architectural, or cultural values. The BLM has determined that this cabin provides supplemental value to the Black Ridge Canyons Wilderness Area, and rehabilitation of the cabin would maintain this aspect of wilderness character. The Proposed Action is consistent with and supports the objectives of the Colorado Canyons National Conservation Area Resource Management Plan.

1.4 PUBLIC PARTICIPATION

1.4.1 Public Scoping: The primary mechanism used by the BLM to invite public involvement in the public scoping process was posting this project on the BLM ePlanning NEPA website.

1.4.2 Internal Scoping: Maps of the project area and description of the proposed action were distributed to the GJFO Interdisciplinary Team (IDT) and discussed at IDT meetings. Documentation of which resources would be impacted based on internal scoping is included in Table 3.1.

1.4.3 Issues Identified: The primary issue identified during internal scoping is the cabin's location in the Black Ridge Canyons Wilderness.

1.5 DECISION TO BE MADE

The BLM will decide whether to approve the proposed Devils Canyon Cabin Rehabilitation Project based on the analysis contained in this Environmental Assessment (EA). This EA analyzes repairs to the cabin roof and sheep pen, sealing of the cold storage box, removal of graffiti and trash, replacement of the wood stove, and installation of a visitor log in the cabin. The BLM may choose to: a) authorize the project as proposed, b) authorize the project with modifications, c) authorize an alternative to the proposed action, or d) not authorize the project at this time.

CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

The purpose of this chapter is to provide information on the Proposed Action and Alternatives. Alternatives considered but not analyzed in detail are also discussed. The issue identified through scoping, "The proposed project…would affect the undeveloped and opportunities for solitude qualities of wilderness character" drove the development of the Weekday Alternative (Alternative C, 2.2.3 below) to conduct the activity during periods of lower recreational demand.

2.2 ALTERNATIVES ANALYZED IN DETAIL

2.2.1 ALTERNATIVE A – No Action Alternative

Under the No Action Alternative, rehabilitation of the Devils Canyon Cabin would not occur by the BLM or a BLM partner. The cabin would continue to deteriorate by natural and human-caused processes.

2.2.2 ALTERNATIVE B – Proposed Action

The Proposed Action includes several components:

1. Repair the roof. The roof of the cabin is constructed of 1x12 planks. Appropriate dimensional lumber would be used to patch the hole in the roof. The patchwork tar paper and shingles present on the roof would be removed and replaced with rolled roofing.
2. Clean up the trash and graffiti in and around the cabin. Using gloves, trash pickers, and trash bags, BLM employees or partner volunteers would bag and remove modern trash in the cabin. All waste would be carried out on foot and horseback and disposed of appropriately. Graffiti would be removed with brushes and water where possible.
3. Replace the wood stove. Prior to returning the stove to the cabin, and off of BLM-administered land, the door to the wood stove would be welded shut. The stove would then be transported on foot or horseback and reinstalled into the cabin.
4. Repair the sheep pen. The door to the sheep pen has recently fallen off and would be replaced to its condition as recorded in 2010. If needed, fencing around the sheep pen would also be replaced.
5. Seal the cold storage box. The cold storage box is currently being used as a refuse space by hikers. The box would be shut and sealed using nails.
6. Install a visitor book in the cabin. The BLM or partner group would anchor a visitors log in the cabin to discourage further graffiti.

All materials would be transported into and out of the site on foot and on horseback. The wood stove will be welded shut off site. The visitor book would be installed inside the cabin to prevent future graffiti.

Partner volunteers may camp overnight outside the cabin with their horses. Rather than packing in feed, horses would graze the surrounding vegetation. Camping would occur no more than three consecutive nights.

In order to make sure all rehabilitation activity is in keeping with the historic appearance of the cabin and is completed appropriately, a BLM or BLM-permitted archaeologist will be on site to monitor all rehabilitation efforts.

Alternative B is proposed as a weekend (Friday-Sunday) project.

2.2.3 ALTERNATIVE C – Weekday Alternative

Alternative C, the Weekday Alternative, proposes the same actions as Alternative B, however, the project would occur during a weekday (Monday-Thursday).

2.3 Alternatives Considered but not Analyzed in Detail

Another Alternative considered involves the group conducting all rehabilitation activities during day trips to the project site, without staying overnight in Black Ridge Canyons Wilderness. This Alternative was not analyzed because, given the scope of work involved with the project, it would be more efficient to accomplish all of the tasks over consecutive days with a stay overnight. Additionally, this area of the wilderness does not see a significant amount of overnight visitor use, so the impact on the Opportunities for Solitude quality of wilderness does not differ greatly from Alternatives 1 and 3.

2.4 PLAN CONFORMANCE REVIEW

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Resource Management Plan for the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness, approved October 28, 2004

Date Approved: October 2004

Decision Number/Page: CCNCA RMP page 2-17

Decision Language: The Management Actions in the CCNCA RMP direct the cultural resources program to, "Develop and implement a base-level proactive cultural resource program required under Section 110 of the NHPA. A reasonable amount of…restoration and protection of "at-risk" site efforts…are to be completed annually."

Section 1.6.C.5.a. of BLM Manual 6340, Management of BLM Wilderness acknowledges "the presence of cultural resources…as a unique and nonrenewable part of an area's wilderness character." Furthermore, Section 1.6.C.5.d. of the manual states, "Any structure or installation found to be eligible for the National Register may be retained as a historic feature of the wilderness."

2.5 STANDARDS FOR PUBLIC LAND HEALTH

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. The BLM also incorporated the standards into the 2015 GJFO RMP and other RMPs that have since been revised. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment stemming from the implementation of the actions under the Proposed Action and other alternatives analyzed.

This EA draws upon information compiled in the Grand Junction Resource Area RMP (BLM 2015) and the Colorado Canyons NCA RMP (BLM 2004).

3.1.1 Elements Not Affected

The following elements, identified as not being present or not affected are not brought forward for additional analysis in this EA:

Air and Climate – The proposed activities do not emit any regulated air pollutants. The work activities should not disturb soil and create excessive dust.

Water – Activities planned will not cause any water quality concerns due to the planned use of existing trails and low impact construction work.

Soils – Using existing trails and staying within the original footprint should not create new soil disturbance.

Geology/Mineral Resources – MCNCA is withdrawn from mineral entry; no valid claims exist within the boundaries. Two known AML sites are in Devils Canyon, but significantly distant from the project site.

Special Status Species Animals – No know occurrences of special status species are known within the project area. Use of existing trails and cabin footprint should mitigate any new impacts to wildlife.

Other Important Wildlife Habitat – Use of existing trails and cabin footprint should mitigate any new impacts to wildlife.

Vegetation – Use of existing trails and cabin footprint should mitigate any new impacts to vegetation. Although grazing can affect vegetation, because grazing of horses over space and time will be minimal, impacts are expected to be negligible.

Forestry – No forest resources are present within the project area.

Invasive, Non-native Species – Structural repairs of the cabin will not create a weed issue.

Riparian Zones/Wetlands – Use of existing trails and cabin footprint should mitigate impacts to riparian areas.

Paleontological – The project site is mapped as Precambrian, known to be granite or schist, and therefore exceedingly unlikely to host fossils.

Tribal & Native American Religious Concerns – No known sites of tribal significance exist in the project area.

Visual Resources – The proposed project would not result in any change to the visual landscape.

Social/Economic – Socioeconomic impacts from this project would not be measurable. The work would be conducted by volunteers and improvements to the cabin are not expected to increase visitation from out of area recreationists.

Transportation and Access – The proposed action would not change access to or across public lands.

Wastes, Hazardous or Solid – The project involves the removal of non-hazardous solid waste. No hazardous wastes have been identified and the proposal does not involve the use of hazardous materials so no hazardous waste would be generated.

Recreation – The proposed project would not change the public's ability to participate in recreational activities (hiking and horseback riding). Nor would the proposed project change the recreational setting. The changes to the cabin would be minor and not noticeable to the casual visitor. Effects to recreationists' opportunities for solitude are included in the wilderness section.

Areas of Critical Environmental Concern – The project is not within an ACEC.

National Conservation Lands – There are no Wilderness Study Areas, Wild and Scenic Rivers, or National Historic Trails in the proposed project area.

Wilderness and Wilderness Characteristics – There are no lands found to possess wilderness characteristics in the proposed project area. The project is located in Black Ridge Canyons Wilderness, and effects on wilderness character are analyzed in this EA.

Range Management – The project is located in an allotment that has been relinquished and is not authorized for any domestic grazing use.

Wild Horse and Burros – The project is not within an area managed for wild horses.

Land Tenure, ROW, Other Uses – The proposed action would have no impact on land tenure or rights-of-way.

Fire and Fuels – The proposed action will have no impact on Fire/Fuels management

Farmlands, Prime and Unique – There are no designated Prime and Unique Farmlands located on public lands managed by the BLM within the Grand Junction Field Office.

3.1.2 Past, Present, Reasonably Foreseeable Actions

NEPA requires federal agencies to consider the cumulative effects of proposals under their review. Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations 40 CFR §1508.7 as "…the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency…or person undertakes such other actions." The CEQ states that the "cumulative effects analyses should be conducted on the scale of human communities, landscapes, watersheds, or airsheds" using the concept of "project impact zone" or more simply put, the area that might be affected by the proposed action. The area that may be affected by this project includes the Black Ridge Canyons Wilderness and the McInnis Canyons National Conservation Area. To assess past,

present and reasonably foreseeable actions that may occur within the affected area a review of GJFO NEPA log and our field office GIS data was completed. The following list includes all past, present and reasonably foreseeable actions known to the BLM that may occur within the affected area:

Past Actions:
Periodic trail maintenance near the cabin; dates unknown (post-2010).

Present Actions:

- Recreation in areas adjacent to the project site. Hikers also currently visit the cabin.

Reasonably Foreseeable Actions

- None known

Table 3.1– Potentially Impacted Resources

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation/ Design Features Necessary?	BLM Evaluator Initial & Date
PHYSICAL RESOURCES					
Air and Climate	☐	☒	☐	☐	KH 6/26/17
Water (surface and subsurface, floodplains)	☐	☒	☐	☐	KH 6/26/17
Soils	☐	☒	☐	☐	KH 6/26/17
Geological and Mineral Resources	☐	☒	☐	☐	EE 6/6/17
BIOLOGICAL RESOURCES					
Special Status Plants	☐	☐	☒	☐	NGH 9/27/17
Special Status Wildlife	☐	☒	☐	☐	NGH 6/19/17
Migratory Birds	☐	☐	☒	☐	NGH 9/27/17
Other Important Wildlife Habitat	☐	☒	☐	☐	NGH 6/19/17
Vegetation	☐	☒	☐	☐	NGH 7/13/17
Forestry	☒	☐	☐	☐	BP 6/22/17
Invasive, Non-native Species	☐	☒	☐	☐	MT 6/6/17
Wetlands and Riparian Zones	☒	☐	☐	☐	NGH 6/19/17
HERITAGE RESOURCES AND HUMAN ENV.					
Cultural or Historical	☐	☐	☒	☐	NFC 9/18/17
Paleontological	☐	☒	☐	☐	EE 6/6/17
Tribal and Native American Religious Concerns	☐	☒	☐	☐	NFC 9/18/17
Visual Resources	☐	☒	☐	☐	DB 06/08/17
Social and Economic	☐	☒	☐	☐	CS 6/23/17
Transportation and Access	☐	☒	☐	☐	AW 6/26/17
Wastes, Hazardous or Solid	☐	☒	☐	☐	AK 6/20/17
LAND RESOURCES					
Areas of Critical Environmental Concern	☒	☐	☐	☐	CS 6/23/17
Recreation (Recreation, RMAs, SRPs)	☐	☒	☐	☐	AW 6/26/17
National Conservation Lands (WSR Historic Trails, WSAs)	☒	☐	☐	☐	DB 06/08/17
Wilderness and Wilderness Characteristics	☐	☐	☐	☒	DB 10/16/17
Range Management	☒	☐	☐	☐	JRD 6/27/17
Wild Horse and Burros	☒	☐	☐	☐	JRD 6/27/17
Land Tenure, ROW, Other Uses	☐	☒	☐	☐	RBL 7/10/2017
Fire and Fuels	☐	☒	☐	☐	JP 6/12/17

3.2 BIOLOGICAL RESOURCES

3.2.1 Threatened, Endangered and Sensitive Species (includes a finding on Standard 4)

Current Conditions:

No known threatened or endangered species are currently found within the project area or access areas. Sensitive species found in the project and access areas include white tailed prairie dogs, burrowing owls, and *Lygodesmia dolorensis*. Potential sensitive species include *Amsonii jonseii, Cryptantha osterhoutii, Astragalus debequeaeus*, midget faded rattlesnakes, kit fox, and other raptors.

Finding for Public Land Health Standard 4 for Threatened and Endangered Species:

The project area is currently meeting land health standard 4.

Environmental Consequences:

Alternative A – No Action:

Direct and Indirect Effects: Under the no action alternative, there are no additional direct or indirect impacts to Threatened, Endangered and Sensitive species expected beyond existing conditions.

Finding for Public Land Health Standard 4 for Threatened and Endangered Species:

The No Action Alternative is not expected to substantially change the ability of the action area ability to meet Land Health Standard 4. No additional impacts beyond current conditions are expected.

Cumulative Effects:

The cumulative effects of the No Action Alternative are continued recreation use of the area, and continued degradation of the cabin, which is not expected to impact threatened, endangered, and sensitive species or habitat.

Alternative B – Proposed Action:

Direct and Indirect Effects: Under the proposed action, grazing horses for up to three nights could impact sensitive plant species found in the area. If this project is conducted outside of growth and flowering season for sensitive species (April to July) then no impacts are expected. If the project is conducted during this time then individual plants may be impacted, but overall population impacts are expected to be negligible. Sensitive animal species are not expected to be impacted due to use of existing trails.

Finding for Public Land Health Standard 4 for Threatened and Endangered Species:

The Proposed Action is not expected to substantially change the ability of the action area ability to meet Land Health Standard 4. Additional impacts beyond current conditions are expected to be ephemeral in time and space and therefore not to impact populations.

Cumulative Effects:

The cumulative effects of the Proposed Action Alternative are continued recreation use of the area, which is not expected to impact threatened, endangered, and sensitive species or habitat.

Alternative C – Weekday Alternative:

Direct and Indirect Effects: Direct and indirect effects would be the same as described under the Proposed Action.

Cumulative Effects:

Cumulative effects would be the same as described under the Proposed Action.

3.2.2 Wildlife (includes fish, aquatic and terrestrial) (includes a finding on Standard 3)

Current Conditions:

Wildlife found in the area includes species typical of Mixed salt desert scrub, Sagebrush and Pinyon Juniper habitats. Migratory birds may also use this area.

Finding on Public Land Health Standard 3 for Animal Communities:

The project area is currently meeting land health standard 3.

Environmental Consequences:

Alternative A – No Action:

Direct and Indirect Effects: Under the No Action alternative, there are no additional direct or indirect impacts to Wildlife and Migratory birds expected beyond existing conditions.

Finding on Public Land Health Standard 3 for Animal Communities:

The No Action Alternative is not expected to substantially change the ability of the action area ability to meet Land Health Standard 3. No additional impacts beyond current conditions are expected.

Cumulative Effects:

The cumulative effects of the No Action Alternative are continued recreation use of the area, and continued degradation of the cabin, which is not expected to wildlife or migratory birds or habitat.

Alternative B – Proposed Action:

Direct and Indirect Effects: Under the Proposed Action, grazing horses for up to three nights could impact migratory birds found in the area. If this project is conducted outside of migratory bird

season (May 15 to July 15) then no impacts are expected. If the project is conducted during this time then grazing may impact ground nesting birds, but overall population impacts are expected to be negligible.

Finding on Public Land Health Standard 3 for Animal Communities:

The Proposed Action is not expected to substantially change the ability of the action area ability to meet Land Health Standard 3. Additional impacts beyond current conditions are expected to be ephemeral in time and space and therefore not to impact populations.

Cumulative Effects:

The cumulative effects of the No Action Alternative are continued recreation use of the area, and continued degradation of the cabin, which is not expected to wildlife or migratory birds or habitat.

Alternative C – Weekday Alternative:
Direct and Indirect Effects: Direct and indirect effects would be the same as described under the Proposed Action.

Cumulative Effects:

Cumulative effects would be the same as described under the Proposed Action.

3.3 HERITAGE RESOURCES AND HUMAN ENVIRONMENT

3.3.1 Cultural Resources

Current Conditions:

The Devils Canyon Cabin (5ME754) has been evaluated for condition and for National Register of Historic Places (NRHP) significance under three different projects (ME.LM.R335, ME.LM.R676, and ME.LM.R927). The site is considered eligible for listing on the NRHP and has been deteriorating in condition over time.

Environmental Consequences:

Alternative A – No Action:

Direct and Indirect Effects: If the proposed project does not occur, the Devils Canyon Cabin would continue to deteriorate and eventually collapse completely. Visitors would continue to visit and vandalize the site using a designated trail.

Cumulative Effects:

If the proposed project does not occur, the Devils Canyon Cabin would continue to deteriorate and eventually collapse completely. Visitors would continue to visit and vandalize the site using a designated trail.

Alternative B – Proposed Action:

Direct and Indirect Effects: Direct effects to sites near trails typically occur during construction, which includes ground-disturbing activities. Indirect effects can occur when trail-users collect artifacts, vandalize sites, or improperly use historic structures. The project will have an overall beneficial direct effect to the Devils' Canyon Cabin by rehabilitating the site and by encouraging proper use of the area through clean-up and installation of a visitor's log.

Cumulative Effects:
The proposed rehabilitation of the cabin will harden the site to visitors, though deterioration of the cabin could continue to occur. Installing a visitor's log is intended to minimize graffiti, however, this cannot be totally avoided.

Alternative C – Weekday Alternative:

Direct and Indirect Effects: Direct and indirect effects would be the same as described under the Proposed Action.

Cumulative Effects:

Cumulative effects would be the same as described under the Proposed Action.

3.4 LAND RESOURCES

3.4.1 Wilderness and Wilderness Study Areas

Current Conditions:

Congress designated Black Ridge Canyons Wilderness as part of the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000 (Public Law 106-353). Black Ridge Canyons Wilderness contains approximately 75,000 acres of federally designated Wilderness and is managed in accordance with the Wilderness Act (16 U.S.C. 1131-1136).

BLM's primary responsibility in the management of federally designated Wilderness is to ensure that all activities within BLM Wilderness conform to the Wilderness Act, establishing legislation, and BLM Wilderness policies and guidance. Any potential impacts to wilderness areas, and specifically, to wilderness character within a wilderness area, are to be appropriately analyzed in conformance with NEPA. To assist in documenting decisions in which wilderness character may be degraded, a Minimum Requirements Decision Guide (MRDG) may be used. An MRDG analyzing each of the Alternatives is documented in Appendix 2.

Section 4(b) of the Wilderness Act sets forth the BLM's responsibility in administering wilderness, stating, "[e]xcept as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area."

Set forth in Section 2(c) of the Act, wilderness character is composed of four mandatory qualities, and a fifth, optional, quality as follows:

1. Untrammeled;
2. Natural;
3. Undeveloped;
4. Outstanding opportunities for solitude or primitive and unconfined recreation; and,
5. Unique, supplemental, or other features of value.

The Wilderness Act indicates that areas "may also contain ecological, geological, or other features of scientific, educational, scenic, or historical use," that reflect the character of this wilderness. Features, such as the presence of important geological formations, cultural resources, historical sites, or paleontological localities are included here if they are significant or integral to the Wilderness. BLM guidance allows for any structure or installation found eligible for the National Register of Historic Places to be retained as an historic feature of the Wilderness. Eligible structures or installations may be rehabilitated if it is determined that such actions are necessary to preserve the contribution of the structure or installation to the area's wilderness character. The preservation of unique, supplemental, or other features of value may be in conflict with one or more of the other qualities of wilderness character, and the tradeoff is determined by the significance of the feature to the area's determination as Wilderness.

Environmental Consequences:

Alternative A – No Action:

Direct and Indirect Effects: Under the No Action Alternative, the Devils Canyon Cabin would continue to deteriorate. Analysis of this Alternative is documented as Alternative 2 in the Minimum Requirements Decision Guide, and would have the greatest impact on the Other Features of Value quality of wilderness character. Under this Alternative, the Other Features of Value associated with the cabin would degrade in the short-term, and may potentially be lost in the long-term.

Cumulative Effects:

The cumulative effects of the No Action Alternative would combine the past, present, and reasonably foreseeable impacts in combination with other resource uses on the Devils Canyon Cabin. Since the cabin is visible to recreational trail users, and some vandalism of the cabin would continue, there may be increased degradation to the natural quality of wilderness character in Black Ridge Canyons Wilderness surrounding the cabin.

Alternative B – Proposed Action:

Direct and Indirect Effects: Under the Proposed Action, rehabilitation of the Devils Canyon Cabin would occur as outlined. This Alternative is analyzed as Alternative 1 in the Minimum Requirements Decision Guide.

There would be both positive and negative impacts to the undeveloped quality of wilderness character. Trash and graffiti would be cleaned, and the cabin's cold storage box would be sealed, resulting in an improvement in the undeveloped quality. Adversely, the cabin's original stove would be return, resulting in a degradation of the undeveloped quality. The net effect on the undeveloped nature of wilderness would be negligible.

The Proposed Action would affect the wilderness quality of opportunities for solitude. Any time a wilderness visitor encounters the sights and sounds of others this quality is degraded. Under the Proposed Action, the group and their stock would be camping overnight near the cabin. Other wilderness visitors during this time would not have the same opportunity for solitude that is typical in Black Ridge Canyons Wilderness.

The Proposed Action would improve the Other Features of Value quality of wilderness character. The Devils Canyon Cabin has been determined to be a significant feature of value in Black Ridge Canyons Wilderness, and the rehabilitation as proposed would preserve this feature.

Cumulative Effects:

The Proposed Action, when combined with past, present, and reasonably foreseeable actions, would increase the longevity of the cabin, and prevent further degradation. With other recreational use in the area during the rehabilitation project, a visitor's opportunity for solitude diminishes greatly.

Alternative C – Weekday Alternative:

Direct and Indirect Effects: Under the Weekday Alternative, rehabilitation of the Devils Canyon Cabin would occur as outlined. This Alternative is analyzed as Alternative 3 in the Minimum Requirements Decision Guide.

The impacts to the undeveloped quality of wilderness character would be similar to those under the Proposed Action. Trash and graffiti would be cleaned, and the cabin's cold storage box would be sealed, resulting in an improvement in the undeveloped quality. Adversely, the cabin's original stove would be return, resulting in a degradation of the undeveloped quality. The net effect on the undeveloped nature of wilderness would be negligible.

The Weekday Alternative would differ from the Proposed Action with its impacts on the wilderness quality of opportunities for solitude. Any time a wilderness visitor encounters the sights and sounds of others this quality is degraded. Under the Weekday Alternative, other visitor use in the area would be less than under the Proposed Action, thus the impacts to opportunities for solitude would be less severe. Visitor use monitoring data taken from July 1, 2016, through April 14, 2017, show an average of 68% increase in visitor use over weekend days (Saturday and Sunday), versus weekdays (Monday through Friday). A project conducted on a weekday would be less likely to affect other visitors' opportunities for solitude.

The Weekday Alternative would improve the Other Features of Value quality of wilderness character. The Devils Canyon Cabin has been determined to be a significant feature of value in Black Ridge Canyons Wilderness, and the rehabilitation as proposed would preserve this feature.

Cumulative Effects:

The cumulative effects under the Weekday Alternative would be similar to those under the Proposed Action.

CHAPTER 4 - CONSULTATION AND COORDINATION

4.1 LIST OF PREPARERS AND PARTICIPANTS

INTERDISCIPLINARY REVIEW

NAME	TITLE	AREA OF RESPONSIBILITY
Natalie Clark	Archaeologist	Cultural Resources, Native American Religious Concerns
Andy Windsor	Supervisory Outdoor Recreation Planner	Access, Transportation, Recreation
Dan Ben-Horin	National Conservation Land Specialist	Wilderness, Wild & Scenic Rivers, WSA, NHT, VRM, Wilderness Characteristics
Andy Windsor	Outdoor Recreation Planner	Lead for Recreation Projects
Jim Dollerschell	Range Management Specialist	Range, Wild Horse & Burro Act
Eric Eckberg	Geologist	Geology, Paleontology
Alan Kraus	Hazardous Materials Specialist	Hazardous Materials
Robin Lacy	Realty Specialist	Land Tenure/Status, Realty Authorizations
Nikki Hoffman	Wildlife Biologist Ecologist	Land Health Assessment, Special Status Plants, Riparian and Wetlands, T&E Species, Migratory Bird Treaty Act, Terrestrial & Aquatic Wildlife, Vegetation
Kevin Hyatt	Hydrologist	Soils, Air Quality, Water Quality, Hydrology, Water Rights
Jeff Phillips	Fire Ecologist Natural Resource Specialist	Fire Ecology, Fuels Management
Mark (Sparky) Taber	Range Management Specialist	Weed Coordinator, Invasive, Non-Native Species
Christina Stark	Assistant Field Manager (Resources Programs / Planning & Environmental Coordination)	Environmental Justice, Socioeconomics, ACECs, Prime & Unique Farmlands, P&EC, Renewable Resources Supervisor
Wayne Werkmeister	Associate Field Manager	Non-Renewable Resource Program Supervisor

4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

Colorado State Historic Preservation Officer

CHAPTER 5 - REFERENCES

Bureau of Land Management. March 2015. Proposed Resource Management Plan and Final Environmental Impact Statement. BLM/CO/GI-15/008. Grand Junction, Colorado.

Bureau of Land Management. August 2015. Approved Resource Management Plan and Record of Decision. BLM/CO/PL-15/016. Grand Junction, Colorado.

Bureau of Land Management. 2008. H-1790-1 National Environmental Policy Handbook. Washington, D.C.

Bureau of Land Management. 2004. Resource Management Plan and Record of Decision for the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness. Grand Junction Field Office. Grand Junction, Colorado.

APPENDIX 1 – Maps

Figure 1. Locator Map

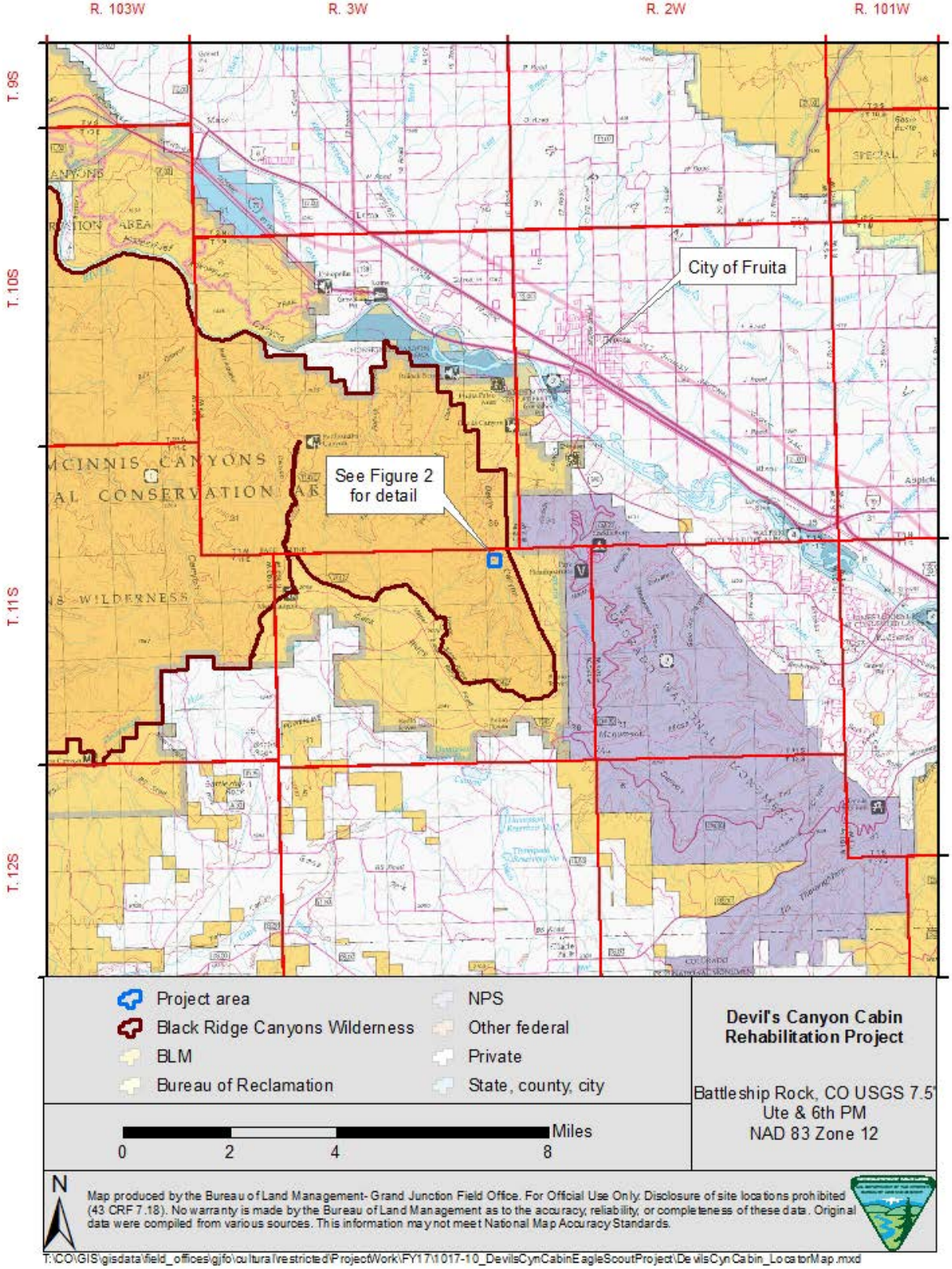
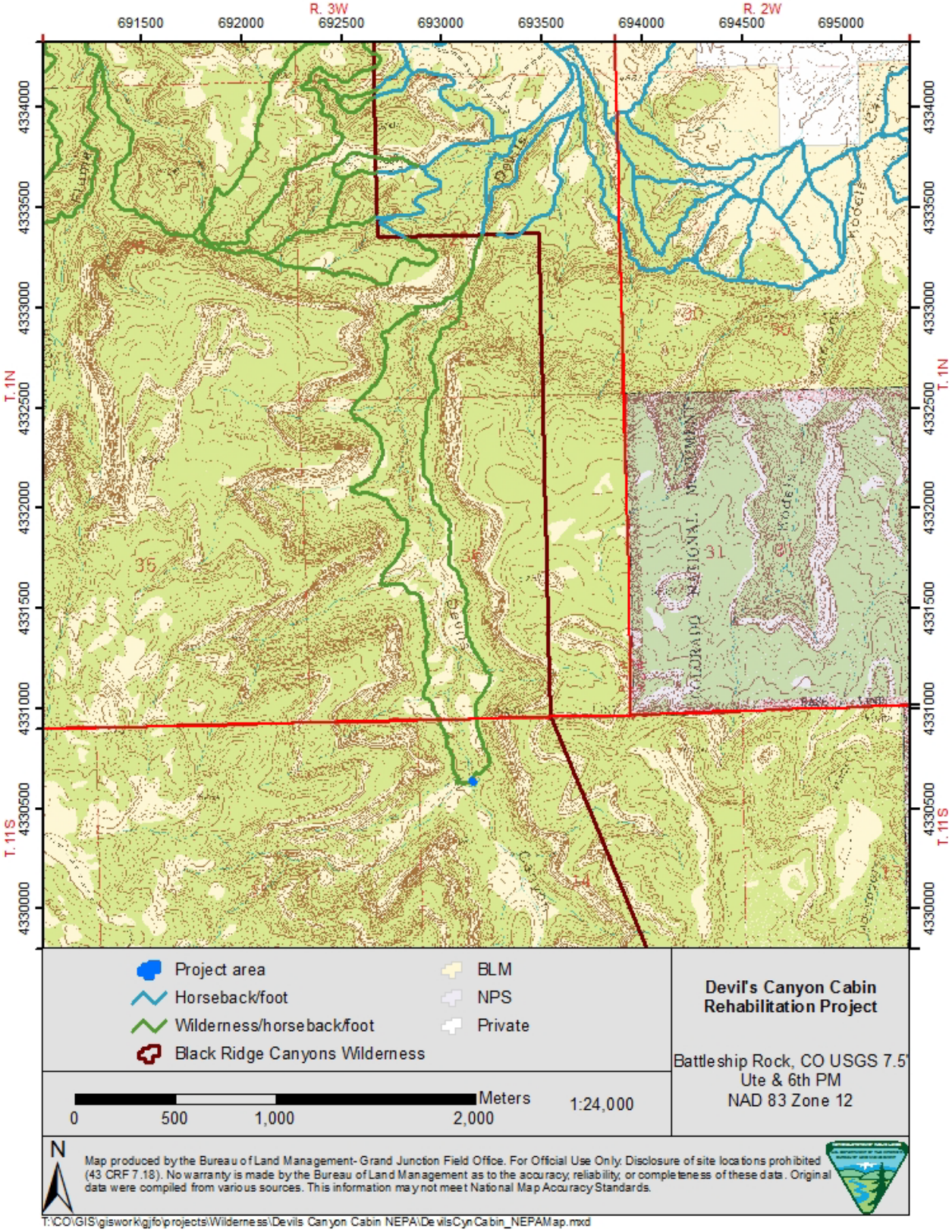


Figure 2. Project Detail Map



APPENDIX 2 – Minimum Requirements Decision Guide



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE WORKBOOK

"…except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act…"

-- The Wilderness Act of 1964

Project Title: **Devils Canyon Cabin Rehabilitation Project**

MRDG Step 1: Determination

Determine if Administrative Action is Necessary

Description of the Situation
What is the situation that may prompt administrative action?

The Devils Canyon Cabin is a historic sheepherding line cabin in Devils Canyon in Black Ridge Canyons Wilderness Area, within McInnis Canyon National Conservation Area (MCNCA). This structure was probably constructed by John G. Beard and/or his ranch hands in the 1920s or 1930s. John Beard homesteaded the area to the north of the cabin in 1927 and ran sheep through the area well into the mid-20th century. Although it has been modified over the years, the cabin retains the distinctive characteristics of historic period architecture found in the area and is associated with ranching and the broader economic development and settlement of the Grand Valley. Because of these characteristics, the site is determined eligible for listing on the National Register of Historic Places (NRHP). No other similar buildings or structures with the same associations have survived in the Devils Canyon area.

Currently, the cabin is still standing but is deteriorating as a result of a water damage to the roof on the cabin's northwest corner over the rafter (top) plate. This cabin is located at the southern-most end of a recreation trail loop, and the public frequently visits the site. Repeated alterations to the structure over the years has led to patchwork tarpaper on the roof, graffiti, and trash left in and around the structure. Natural processes have also led to the deterioration of the sheep pen attached the cabin. Finally, several years ago, the wood stove in the cabin was removed.

The cabin is visible to visitors traveling on the Devils Canyon trail (D3), and is often used as a destination for day hikers.

The question for this analysis is whether any action is needed in wilderness to manage the Devils Canyon Cabin (Step 1) and, if so, what is the minimum necessary action (Step 2).

Options Outside of Wilderness
Can action be taken outside of wilderness that adequately addresses the situation?

☐ YES **STOP – DO NOT TAKE ACTION IN WILDERNESS**

☒ NO **EXPLAIN AND COMPLETE STEP 1 OF THE MRDG**

Explain:

The Devils Canyon Cabin lies entirely within designated wilderness.

Criteria for Determining Necessity
Is action necessary to meet any of the criteria below?

A. Valid Existing Rights or Special Provisions of Wilderness Legislation

*Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that **requires** action? Cite law and section.*

☐ YES ☒ NO

Explain:

Neither the Wilderness Act nor the legislation designating the wilderness, Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000 (Public Law 106-353), or the Ruby Canyon/Black Ridge Integrated Resource Management Plan Record of Decision contain any special provisions that require an action.
There are no valid existing rights associated with the Devils Canyon Cabin.

B. Requirements of Other Legislation

Is action necessary to meet the requirements of other federal laws? Cite law and section.

☒ YES ☐ NO

Explain:

The site was determined officially eligible to the National Register of Historic Places in 2011. Based on the intent of the following statutes, some action may be necessary in wilderness:

1. The Antiquities Act (1906) and regulations at 43 CFR 3 (16 USC 431, 432, 433; PL 59-209 (June 8, 1906)) provides for the protection of historic resources.

2. The Historic Sites Act (1935) and regulations at 36 CFR Part 65 (49 USC 303, PL 100-17, 1987 declared "a national policy to preserve for public use historic site, buildings, and objects..."

3. The National Historic Preservation Act (1966) as amended and regulations at 36 CFR
60, 63, 65, 78, 79, and 800 (16 USC et seq.; PL 89-665 (October15, 1966); P. L. 96-515 (December 12, 1980); title XL of PL 102-575 (October 30, 1992)) declared a national policy of historic preservation.

4. The National Environmental Policy Act of 1968 (PL 91-190; 31 Stat. 852) declared a federal policy to “preserve important historic, cultural, and natural aspects of our national heritage.”

C. Wilderness Character

Is action necessary to preserve one or more of the five qualities of wilderness character?

UNTRAMMELED

☐ YES ☒ NO

Explain:

It is not necessary to take action to preserve this quality. The definition of the Untrammeled quality is the lack of manipulation or control of natural processes by humans, which if allowed to occur, would eventually affect wilderness character. This quality is preserved when no manipulation or control of natural processes occurs.

Managing the Devils Canyon Cabin is not a manipulation of the natural processes on going in wilderness.

UNDEVELOPED

☐ YES ☒ NO

Explain:

It is not necessary to take action to preserve this quality. Preserving this quality keeps areas free from “expanding settlement and growing mechanization” and “with the imprint of man’s work substantially unnoticeable” and without structures, installations, temporary or permanent roads, or use of motorized equipment, mechanical transport, or landing or aircraft, as required by the Wilderness Act. The Undeveloped quality is preserved when wilderness retains its "primeval character and influence," and is essentially "without permanent improvements" or modern human occupation.

The Devils Canyon Cabin was pre-existing at the time the area was designated as wilderness and is not an administrative structure or installation.

NATURAL

☐ YES ☒ NO

Explain:

It is not necessary to take action to preserve this quality. A wilderness area is to be "protected and managed so as to preserve its natural conditions," meaning that wilderness ecological systems are substantially free from the effects of modern civilization. To preserve this quality, it may be necessary to take action to correct unnatural conditions even if they were present at the time of designation.

The presence of the Devils Canyon Cabin may have some negative impact to the Natural quality of wilderness character.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

☐ YES ☒ NO

Explain:

It is not necessary to take action to preserve this quality. The Wilderness Act defines wilderness as having “outstanding opportunities for solitude or a primitive and unconfined type of recreation.” This quality is preserved when the opportunity for people to experience wilderness in terms of the visitor's sense of solitude, and their expectation for an undeveloped environment with minimal restrictions is available.

The Intensive Wilderness Inventory published in November 1980, which originally identified Black Ridge Canyons for wilderness study found both outstanding opportunities for solitude and primitive and unconfined recreation. The issue for this analysis is the need to manage the historic Cutler cabin which is not a significant impact to the Solitude or Primitive and Unconfined Recreation quality or the Recreation public purpose of wilderness.

OTHER FEATURES OF VALUE

☒ YES ☐ NO

Explain:

The Wilderness Act indicates that areas “may also contain ecological, geological, or other features of scientific, educational, scenic, or historical use” that reflect the character of this wilderness. Features, such as the presence of important geological formations, cultural resources, historical sites, or paleontological localities are included here if they are significant or integral to the wilderness. To preserve this quality, it may be necessary to take action to protect these features even if they were already at risk or degraded prior to the date of designation.

The Devils Canyon Cabin is an historical site dating to the early 1920's. The cabin is a locally well-known and specifically sought out feature along an existing trail in the wilderness area. The cabin is an example of a 'cowboy line shack' that was utilized ephemerally by ranchers and sheepmen as they moved livestock between winter and summer pastures. Specifically, the Devils Canyon Cabin is located in a locally well-known sheep herding corridor between Glade Park on the Uncompahgre Plateau, through canyonlands, and down into lower elevation areas along the Colorado River. Several other known and/or recorded historical sites and cultural resources related to sheepherding are located in the area, and the Black Ridge Canyons Wilderness encompasses an entire sheepherding landscape that is an important aspect -- historically and interpretively -- to the local area and population.

The Devils Canyon Cabin is eligible for the National Register of Historic Places and an important feature of value for this wilderness. Some type of action is necessary to preserve the value of the historic structure and its contribution to the wilderness character of Black Ridge Canyons.

Step 1 Decision
Is administrative action necessary in wilderness?

Decision Criteria

A.	Existing Rights or Special Provisions	☐ YES	☒ NO
B.	Requirements of Other Legislation	☒ YES	☐ NO
C.	Wilderness Character		
	Untrammeled	☐ YES	☒ NO
	Undeveloped	☐ YES	☒ NO
	Natural	☐ YES	☒ NO
	Outstanding Opportunities	☐ YES	☒ NO
	Other Features of Value	☒ YES	☐ NO

Is administrative action necessary in wilderness?

☒ YES	**EXPLAIN AND PROCEED TO STEP 2 OF THE MRDG**
☐ NO	**STOP – DO NOT TAKE ACTION IN WILDERNESS**

Explain:

There is a need to take action in the wilderness to manage the Devils Canyon Cabin. The cabin is eligible for listing in the National Register of Historic Places. The requirements of the federal laws listed in B. above mandate that some type of management action be taken to ensure that the historic value of the cabin not be lost.

The structure is part of the Other Features of Value quality of wilderness character for this wilderness. This quality must be preserved in some manner.

MRDG Step 2

Determine the Minimum Activity

Other Direction

*Is there "special provisions" language in legislation (or other Congressional direction) that explicitly **allows** consideration of a use otherwise prohibited by Section 4(c)?*

AND/OR

Has the issue been addressed in agency policy, management plans, species recovery plans, or agreements with other agencies or partners?

☒ YES **DESCRIBE OTHER DIRECTION**

☐ NO **SKIP AHEAD TO TIME CONSTRAINTS BELOW**

Describe Other Direction:

There is no special provisions language in legislation or other congressional direction that specifically allows consideration of a use otherwise prohibited by Section 4(c) of the Wilderness Act

.

The requirements of the relevant federal legislation, regulations, and BLM policy indicate that the value of historic properties, which are eligible for the National Register of Historic Places, must be preserved in designated wilderness areas. The direction provides a number of standards and prescribes a process for consultations with the SHPO and others to ensure that the requirements of all laws are satisfied. The allowable options for management of an historic property in wilderness include both a number of preservation strategies as well as an option for inventory and documentation along with natural deterioration.

Section 1.6.C.5.a. of BLM Manual 6340, Management of BLM Wilderness acknowledges "the presence of cultural resources…as a unique and nonrenewable part of an area's wilderness character.

Section 1.6.C.5.d. of the manual states, "Any structure or installation found to be eligible for the National Register may be retained as a historic feature of the wilderness."

Time Constraints

What, if any, are the time constraints that may affect the action?

There are no time constraints that may affect the action.

Components of the Action
What are the discrete components or phases of the action?

Component X:	*Example: Transportation of personnel to the project site*
Component 1:	Transportation of workers and tools to the project site
Component 2:	Repair the cabin's roof
Component 3:	Cleanup of trash and graffiti
Component 4:	Replacement of the cabin's stove
Component 5:	Repair of the sheep pen
Component 6:	Sealing of the cabin's cold storage box
Component 7:	Installation of a visitor log book
Component 8:	Preservation of the historic value of Devils Canyon Cabin

Proceed to the alternatives.

Refer to the **MRDG Instructions** regarding alternatives and the effects to each of the comparison criteria.

MRDG Step 2: Alternatives

Alternative 1: Proposed Action

Description of the Alternative
What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

The Devils Canyon Cabin would be stabilized and maintained as a representation of the historic use of the structure and habitation of lands that are now managed as part of the McInnis Canyons National Conservation Area and Black Ridge Canyons Wilderness with two primary goals:

1. Maintaining historic integrity of the structure; and,
2. Continued use of the cabin for interpretation and education.

Work tasks and repairs needed include the following:

1. Roof repair – The roof of the cabin is constructed of 1x12 planks. Appropriate dimensional lumber would be used to patch the hole in the roof. The patchwork tarpaper and shingles present on the roof would be removed and replaced with rolled roofing.
2. Cleanup of trash and graffiti. Using gloves, trash pickers, and trash bags, Boy Scouts would bag and remove modern trash in the cabin. All waste would be carried out on foot and horseback and disposed of appropriately. Graffiti would be removed with brushes and water where possible.
3. Replacement of a wood stove. Prior to returning the stove to the cabin, and off of BLM-administered land, the door to the wood stove would be welded shut. The stove would then be transported on foot or horseback and reinstalled into the cabin.
4. Repair the sheep pen. The door to the sheep pen has recently fallen off and would be replaced to its condition as recorded in 2010. If needed, fencing around the sheep pen would also be replaced.
5. Seal the cold storage box. The cold storage box is currently being used as a refuse space by hikers. The box would be shut and sealed using a hammer and nails.
6. Install a visitor logbook in the cabin. The Boy Scouts would anchor a visitors log in the cabin to discourage further graffiti.

All materials would be transported into and out of the site on foot and on horseback. The group performing the rehabilitation would hike to the project site, camp overnight, and pack out all materials the following day. All activities would be performed on the weekend. The wood stove would be welded shut off site. A visitor logbook would be installed inside the cabin with the intention to prevent future graffiti.

Component Activities
How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Transportation of workers and tools to the project site	Personnel would travel by horseback and camp overnight
2	Repair the cabin's roof	All tools used would be non-motorized
3	Cleanup of trash and graffiti	Trash would be collected by hand and packed out, and graffiti would be removed with brushes and water
4	Replacement of the cabin's stove	The cabin's stove would be returned
5	Repair of the sheep pen	All tools used would be non-motorized
6	Sealing of the cabin's cold storage box	All tools used would be non-motorized
7	Installation of a visitor log book	A visitors log book would be installed
8	Condition of Devils Canyon Cabin after the project	The cabin would be stabilized

Wilderness Character
What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☐	☐	☒
4	The cabin's stove would be returned	☐	☐	☒

5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☐	☐	☒
7	A visitor log book would be installed	☐	☐	☒
8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		0	0	NE
Untrammeled Total Rating		**0**		

Explain:

None of the proposed activities would have an effect on the Untrammeled quality.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☒	☐	☐
4	The cabin's stove would be returned	☐	☒	☐
5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☒	☐	☐
7	A visitor logbook would be installed	☒	☒	☐
8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		3	(2)	NE
Undeveloped Total Rating		**1**		

Explain:

Transportation by foot or pack string would have no effect on the Undeveloped quality.

The use of non-motorized tools on-site for the repair of the roof and sheep pen, and to shut the cold storage box, have no effect on the Undeveloped quality.

The removal of trash and graffiti would have a positive effect on the Undeveloped quality, as materials would be removed from the wilderness.

The sealing of the cold storage box would have a positive effect on the Undeveloped quality as it would prevent visitors from leaving trash and refuse in the cabin.

The installation of the stove and visitor's logbook have a slight negative effect on the Undeveloped quality. The Undeveloped quality is preserved when wilderness retains its "primeval character and influence," and is essentially "without permanent improvements" or evidence of modern human occupation. The overall negative effect on this quality is minimal, because these installations would be inside an existing development that would remain. Additionally, the installation of a logbook would have a positive effect on the Undeveloped quality as it would deter visitors from leaving graffiti around the cabin.

NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☐	☐	☒
4	The cabin's stove would be returned	☐	☐	☒
5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☐	☐	☒
7	A visitor log book would be installed	☐	☐	☒

8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		0	0	NE
Natural Total Rating		**0**		

Explain:

None of the proposed activities would have an effect on the Natural quality.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☒	☐
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☐	☐	☒
4	The cabin's stove would be returned	☐	☐	☒
5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☐	☐	☒
7	A visitor log book would be installed	☐	☐	☒
8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		0	(1)	NE
Solitude or Primitive & Unconfined Rec. Total Rating		**(1)**		

Explain:

Transportation by foot or pack string would have a negative effect on Opportunities for Solitude. Any time a wilderness visitor encounters the sights and sounds of others their wilderness experience diminishes. Planning this project on a weekend during a season with higher visitation would present the greatest effect on Opportunities for Solitude.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☒	☐	☐
3	Trash and graffiti would be cleaned by hand	☒	☐	☐
4	The cabin's stove would be returned	☒	☐	☐
5	The sheep pen would be repaired with non-motorized tools	☒	☐	☐
6	The cabin's cold storage box would be sealed with non-motorized tools	☒	☐	☒
7	A visitor log book would be installed	☐	☐	☒
8	The cabin would be stabilized	☒	☐	☐
Total Number of Effects		6	0	NE
Other Features of Value Total Rating		**6**		

Explain:

The Devils Canyon Cabin is part of the Other Features of Value quality for Black Ridge Canyons Wilderness, and its preservation would result in a positive impact to this quality.

Summary Ratings for Alternative 1

Wilderness Character	
Untrammeled	0
Undeveloped	1
Natural	0
Solitude or Primitive & Unconfined Recreation	(1)
Other Features of Value	6

Wilderness Character Summary Rating	6

MRDG Step 2: Alternatives

Alternative 2: No Action Alternative

Description of the Alternative
What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Under this Alternative, no project work would be completed and the cabin would be allowed to deteriorate naturally.

Component Activities
How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Transportation of workers and tools to the project site	Not Applicable
2	Repair the cabin's roof	Not Applicable
3	Cleanup of trash and graffiti	Not Applicable
4	Replacement of the cabin's stove	Not Applicable
5	Repair of the sheep pen	Not Applicable
6	Sealing of the cabin's cold storage box	Not Applicable
7	Installation of a visitor log book	Not Applicable
8	Condition of Devils Canyon Cabin after the project	The cabin would deteriorate naturally

Wilderness Character
What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect

X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	Not Applicable	☐	☐	☒
2	Not Applicable	☐	☐	☒
3	Not Applicable	☐	☐	☒
4	Not Applicable	☐	☐	☒
5	Not Applicable	☐	☐	☒
6	Not Applicable	☐	☐	☒
7	Not Applicable	☐	☐	☒
8	Natural deterioration of Devils Canyon Cabin	☐	☐	☒
Total Number of Effects		0	0	NE
Untrammeled Total Rating			**0**	

Explain:

No work activities would occur; therefore, there would be no impact to the Untrammeled quality of the wilderness.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	Not Applicable	☐	☐	☒
2	Not Applicable	☐	☐	☒
3	Not Applicable	☐	☐	☒
4	Not Applicable	☐	☐	☒
5	Not Applicable	☐	☐	☒
6	Not Applicable	☐	☐	☒
7	Not Applicable	☐	☐	☒
8	Natural deterioration of Devils Canyon Cabin	☒	☐	☐
Total Number of Effects		1	0	NE

Undeveloped Total Rating	1

Explain:

Removing the structure over time through natural deterioration has a positive impact on the Undeveloped quality.

NATURAL

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	Not Applicable	☐	☐	☒
2	Not Applicable	☐	☐	☒
3	Not Applicable	☐	☐	☒
4	Not Applicable	☐	☐	☒
5	Not Applicable	☐	☐	☒
6	Not Applicable	☐	☐	☒
7	Not Applicable	☐	☐	☒
8	Natural deterioration of Devils Canyon Cabin	☒	☐	☐
Total Number of Effects		1	0	NE
Natural Total Rating		**1**		

Explain:

The area of the existing cabin and historical disturbance nearby the cabin would eventually return to a more natural condition as the structure deteriorates.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	Not Applicable	☐	☐	☒
2	Not Applicable	☐	☐	☒
3	Not Applicable	☐	☐	☒

4	Not Applicable	☐	☐	☒
5	Not Applicable	☐	☐	☒
6	Not Applicable	☐	☐	☒
7	Not Applicable	☐	☐	☒
8	Natural deterioration of Devils Canyon Cabin	☐	☐	☒
Total Number of Effects		0	0	NE
Solitude or Primitive & Unconfined Rec. Total Rating		**0**		

Explain:

No work activities would occur; therefore, there would be no impact to the Opportunities for Solitude or Primitive and Unconfined Recreation quality of the wilderness.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	Not Applicable	☐	☐	☒
2	Not Applicable	☐	☐	☒
3	Not Applicable	☐	☐	☒
4	Not Applicable	☐	☐	☒
5	Not Applicable	☐	☐	☒
6	Not Applicable	☐	☐	☒
7	Not Applicable	☐	☐	☒
8	Natural deterioration of Devils Canyon Cabin	☐	☒	☐
Total Number of Effects		0	(1)	NE
Other Features of Value Total Rating		**(1)**		

Explain:

The deterioration of Devils Canyon Cabin would have a negative effect on the Other Features of Value, as the structure is eligible for the National Register of Historic Places and an important feature of value for this wilderness.

Summary Ratings for Alternative 2

Wilderness Character	
Untrammeled	0
Undeveloped	1
Natural	1
Solitude or Primitive & Unconfined Recreation	0
Other Features of Value	(1)
Wilderness Character Summary Rating	**1**

MRDG Step 2: Alternatives

Alternative 3: Cabin rehabilitation during off-peak/weekday visitor use

Description of the Alternative
What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

The Devils Canyon Cabin would be stabilized and maintained as described in Alternative 1, but all project work would be conducted during off-peak visitation (weekdays). The project as proposed was to occur over the course of a weekend during the spring, when visitor use in Black Ridge Canyons Wilderness is historically high. Under this Alternative, all activities would occur on two consecutive weekdays, during a non-holiday week, when visitor use is historically lower. Visitor use monitoring data taken from July 1, 2016, through April 14, 2017, show an average of 68% increase in visitor use over weekend days (Saturday and Sunday), versus weekdays (Monday through Friday). Monitoring data was taken at the wilderness boundary on the Devils Canyon Trail. Over the course of the monitoring period, average weekday use was 168 individual trail users on weekdays, and 282 individual trail users on weekends.

Component Activities
How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Transportation of workers and tools to the project site	Personnel would travel by horseback and camp overnight
2	Repair the cabin's roof	All tools used would be non-motorized
3	Cleanup of trash and graffiti	Trash would be collected by hand and packed out, and graffiti would be removed with brushes and water
4	Replacement of the cabin's stove	The cabin's stove would be returned
5	Repair of the sheep pen	All tools used would be non-motorized
6	Sealing of the cabin's cold storage box	All tools used would be non-motorized
7	Installation of a visitor log book	A visitors log book would be installed

8	Condition of Devils Canyon Cabin after the project	The cabin would be stabilized

Wilderness Character
What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☐	☐	☒
4	The cabin's stove would be returned	☐	☐	☒
5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☐	☐	☒
7	A visitor log book would be installed	☐	☐	☒
8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		0	0	NE
Untrammeled Total Rating		**0**		

Explain:

None of the proposed activities would have an effect on the Untrammeled quality.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒

1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☒	☐	☐
4	The cabin's stove would be returned	☐	☐	☒
5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☒	☐	☐
7	A visitor log book would be installed	☒	☐	☐
8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		3	(2)	NE
Undeveloped Total Rating		**1**		

Explain:

Transportation by foot or pack string would have no effect on the Undeveloped quality.

The use of non-motorized tools on-site for the repair of the roof and sheep pen, and to shut the cold storage box, have no effect on the Undeveloped quality.

The removal of trash and graffiti would have a positive effect on the Undeveloped quality, as materials would be removed from the wilderness.

The sealing of the cold storage box would have a positive effect on the Undeveloped quality as it would prevent visitors from leaving trash and refuse in the cabin.

The installation of the stove and visitor's logbook have a slight negative effect on the Undeveloped quality. The Undeveloped quality is preserved when wilderness retains its "primeval character and influence," and is essentially "without permanent improvements" or evidence of modern human occupation. The overall negative effect on this quality is minimal, because these installations would be inside an existing development that would remain. Additionally, the installation of a logbook would have a positive effect on the Undeveloped quality as it would deter visitors from leaving graffiti around the cabin.

NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☐	☐	☒
4	The cabin's stove would be returned	☐	☐	☒
5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☐	☐	☒
7	A visitor log book would be installed	☐	☐	☒
8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		0	0	NE
Natural Total Rating		**0**		

Explain:

None of the proposed activities would have an effect on the Natural quality.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☒	☐
1	All workers, tools, and materials would be transported by foot or horseback	☐	☒	☐
2	The cabin's roof would be repaired with non-motorized tools	☐	☐	☒
3	Trash and graffiti would be cleaned by hand	☐	☐	☒
4	The cabin's stove would be returned	☐	☐	☒

5	The sheep pen would be repaired with non-motorized tools	☐	☐	☒
6	The cabin's cold storage box would be sealed with non-motorized tools	☐	☐	☒
7	A visitor log book would be installed	☐	☐	☒
8	The cabin would be stabilized	☐	☐	☒
Total Number of Effects		0	(1)	NE
Solitude or Primitive & Unconfined Rec. Total Rating		**(1)**		

Explain:

Transportation by foot or pack string would have a negative effect on Opportunities for Solitude. Any time a wilderness visitor encounters the sights and sounds of others their wilderness experience diminishes. Planning this project on a weekday during times of lower visitation would have less of an impact on Opportunities for Solitude than Alternative 1.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☒
1	All workers, tools, and materials would be transported by foot or horseback	☐	☐	☒
2	The cabin's roof would be repaired with non-motorized tools	☒	☐	☐
3	Trash and graffiti would be cleaned by hand	☒	☐	☐
4	The cabin's stove would be returned	☒	☐	☐
5	The sheep pen would be repaired with non-motorized tools	☒	☐	☐
6	The cabin's cold storage box would be sealed with non-motorized tools	☒	☐	☐
7	A visitor log book would be installed	☐	☐	☒
8	The cabin would be stabilized	☒	☐	☐

Total Number of Effects	6	0	NE
Other Features of Value Total Rating		**6**	

Explain:

The Devils Canyon Cabin is part of the Other Features of Value quality for Black Ridge Canyons Wilderness, and its preservation would result in a positive impact to this quality.

Summary Ratings for Alternative 3

Wilderness Character	
Untrammeled	0
Undeveloped	1
Natural	0
Solitude or Primitive & Unconfined Recreation	(1)
Other Features of Value	6
Wilderness Character Summary Rating	**6**

MRDG Step 2: Alternatives Not Analyzed

Alternatives Not Analyzed
What alternatives were considered but not analyzed? Why were they not analyzed?

Another Alternative considered involves the group conducting all rehabilitation activities during day trips to the project site, without staying overnight in Black Ridge Canyons Wilderness. This Alternative was not analyzed because given the scope of work involved with the project, it would be more efficient to accomplish all of the tasks over consecutive days with a stay overnight. Additionally, this area of the wilderness does not see a significant amount of overnight visitor use, so the impact on the Opportunities for Solitude quality of wilderness does not differ greatly from Alternatives 1 and 3.

MRDG Step 2: Alternative Comparison

Alternative 1:	Proposed action
Alternative 2:	No action
Alternative 3:	Cabin rehabilitation during off-peak visitation

Wilderness Character	Alternative 1		Alternative 2		Alternative 3	
	+	-	+	-	+	-
Untrammeled	0	0	0	0	0	0
Undeveloped	3	(2)	1	0	3	(2)
Natural	0	0	1	0	0	0
Solitude/Primitive/Unconfined	0	(1)	0	0	0	(1)
Other Features of Value	6	0	0	0	6	0
Total Number of Effects	9	(3)	2	0	9	(3)
Wilderness Character Rating	6		3		6	

MRDG Step 2: Determination

Refer to the **MRDG Instructions** before identifying the selected alternative and explaining the rationale for the selection.

Selected Alternative

☐	Alternative 1:	
☐	Alternative 2:	
☐	Alternative 3:	

Explain Rationale for Selection:

Describe Monitoring & Reporting Requirements:

Approvals

Which of the prohibited uses found in Section 4(c) of the Wilderness Act are approved in the selected alternative and for what quantity?

	Prohibited Use	Quantity
☐	Mechanical Transport:	
☐	Motorized Equipment:	
☐	Motor Vehicles:	
☐	Motorboats:	
☐	Landing of Aircraft:	
☐	Temporary Roads:	
☐	Structures:	

☒	Installations:	2 – Stove and visitor log

Record and report any authorizations of Wilderness Act Section 4(c) prohibited uses according to agency policies or guidance.

Refer to agency policies for the following review and decision authorities:

Prepared	Name	Position	
	Signature		Date

Recommended	Name	Position	
	Signature		Date

Recommended	Name	Position	
	Signature		Date

Approved	Name	Position	
	Signature		Date

From: Kyle Tisdel
To: Rebecca Fischer; BLM_NM_FFO_Comments@blm.gov; NMLeasesalecomments@blm.gov
Cc: Jeremy Nichols
Subject: Re: Citizen group comments on the March 2018 NM oil and gas lease sale
Date: Friday, October 20, 2017 4:21:40 PM

Thanks, Becca. In the event the hard copy didn't get sent already, I just got work the Diné CARE will also sign on.

Kyle J. Tisdel
Attorney, Climate & Energy Program Director
Western Environmental Law Center
208 Paseo del Pueblo Sur, #602
Taos, New Mexico 87571
Ph: 575.613.8050

tisdel@westernlaw.org

www.westernlaw.org

Defending the West

From: Rebecca Fischer <rfischer@wildearthguardians.org>
Date: Friday, October 20, 2017 at 2:01 PM
To: <BLM_NM_FFO_Comments@blm.gov>, <NMLeasesalecomments@blm.gov>
Cc: Jeremy Nichols <jnichols@wildearthguardians.org>, Kyle Tisdel <tisdel@westernlaw.org>
Subject: Re: Citizen group comments on the March 2018 NM oil and gas lease sale

Just in case the comments with the exhibits did not send, here are the comments without the exhibits.

On Fri, Oct 20, 2017 at 1:56 PM, Rebecca Fischer <rfischer@wildearthguardians.org> wrote:

Mr. Ames and Ms. White Bull,

Attached are comments from the Western Environmental Law Center, Amigos Bravos, Chaco Alliance, Natural Resources Defense Council, San Juan Citizens Alliance, Sierra Club, and WildEarth Guardians on New Mexico's March 2018 competitive oil and gas lease sale.

Feel free to contact me at the information below should you have any questions. Also, please send me an email acknowledging receipt of this email. The file is large, and I want to ensure that it is received.

I will be sending a CD via mail with the exhibits incorporated by reference from our past comments on similar lease sales in the Greater Chaco Region.

Thank you.

Sincerely,

Rebecca Fischer

--

<https://twitter.com/RebeccaJFischer>

--

<https://twitter.com/RebeccaJFischer>

From:	Anderson, Kemba
To:	Patrick Donnelly
Cc:	jbybee@blm.gov; Taylor McKinnon; Michael Saul; mtodd@blm.gov; cjcook@blm.gov; Brian Amme; Michael Herder
Subject:	Re: Ely DO oil and gas Final EA
Date:	Friday, October 20, 2017 4:57:44 PM

Mr. Donnelly,

The final EA is posted online at the following link, http://bit.ly/2vH21Ix. If you have any additional questions, feel free to contact me at the number listed below.

On Fri, Oct 20, 2017 at 12:22 PM, Patrick Donnelly <PDonnelly@biologicaldiversity.org> wrote:

> Ms. Anderson and Mr. Bybee,
>
> Per my discussions yesterday with Ms. Anderson on the phone and Mr. Bybee in person, the Ely District Office December 2017 Oil and Gas Lease Auction Final EA/Draft FONSI are to be posted on eplanning today. We were expecting it to be issued the day that the sale notice was posted (thus initiating the protest period), so that we would be able to know how you reached your decisions and whether or not we should protest.
>
> The document still has not been posted. I am going to be away from my computer for the rest of the day, so I'm writing now in the hopes of getting ahold of the Final EA/Draft FONSI before the weekend. If we don't get it until Monday we will have lost a full week from our protest period. If per chance you are unable to post it to eplanning before the end of the day today, could someone please email it to me? As you know we have significant issues with this lease sale. But I would hope that a procedural element like getting ahold of the Final EA/Draft FONSI shouldn't be one of them. In the name of transparency and adherence to the spirit of public participation embodied in NEPA, I would ask that you please try to remedy this situation by providing us with the Final EA/Draft FONSI before COB today.
>
> Thank you for your consideration of this matter,
>
> -Patrick Donnelly
>
> Patrick Donnelly
>
> Nevada State Director
>
> Center for Biological Diversity
>
> pdonnelly@biologicaldiversity.org <mailto:pdonnelly@biologicaldiversity.org>
>
> 702.483.0449
>
> @bitterwaterblue

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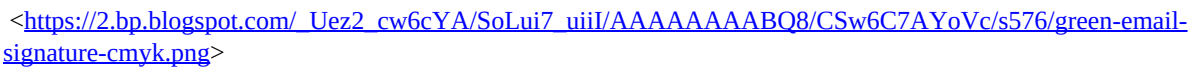

Kemba K. Anderson-Artis, MBA
Branch Chief Fluid Minerals
Nevada State Office
1340 Financial Blvd.
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775-861-6566 phone
775-335-9015 cell
775-861-6711 Fax
kembaand@blm.gov

From: Krissy Wilson
To: Mellon, Cassie
Cc: Jon C. Sjoberg; Justin Jimenez
Subject: Re: Signatory page for Springsnail CAS
Date: Monday, October 23, 2017 11:32:40 AM
Attachments: 2017 Springsnail Conservation Agreement_102317_final.docx

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OK----here is the final version of the Agreement. The cover page was removed but will be added when the Strategy portion is complete.

On Mon, Oct 23, 2017 at 9:26 AM, Krissy Wilson <krissywilson@utah.gov> wrote:

> No worries. The Agreement portion is final but the Strategy portion will not be final until we bring on an outside contractor to work with the team to draft the Strategy portion. I don't have the final copy on my computer, it is on Erin's computer. Erin is in a meeting. As soon as she gets out I will send to you.
>
> Thanks Cassie
>
> On Mon, Oct 23, 2017 at 9:04 AM, Mellon, Cassie <cmellon@blm.gov> wrote:
>
> > Hi Krissy,
> >
> > Sorry we haven't been ignoring you, we've just both been running around trying to wrap up field work. I spoke with Justin about this last week and he's out in the field again this week, so I'll try to relay our conversation. Has the agreement been finalized? The last Justin and I remember seeing was a draft, but he was a little uncomfortable taking it to our director for signature if it was still a draft and not final. We are still on board and want to move forward with this, just could use a little clarification on what the status of the agreement is and if it is something we take to the director, how much it could still change.
> >
> > Thanks,
> > Cassie
> >
> > On Mon, Oct 23, 2017 at 8:48 AM, Krissy Wilson <krissywilson@utah.gov> wrote:
> >
> > > Hello again,
> > > Sorry to be a pain but it has been 7 days since I sent the email asking about the status of your signatory page. We are pestering folks until we get all the signatory pages in from folks that initially said they were interested.
> > >
> > > I look forward to your reply.
> > >
> > > Krissy
> > >
> > > On Mon, Oct 16, 2017 at 4:30 PM, Krissy Wilson <krissywilson@utah.gov> wrote:
> > >
> > > > Hello Cassie,
> > > > We have received most of the signatory pages from the partners but have not yet received one from your office. We are wondering what the status is of the Utah BLM signatory page for the Springsnail CAS?
> > > >
> > > > I look forward to your reply.
> > > >
> > > > Krissy

> > > --
> > >
> > > Krissy Wilson
> > > Asst Wildlife Program Chief
> > > Utah Division Wildlife Resources
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> > > Salt Lake City, UT 84114
> > > office phone: 801-538-4756
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> --
> Cassie Mellon
> Aquatic Ecologist
> BLM West Desert District
> 2370 Decker Lake Boulevard
> West Valley City, UT 84119
>
> 801-977-4378

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CONSERVATION AGREEMENT
FOR SPRINGSNAILS IN NEVADA AND UTAH

PURPOSE

This Conservation Agreement (Agreement) has been developed to assist in the implementation of conservation measures for springsnail species, as identified in the associated Conservation Strategy (Strategy), in Nevada, Utah, and adjacent areas as a collaborative and cooperative effort among resource agencies, governments, and landowners. The desired outcome is to ensure the long-term conservation and persistence of springsnails and their associated habitats throughout Nevada and Utah and to contribute to development of range-wide conservation efforts for these species. The parties to this Agreement believe that implementing the conservation objectives defined herein will benefit springsnails in Nevada and Utah. The Conservation Agreement and Strategy (CAS) is intended to provide for species and habitat conservation needs and to significantly reduce or eliminate threats, thus providing needed conservation that will insure the persistence of these species on a local and landscape scale and, if fully implemented, should reduce the likelihood of listing these species under the Endangered Species Act (ESA) in the future. Conservation of springsnails and their associated habitats is also likely to provide corollary benefits to other spring-dependent at-risk species, which also could reduce the likelihood for ESA-listing of these species. The Federal listing of species may increase awareness and funding of conservation needs; however, listing can increase management complexity and create additional challenges to implementing conservation projects for those species on both public and private lands.

Although the focus of this Agreement is on the conservation of springsnail species and associated habitats in Nevada and Utah, additional benefits may derive from the inclusion of species and habitats in adjacent areas of surrounding states. Those additional areas may be incorporated into this Agreement and associated Strategy through signatory inclusion of the appropriate State and Federal management entities.

The terms of this Agreement shall be governed by and construed in accordance with applicable Federal and State laws. Nothing in this Agreement is intended to limit the authority of the U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), U.S. Forest Service (USFS), or other Federal agencies to fulfill their responsibilities under Federal laws. Additionally, nothing in this Agreement is intended to supersede or limit applicable State agency authorities and State laws. All actions undertaken pursuant to this Agreement are intended to be in compliance with all applicable State and Federal laws and regulations. Signatory Parties agree to implement conservation objectives set forth in this Agreement through the duration of the Agreement, consistent with available resources.

CONSERVATION GOAL OF THE AGREEMENT

The primary goal of this Agreement is to ensure the continued persistence of springsnails and their habitats in Nevada and Utah to preclude ESA listing.

The goal will be achieved through implementation of specific objectives set forth below and conservation measures identified in the Strategy. The status of springsnail species will be evaluated annually by the Springsnail Conservation Team (SCT) through an adaptive management framework to assess program progress.

CONSERVATION OBJECTIVES

The following conservation objectives will be implemented to reach the goal of this Agreement stated above. Included with each objective is a statement on how the objective will benefit springsnail species in Nevada and Utah and a standard to determine if the objective was successful at achieving the goal. The conservation actions and commitments by the signatories will be implemented as proposed in the Strategy.

Objective 1. Compile known springsnail distribution, status and habitat data into a single comprehensive and accessible database, and incorporate new information as it becomes available to manage extant and future spatial and biological information for springsnail conservation.

Benefit: A centralized database will house what is currently known about species distribution, status, and habitat conditions for included springsnail species. The database will enable biologists and managers to readily identify information gaps, species descriptions, life history information and habitat conditions, population abundance and status, known locations of occurrence, known threats and the magnitude of those threats, historical information, and other relevant information as available.

Success Standard: An accessible and centralized database is in place that serves as a foundation to develop protocols and actions for the protection and enhancement of springsnails and the habitats they rely upon, guide future survey and habitat restoration efforts, and track population and habitat trends.

Objective 2. Identify, assess, and reduce known and potential threats to springsnail populations and their associated habitats at occupied sites.

Benefit: Ensures long-term persistence and viability of springsnail species' populations. Enables biologists and managers to implement appropriate management actions to reverse declines and prevent extirpations by eliminating or reducing threats.

Success Standard: Detrimental habitat conditions and threats are eliminated or reduced and steps are taken to minimize the likelihood of future extirpations of springsnail populations. A reduction of threats will allow for increases in number of occupied sites or amount of occupied habitat.

Objective 3. Maintain, enhance, and restore springsnail habitats in Nevada and Utah to ensure the continued persistence of the species.

Benefit: Enables springsnail populations to use the full potential of existing occupied habitats and expand into currently unoccupied or potential habitat.

Success Standard: A reduction of the risk of extirpation through maintenance, enhancement, and restoration of habitat will allow for increases in number of occupied sites or amount of occupied habitat.

Objective 4. Develop a Springsnail Conservation Team (SCT), which will be tasked with development and implementation of the Strategy and coordinating on-the-ground conservation actions for identified springsnail species and habitats.

Benefit: Ensures consistent implementation of actions and activities identified in the Strategy. Additionally, the SCT will ensure consistent review and adaptive management in implementation of conservation actions.

Success Standard: Completion of the Strategy. Consistent, documented implementation of priority actions identified in the Strategy and measureable progress towards conservation of the included springsnail species and habitats.

Objective 5. Create education and outreach tools that generate broad awareness and strong support for the conservation of springsnails and their habitats among land owners, agencies, and the general public.

Benefit: A common and consistent message is shared by signatories with conservation partners including private land owners and the general public. This will increase opportunities for private lands conservation through education and outreach.

Success Standard: All partners and signatories are sharing and supporting a consistent message for springsnail conservation and the message is accepted and supported by the public and landowners as evidenced by support for public and private lands conservation actions.

ECOSYSTEM PROTECTION

Spring ecosystem protection and restoration will be a core component of planning, designing, and implementing management actions that will benefit springsnails in Nevada and Utah.

The rare and often isolated nature of springs and spring habitats in Nevada and Utah has increased the value of these water resources for people in the area. This has resulted in multiple factors that threaten not only springsnails and other aquatic life that depend on them, but also impacts the entirety of the spring ecosystems they inhabit. The persistence of riparian and wetland systems across the landscape are dependent on the quantity and quality of spring discharge. Anthropogenic threats to these systems include, but are not limited to: spring development and diversion, improper livestock grazing practices, impacts from wild horses and burros, land development and use, recreation, groundwater pumping and contamination, and introduction of non-native species. While the CAS targets conservation of springsnails within Nevada and Utah, the actions implemented to reduce these threats will also conserve a host of other spring-dependent species and associated aquatic habitats.

CONSERVATION PARTNERS

Signatory Parties:

Bureau of Land Management (BLM)
- Nevada State Office
- Utah State Office

Nevada Department of Wildlife (NDOW)

Nevada Natural Heritage Program (NNHP)

National Park Service (NPS)

Natural Resource Conservation Service (NRCS)
- Nevada
- Utah

The Nature Conservancy (TNC)

Utah Division of Wildlife Resources (UDWR)

U.S. Fish and Wildlife Service (USFWS)
- Region 6
- Region 8

U.S. Forest Service (USFS)
- Intermountain Region

Additional Signatory Parties not identified here may be added to this Agreement at any time through individual signatory pages and concurrence of the Signatory Parties, as amendments to this Agreement.

Non-Signatory Cooperators:

Utah Division of Water Rights (UDWRR)

Conservation Districts of UT and NV

Idaho Department of Fish and Game (IDFG)

California Department of Fish and Wildlife (CDFW)

Any party interested in contributing to and participating in the conservation of springsnails and springsnail habitats through the Strategy may be invited to participate as a non-signatory cooperator through the SCT and other contributed actions, including direct or in-kind support for conservation implementation, contribution of specific expertise, and outreach.

Other types of Agreements may be developed with additional parties as necessary to ensure implementation of specific conservation measures. The NDOW and UDWR hold regulatory authorities for management of springsnail species as resident wildlife. The USFS, NPS, and BLM will maintain their lead federal management role in the implementation of habitat conservation and restoration activities for springsnail species on public lands. The SCT will cooperate and coordinate with other springsnail conservation efforts in Nevada and Utah and other states as needed in the implementation of this Agreement.

AUTHORITIES

This Agreement is subject to and is intended to be consistent with all applicable Federal and State laws. Section 6 of the ESA encourages States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs that meet national and international standards. This is essential to safeguard, for the benefit of all citizens, the nation's heritage in wildlife and plants. Under their respective authorities, the Parties below have the ability to influence the occurrence and intensity of threats to springsnails and their habitats in Nevada and Utah.

Nothing in the Agreement shall be construed as obligating any Party hereto in the expenditure of funds, or for the future payment of money, greater than appropriations authorized by law.

The authorities for the signatory Parties to enter into this voluntary Agreement derive from the following legislation:

Bureau of Land Management

- Federal Land Policy Management Act of 1976, 43 U.S.C. 1701 et seq.
- Endangered Species Act of 1973, as amended

National Park Service

- National Park Service Organic Act of 1916, as amended
- Endangered Species Act of 1973, as amended
- National Parks Omnibus Management Act of 1998

Nevada Department of Wildlife

- Nevada Revised Statutes 501.097, 501.351 and 503.589

U.S. Fish and Wildlife Service

- Endangered Species Act of 1973, as amended
- Fish and Wildlife Act of 1956, as amended
- Fish and Wildlife Coordination Act, as amended
- National Wildlife Refuge System Administration Act of 1966 (amended in 1997 as National Wildlife Refuge System Improvement Act) of 1997, as amended

U.S. Forest Service

- National Forest Management Act of 1976 and the Sikes Act of 1990

Utah Division of Wildlife Resources

- Utah Code Title 23 Chapter 22.1

Natural Resources Conservation Service

- Food Security Act of 1985, as amended

Additional authorities, directives, and plans exist for each involved party as outlined below.

Bureau of Land Management

The BLM is a Federal land management agency responsible for the management of public lands in accordance with the Federal Land Policy and Management Act of 1976. The mission of BLM is to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations. Sensitive species are designated by each BLM State Director. The BLM manages these sensitive species and their habitats to minimize or eliminate threats affecting the status of the species or to improve the conditions of the species habitat (BLM Manual section 6840.06. 2 C.).

National Park Service

The NPS was established by an act of Congress passed in 1916 generally referred to as “The Organic Act” (16 U.S. Code I). This law states that it is the mission of the NPS to “conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the

enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations" in the areas under their jurisdiction.
NPS Management Policy 4.1.4 encourages parks to pursue opportunities to improve natural resource management within parks and across administrative boundaries by cooperating with public agencies and interested parties. The NPS recognizes that cooperation with other resource and land managers can accomplish ecosystem stability and other resource management objectives, when the best efforts of a single manager might fail. Therefore, parks will develop agreements with Federal, State, Tribal, and local governments and organizations, and private landowners, when appropriate, to coordinate plant, animal, water and other natural resource management activities in ways that maintain and protect, not compromise, park resources and values. Such cooperation may involve coordinating management activities in two or more separate areas, integrating management practices to reduce conflicts, coordinating research, sharing data and expertise, exchanging native biological resources for species management or ecosystem restoration purposes, establishing native wildlife corridors, and providing essential habitats adjacent to, or across, park boundaries (NPS 2001 Management Policies, 4.1.4).

Nevada Department of Wildlife

A key mission component of NDOW is to protect, preserve, manage, and restore wildlife and its habitat. The Nevada Wildlife Action Plan serves as a comprehensive, landscape level guidance plan, which identifies species of greatest conservation need and the key habitats on which they depend, with the intent to prevent wildlife species from becoming threatened or endangered. Sixty-nine species of springsnails endemic to Nevada or Nevada and surrounding states are identified as Species of Conservation Priority in the Nevada Wildlife Action Plan. Nevada Revised Statute (NRS) 501.351 provides authority for the Director of NDOW to enter into cooperative agreements for the purpose of the management of native wildlife. NRS 503.584 recognizes the State's obligation to conserve and protect imperiled, native species.

U.S. Fish and Wildlife Service

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. Sections 2, 4, 6, 7, and 10 of the ESA, as amended, allow the USFWS to enter into this Agreement. Section 2 of the ESA states that encouraging interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs is a key to safeguarding the Nation's heritage in fish, wildlife, and plants. Section 4 of the ESA describes guidelines for determination of species status as endangered or threatened under the ESA, establishes deadlines and standards for making findings on petitions to list species under the ESA (which include 42 springsnail species which were petitioned for listing in Nevada, Utah, and California), and establishes a program to identify species that warrant protection under the ESA and to monitor and conserve those species for which protection is deemed appropriate until listing can proceed. Section 6 of the ESA provides for the cooperation with the States in endangered species conservation, including matching Federal funding and delegation of

permitting authority. Collaborative stewardship with State agencies is important in the development of Conservation Agreements, given the statutory role of State agencies and their traditional conservation responsibilities and authorities for resident species. Section 7(a)(1) of the ESA requires the USFWS to review programs that it administers and to utilize such programs in furtherance of the purposes of the ESA. Section 10(a)(1)(A) of the ESA allows the USFWS to issue permits for acts that would otherwise be prohibited by section 9 if such acts are expected to enhance the propagation or survival of the affected species. Under section 10(a)(1)(A), the USFWS may issue permits to non-Federal entities for agreements that provide net conservation benefits for non-listed at-risk species.

The National Wildlife Refuge System Improvement Act (Refuge Improvement Act), as amended states that the mission of the National Wildlife Refuge System is "To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans." In addition, the goals of the National Wildlife Refuge System are to:

- Conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered;
- Conserve a diversity of fish, wildlife, and plants; and
- Conserve and restore, where appropriate, representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems

The Refuge Improvement Act also requires the USFWS to maintain the biological integrity, diversity, and environmental health of Refuges. By entering into this Agreement, the USFWS is using its authorities within the National Refuge System to further the conservation of Nevada and Utah springsnails pursuant to the Act.

The Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j, not including 742 d-I; 70 Stat. 1119), establishes a comprehensive national fish, shellfish, and wildlife resources policy with emphasis on the commercial fishing industry but also with a direction to administer the Act with regard to the inherent right of every citizen and resident to fish for pleasure, enjoyment, and betterment and to maintain and increase public opportunities for recreational use of fish and wildlife resources. Among other things, it directs a program of continuing research, extension, and information services on fish and wildlife matters, both domestically and internationally.

The Fish and Wildlife Coordination Act (FWCA) of the United States was enacted March 10, 1934 to protect fish and wildlife when Federal actions result in the control or modification of a natural stream or body of water. The amendments enacted in 1946 require consultation with the Fish and Wildlife Service and the fish and wildlife agencies of States where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted . . . or otherwise controlled or modified" by any agency under a Federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources."

U. S. Forest Service

The U. S. Forest Service (USFS) is an agency of the U.S. Department of Agriculture that administers the nation's 154 national forests and 20 national grasslands, which encompass 193 million acres. USFS's mission is "to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." The USFS provides leadership in protection, management, and use of the nation's forest, rangeland, and aquatic ecosystems, and is responsible for managing habitat to maintain viable populations of plants and animals. The USFS strives to restore, maintain, and enhance populations and habitats for 422 species of plants and animals listed under the ESA, and provides special management for over 2,900 additional plant and animal species designated by the USFS. Management of these vulnerable species is crucial to implementing the USFS mission.

Utah Division of Wildlife Resources

The Utah Division of Wildlife Resources mission is "to serve the people of Utah as trustee and guardian of the State's wildlife, and to ensure its future and values through management, protection, conservation, and education." The State of Utah, in coordination with Federal agencies, has implemented cooperative agreements for a variety of fish and wildlife programs on Federal Lands, and state law, as applicable, under Title 23 Chapter 22.1 of the Utah Code stating that the "Utah Division of Wildlife Resources may enter into cooperative agreements and programs with other State agencies, Federal agencies, States, educational institutions, municipalities, counties, corporations, organized clubs, landowners, associations, and individuals for purposes of wildlife conservation."

Natural Resources Conservation Service

The NRCS delivers financial and technical assistance to farmers, ranchers, and non-industrial landowners who are voluntarily working to conserve natural resources. The assistance follows guidelines and requirements specified by the Secretary of Agriculture, Farm Bill legislation, and the Food Security Act. Conservation technical assistance is available independent of receiving financial assistance. NRCS financial assistance for conservation is dependent upon Farm Bill funding and land and landowner eligibility.

The Food Security Act (FSA) of 1985 (P.L. 99-198) provides for the conservation, protection, and restoration of air, soil, water, and wildlife resources in compliance with State and Federal laws. Funding to implement the FSA by defining the programs NRCS utilizes to meet the conservation objectives occur through the Federal Farm Bill. Private landowners voluntarily enter into contracts to address resources and comply with Farm Bill requirements with the understanding participation information is protected under the Privacy Act of 1974 (P.L. 93-579) and the privacy protections of Farm Bill legislation. The Privacy Act prohibits disclosure of information from a system of records by any means of communication to any person or to another agency without the written consent of the subject individual or entity. This consent is required even for

NRCS to comply with any necessary NEPA consultation needed in expending Federal funds on Federal lands.

REQUIRED CONSERVATION TASKS AND RESPONSIBILITIES BY SIGNATORIES

To meet the goals of this Agreement, the Parties agree to undertake specific conservation actions, under their respective authorities, as described in the Strategy. Lead and co-lead responsibilities for specific tasks are identified by agency. Where responsibility for undertaking a specific action has not yet been assigned, the Parties agree to determine appropriate actions to implement through modifications to the Strategy based on outcomes of reviews as proposed in the Agreement.

CONSERVATION SCHEDULE AND ASSESSMENT

The coordination, implementation, and funding of conservation activities, and progress review, will be conducted as follows:

Coordinating Conservation Activities

Administration of the Agreement will be conducted by the SCT. The team will consist of a designated representative from each signatory to the Agreement. The SCT may request or accept technical and legal advice from other parties as deemed necessary, including all non-signatory cooperators identified in this Agreement. The SCT will meet at least annually to review progress in implementing the conservation actions, develop conservation schedules, implement adaptive management, and review budgets. Additional meetings may be scheduled as needed and at a frequency determined by the SCT to insure effective development and implementation of the strategy. The SCT will provide annual progress reports and 5-year assessments and will review and revise the Strategy as needed.

Implementing Conservation Activities

A minimum of 10 years is anticipated for full implementation of the conservation actions identified in the Strategy. However, the Parties agree to the intent that significant actions to benefit Nevada and Utah springsnails will be implemented within the first five years as funds become available. Actions and the priority of implementation to maximize conservation benefits will be determined by the SCT. A timetable for completion of specific actions is identified in the Strategy.

Funding Conservation Activities

Funding for the Agreement and implementation of the Strategy will be provided from a variety of sources. Federal, State, and local sources will be pursued to secure funding to implement actions identified in the Strategy. In-kind contributions such as personnel, field equipment, and supplies will be provided by participating agencies, partners, and volunteers. In addition, each agency will identify specific tasks, responsibilities, and proposed actions/commitments related to their in-kind contributions as outlined in the Strategy. It is understood that all funding

commitments made under the Agreement are subject to budget authorization and approval by the appropriate agency or government appropriation. Nothing in the Agreement shall be construed as obligating any party hereto in the expenditure of funds, or for the future payment of money, greater than appropriations authorized by law.

Progress Reports and Assessments

Annual progress reports and five-year assessments will be prepared by the SCT and provided to signatories of the Agreement. The five-year assessments will evaluate the effectiveness of conservation actions in reducing threats to ensure long term persistence of springsnail species in Nevada and Utah.

SPRINGSNAIL CONSERVATION TEAM

The Springsnail Conservation Team (SCT) will be developed and comprised of Signatory Parties to the Agreement. The SCT will incorporate the necessary expertise; including biology, groundwater hydrology, restoration ecology for spring systems, geology, and malacology, including participation by non-signatory parties as needed. The SCT will be initiated upon the execution of the Agreement and will remain active for the term of the Agreement.

DURATION OF AGREEMENT

The term of this Agreement shall begin on the date the Agreement is signed by the identified Signatory Parties (see page A4). The duration of the Agreement shall be for 10 years, which the signatories have determined is the minimum time period required to implement the identified conservation actions and assess their effectiveness. Before the end of the 10 year period, or upon completing or addressing all the tasks identified in the implementation schedule, the Agreement shall be reviewed by the Signatory Parties and either modified, renewed, or terminated. If all signatory parties concur, the Agreement may be renewed for up to an additional 10-year term without requiring new signatures. This Agreement may, at any time, be amended or terminated by mutual concurrence of all signatories. Any Party may withdraw from this Agreement by providing 60 days' notice to the other Parties in writing. Within 30 days of the withdrawal of any Signatory Party to this Agreement, the remaining Parties shall meet to determine if the Agreement will require amendment or modification, or if other actions may be required to insure continued effective conservation of the included springsnail species.

REGULATORY REQUIREMENTS AND FEDERAL COMPLIANCE

National Environmental Policy Act (NEPA) Compliance

This CAS is being developed for the purpose of planning, structuring, and prioritizing future conservation efforts for springsnail species and associated spring ecosystems. Before any Federal actions can occur, a determination must be made whether or not NEPA analysis is required. There are no specific NEPA or ESA compliance needs identified related to data collection and validation, Strategy development or database development. Site specific actions

may have specific compliance needs that may not be identified until those actions are to be implemented, which will be addressed at that time by the appropriate action agency.

Policy for Evaluation of Conservation Efforts (PECE) (68 FR 15100).

The PECE identifies criteria used by the USFWS in determining whether formalized conservation efforts that have yet to be implemented or to show effectiveness contribute to making listing a species as threatened or endangered unnecessary. The Agreement and Strategy working in concert are intended to serve as that formalized conservation effort and will be designed to address the criteria in the PECE. To ensure the Agreement and Strategy address the criteria in the PECE, USFWS cooperators will participate directly in the development of the CAS by serving on the SCT.

Non-Discrimination Compliance

During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on non-discrimination and will not discriminate against any person because of race, color, national origin, age, religion, gender, disability, familial status or political affiliation.

ADDITIONAL PROVISIONS

Remedies

No Party shall be liable in damages for any relief under this Agreement (including, but not limited to, damages, injunctive relief, personal injury, and attorney fees) for any performance or failure to perform under this Agreement. Furthermore, no Party has any right of action under this Agreement.

All Parties will have all remedies otherwise available to enforce the terms of the Agreement and any associated permits. No Party shall be liable in damages for any breach of this Agreement, any performance or failure to perform an obligation under this Agreement, or any other cause of action arising from this Agreement.

Dispute Resolution

The Parties agree to work together in good faith to resolve any disputes, using dispute resolution procedures agreed upon by the Parties. In addition, the SCT will coordinate as needed to help resolve any disputes among the Parties.

No Third-Party Beneficiaries

This Agreement does not create any new right or interest in any member of the public as a third-party beneficiary, nor shall it authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or damages pursuant to the provisions of this Agreement. The duties,

obligations, and responsibilities of the Parties to this Agreement with respect to third parties shall remain as imposed under existing law.

SIGNATURES

In witness whereof, the Parties have caused this Conservation Agreement and Strategy for Springsnails in Nevada and Utah to be executed as of the date of the last signature of the identified signatories.

From:	Michael Freeman
To:	"BLM_MT_Billings_FO_Lease_EA@blm.gov"; "BLM_MT_Butte_FO_Lease_EA@blm.gov"; "BLM_MT_Great_Falls_Lease_EA@blm.gov"; "blm_MT_North_Dakotafo_Lease_EA@blm.gov"
Subject:	Comments on draft EAs and FONSIs for March 2018 oil and gas lease sale
Date:	Monday, October 30, 2017 1:01:49 PM
Attachments:	EJ - NPRC- Katz -Martinell comments - FINAL with exhibits.pdf

Dear Sirs – attached please find comments from Earthjustice, Northern Plains Resource Council, David Katz, and Jack and Bonnie Martinell, on the draft EAs and FONSIs for the Montana-Dakotas office's scheduled March 13, 2018 oil and gas lease sale.

Regards,

Mike Freeman

Michael Freeman

Staff Attorney

Earthjustice Rocky Mountain Office

633 17th Street, Suite 1600

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earthjustice.org <http://www.earthjustice.org/>

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EARTHJUSTICE

October 30, 2017

BY ELECTRONIC MAIL:

Bureau of Land Management
Billings Field Office
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Billings, MT 59101
Attn: Jim Sparks

BLM_MT_Billings_FO_Lease_EA@blm.gov

Bureau of Land Management
Butte Field Office
106 N. Parkmount
Butte, MT 59701
Attn: Scott Haight

BLM_MT_Butte_FO_Lease_EA@blm.gov

Bureau of Land Management
North Central Montana District
Division of Oil and Gas
1220 38th Street N
Great Falls, MT 59405
Attn: Mark Albers

BLM_MT_Great_Falls_Lease_EA@blm.gov

Bureau of Land Management
North Dakota Field Office
99 23rd Avenue West, Suite A
Dickinson, ND 58601
Attn: Paul Kelley

blm_mt_north_dakotafo_lease_ea@blm.gov

Re: Comments on March 13, 2018 Oil and Gas Lease Sale for BLM Montana-Dakotas Office

Dear Sirs:

We appreciate the opportunity to comment on the Bureau of Land Management (BLM) draft environmental assessments (EAs) and draft Findings of No Significant Impact for the scheduled March 13, 2018 oil and gas lease sale for the Montana-Dakotas Office. Please accept these comments on behalf of Earthjustice, Northern Plains Resource Council, David Katz, and Jack and Bonnie Martinell. At the March 2018 sale, BLM proposes to offer 110 lease parcels in the Billings, Great Falls, Butte and North Dakota field offices. As discussed below, however, the four EAs addressing the sale fail to analyze and disclose the reasonably foreseeable impacts to groundwater from oil and gas development on those leases, as required by the National Environmental Policy Act (NEPA). We request that BLM defer offering these leases until it has prepared such an analysis, and can ensure that development of the leases will not impact aquifers that may have usable water.

ROCKY MOUNTAIN 633 17TH STREET, SUITE 1600 DENVER, CO 80202

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Discussion

Since 1988, BLM's Onshore Order No. 2 has required operators to construct wells to isolate and protect aquifers containing "usable water," defined as having up to 10,000 ppm total dissolved solids (TDS). 53 Fed. Reg. 46,798, 46,801, 46,805 (Nov. 18, 1988). BLM adopted the 10,000 ppm standard because it matched the definition of "underground source of drinking water" used by EPA in administering the Safe Drinking Water Act (SDWA). See id. at 46,798 (citing 40 C.F.R. § 144.3).

When BLM issued its 2015 hydraulic fracturing rule, it made a housekeeping change amending the applicable provision in the Code of Federal Regulations to conform with the Onshore Order No. 2 usable water requirement. 80 Fed. Reg. 16,128, 16,141–42 (Mar. 26, 2015). But in opposing the hydraulic fracturing rule, several industry trade associations and states informed the court that there has been widespread non-compliance with the 10,000 ppm standard, despite the fact that Onshore Order No. 2 is a legally-binding regulation promulgated by notice-and-comment rulemaking. See 53 Fed. Reg. at 46,798; 43 C.F.R. § 3164.1(b). Based in part on concern that the hydraulic fracturing rule would require companies to change their practices, the U.S. District Court for Wyoming enjoined the rule in 2015. Order on Motions for Preliminary Injunction at 30-33, 53-54, ECF No. 130, Wyoming v. Jewell, 2:15-cv-00043-SWS (D. Wyo. Sept. 30, 2015) (Wyoming v. Jewell).

Since then, industry trade associations have continued to highlight that there is a widespread industry practice of failing to protect underground sources of drinking water. For example, in their September 25, 2017 comments supporting BLM's proposed rescission of the hydraulic fracturing rule, Western Energy Alliance and the Independent Petroleum Association of America (collectively, WEA), told the agency that the 10,000 ppm standard is inconsistent with "existing practice for locating and protecting usable water." Sept. 25, 2017 WEA comments at 59 (WEA comments), excerpts attached as Ex. 1.[1] Instead, companies in Wyoming typically set well casing to a depth of only "100 feet below the deepest water well within a one mile radius of [the] oil or gas well"—usually 1,000 feet below ground or less. Id. at 84. And in Montana and North Dakota, WEA states that companies only install protective casing for the Pierre Shale formation, regardless of whether underground sources of drinking water may exist below that formation. Id. The draft EAs for the March 2018 sale also focus only on nearby domestic water wells, rather than on underground sources of drinking water that may be used in the future. See, e.g., Great Falls Office EA at 35-36.

WEA has explained that requiring companies to protect all underground sources of drinking water would result in substantial additional costs for "casing and cementing associated with isolating formations that meet the numerical definition of usable water under the [Onshore Order No. 2 standard], but which are located at depths deeper than the zones that state agencies and BLM field offices have previously designated as requiring isolation." WEA comments at 84. WEA predicted that complying with the 10,000 ppm standard would cost industry nearly $174 million per year in additional well casing expenses. Id. at 84-85.

[1] A complete copy of WEA's comments is available at: https://www.regulations.gov/document?D=BLM-2017-0001-0412 .

Industry's admissions raise a significant environmental concern that BLM must address before issuing new leases. Accepting WEA's statements as true, BLM and energy companies have been putting numerous underground sources of drinking water at risk. In its 2016 hydraulic fracturing study, the Environmental Protection Agency (EPA) noted that "the depth of the surface casing relative to the base of the drinking water resource to be protected is an important factor in protecting the drinking water resource."[2]

While water with salinity approaching 10,000 ppm TDS is considered "brackish," such aquifers are increasingly being used for drinking water. In fact, EPA adopted the 10,000 ppm standard based on the 1974 legislative history of SDWA, which explained that Congress intended SDWA to "protect not only currently-used sources of drinking water, but also potential drinking water sources for the future." H.R. Rep. No. 93-1185 (1974), 1974 U.S.C.C.A.N. 6454, 6484.

Similarly, BLM explained in 2015 that "[g]iven the increasing water scarcity [in much of the United States] and technological improvements in water treatment equipment, it is not unreasonable to assume [these] aquifers . . . are usable now or will be usable in the future." 80 Fed. Reg. at 16,142. The agency noted that even "if we're not using that water today we may be using it ten years [or] a hundred years from now. So we don't want to contaminate it now so it's unusable in the future." Wyoming v. Jewell admin. record at DOIAR0009703, attached as Ex. 3. Comments from EPA and the Association of Metropolitan Water Agencies (AMWA) supported this conclusion. Id. at DOIAR0038117. AMWA reported that brackish groundwater is already being used for drinking in some parts of the country. See id. at DOIAR0038118 (pumping 8,000 ppm TDS groundwater in Florida); id. at DOIAR0068337 (desalination already being used for municipal water treatment in some areas). AMWA explained that because of "challenges resulting from climactic changes, population growth and land development, many utilities are turning to more challenging groundwater sources such as those that are very deep or have high salinity concentrations . . . given the lack of sufficient water elsewhere." Id. at DOIAR0038118. Higher salinity water is also being used today for some industrial purposes. See, e.g., id. at DOIAR0075763 (power plant cooling).

Our concerns are underscored by recent research showing that it is very common in this region for hydraulic fracturing and oil and gas production to occur in shallow formations that have only limited vertical separation from underground sources of drinking water. Fracturing and production also sometimes occur within an aquifer that represents an underground source of drinking water. For example, EPA's 2016 report found that "hydraulic fracturing within a drinking water resource" is "concentrated in some areas in the western United States" that include "the Wind River Basin near Pavillion, Wyoming, and the Powder River Basin of Montana and Wyoming."[3] Where that occurs, EPA explained that:

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[2] EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States at 6-19 (2016) (EPA Study), available at: https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990 .

[3] EPA Study at ES-27; see also id. at 6-44 to 6-50.

> hydraulic fracturing within drinking water resources introduces hydraulic fracturing fluid into formations that may currently serve, or in the future could serve, as a drinking water source for public or private use. This is of concern in the short-term if people are currently using these formations as a drinking water supply. It is also of concern in the long-term, because drought or other conditions may necessitate the future use of these formations for drinking water.

Id. Other recent studies have made similar findings. Researchers investigating the oil and gas-related contamination in Pavillion, Wyoming reported that shallow fracturing also occurs in New Mexico, Colorado, Utah and Montana. Gayathri Vaidyanathan, Fracking Can Contaminate Drinking Water at 8, Sci. Am. (Apr. 4, 2016) (Sci. Am. Article), attached as Ex. 2B. The researchers concluded that "it is unlikely that impact to [underground sources of drinking water] is limited to the Pavillion Field . . . ." Dominic C. DiGiulio & Robert A. Jackson, Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming Field, 50 Am. Chem. Society, Envtl. Sci. & Tech. 4524, 4532 (Mar. 29, 2016), attached as Ex. 2A. Another study found that approximately three quarters of all hydraulic fracturing in California occur in shallow wells less than 2,000 feet deep.[4]

WEA's description of widespread non-compliance with Onshore Order No. 2, and the evidence of shallow production and fracturing, raise a significant environmental issue that must be addressed as a reasonably foreseeable effect of the lease sale. See Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983) (an agency must "consider every significant aspect of the environmental impact of a proposed action"); see also Davis v. Mineta, 302 F.3d 1104, 1123 (10th Cir. 2002). Moreover, BLM's analysis must "state how alternatives considered in it and decisions based on it will or will not achieve the requirements of [NEPA] and other environmental laws and policies." 40 C.F.R. § 1502.2(d); League of Wilderness Defenders v. USFS, 585 Fed. Appx. 613, 614 (9th Cir. 2014); Montana Wilderness Association v. McAllister, 658 F. Supp. 2d 1249, 1255-56 (D. Mont. 2009). The Council on Environmental Quality regulations also require a discussion of possible conflicts with the objectives of state, local and federal land use plans, policies and controls for the area concerned. 40 C.F.R. § 1502.16(c). An assessment of this problem requires an EIS because the cumulative effects of such widespread noncompliance plainly may have a significant impact on groundwater and public health. The fact that BLM proposes to use four separate EAs for the same lease sale further illustrates how the existing analyses fail to address such cumulative impacts. Unfortunately, the EAs make no mention of this problem at all. See, e.g., Great Falls Office EA at 37-38.

Ignoring evidence of widespread noncompliance with BLM's standards for protecting underground sources of drinking water would violate NEPA. To make an informed decision on whether to lease these lands BLM needs to know whether doing so will put underground sources of drinking water at risk, and what additional stipulations or other steps are needed to prevent

[4] California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California at Executive Summary 10 (2015), http://ccst.us/publications/2015/2015SB4-v2ES.pdf ; see also Sci. Am. Article at 8 (similar finding about California).

such contamination. The information necessary to make such an assessment is readily available in BLM's own permitting files for existing oil and gas wells, from produced water records on existing wells, and from other sources such as US Geological Survey reports. 80 Fed. Reg. at 16,151–52. Moreover, to the extent any information gaps exist, it is incumbent on BLM to obtain that additional information before making an irreversible commitment of resources by issuing the leases. Additional data on, for example, aquifer quality or well construction practices is "essential to a reasoned choice among alternatives" and can be collected at a cost that is not "exorbitant." See 40 C.F.R. § 1502.22.

Conclusion

For the reasons stated above, we request that BLM defer offering all of the parcels under consideration, and that the agency develop an analysis of groundwater impacts that complies with NEPA.

Thank you for your consideration of these comments.

Sincerely,

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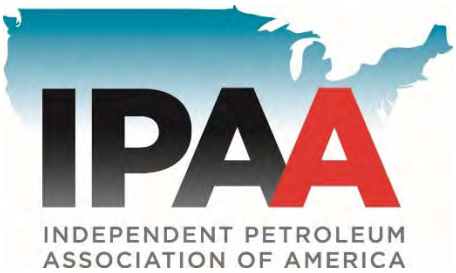
/Enclosures

Exhibit 1





September 25, 2017

Via e-filing on www.regulations.gov

Ms. Katharine S. MacGregor, Deputy Assistant Secretary
United States Department of the Interior

Mr. Michael D. Nedd, Acting Director
Bureau of Land Management

Attn: 1004-AE52
Mail Stop 2134LM
1849 C Street NW
Washington, DC 20240

Re: RIN 1004-AE52. *Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule* (82 Fed. Reg. 34,464).

Dear Ms. MacGregor and Mr. Nedd:

On July 25, 2017, the Bureau of Land Management ("BLM") published a proposed rule that would rescind a final rule BLM issued in March 2015. The "2015 Rule" was designed to regulate hydraulic fracturing on federal and Indian lands.[1] This submission constitutes comments on the July 2017 proposal from the Independent Petroleum Association of America ("IPAA") and the Western Energy Alliance (the "Alliance") (collectively, the "Associations"). The Associations collectively represent thousands of independent oil and natural gas explorers and producers, as well as the service and supply industries that support their efforts. It is the members of these groups that the proposed rescission will most significantly affect.[2] Independent

[1] 80 Fed. Reg. 16,128 (Mar. 26, 2015).

[2] The typical independent oil and natural gas producer is a small business which employs twelve full-time and three part time employees. *See* Independent Petroleum Ass'n of Am., *Profile of Independent Producers* at 2 (2012-2013) (describing the median size of independent oil and natural gas producing firms based on a survey of IPAA members), available at:
http://www.ipaa.org/wp-content/uploads/downloads/2014/07/2012-2013ProfileOfIndependentProducers.pdf.

And BLM acknowledged in the regulatory preamble that "disposal of recovered fluids is generally done . . . under the authority of other agencies such as the EPA (for underground injection)."[115]

BLM has taken an identical position with respect to hydraulic fracturing using diesel. During the rulemaking for the 2015 Rule, numerous commentators requested that BLM ban the use of diesel in hydraulic fracturing operations. BLM rejected these entreaties, emphasizing that the "regulation of diesel fuel in hydraulic fracturing fluids is committed to EPA under the SDWA and Energy Policy Act of 2005."[116] In fact, the 2015 Rule represents BLM's only ever attempt to regulate any form of underground injection, as the SDWA defines that term. But EPA's original source for authority over all forms of underground injection is the SDWA. BLM concedes that it cannot regulate enhanced oil recovery, disposal wells, or hydraulic fracturing using diesel because Congress has designated EPA as the agency with regulatory authority over those forms of underground injection in the SDWA and the same conclusion should apply with respect to non-diesel hydraulic fracturing. Given that BLM lacked the authority to issue the 2015 Rule in the first place, withdrawal of the rule at this point is appropriate.

IV. THE 2015 RULE'S REDEFINING OF "USABLE WATER" DISREGARDED EXISTING LAW AND PRACTICE.

The heart of the 2015 Rule is the identification and isolation of "usable water." Since 1982, operators have been required to "isolate freshwater-bearing [formations] and other usable water containing 5,000 ppm ["parts per million"] or less of dissolved solids . . . and protect them from contamination."[117] Under the 1982 rule, "fresh water" is defined to mean "water containing not more than 1,000 ppm of total dissolved solids" or other toxic constituents.[118] The 1,000 ppm standard for "fresh water" is double the secondary maximum contaminant level EPA has designated for total dissolved solids ("TDS") in drinking water (500 ppm).[119]

The 2015 Rule would have redefined "usable water," modifying the term's definition to include "those waters containing up to 10,000 parts per million (ppm) of total dissolved solids."[120] This despite a lack of any empirical evidence or science-based support for a need to protect water that is so saline that it can kill livestock, and which expands the scope of protected waters well beyond EPA's regulations under the Safe Drinking Water Act. Equally important, because the 2015 Rule was premised on an inaccurate view of the law, BLM did not properly account for any of the significant costs complying with the new standards would have caused operators to incur.

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[115] 80 Fed. Reg. at 16,166.
[116] 80 Fed. Reg. at 16,191.
[117] 43 C.F.R. § 3162.5-2(d) (2014).
[118] 43 C.F.R. § 3160.0-5 (2014).
[119] *See* 40 C.F.R. § 143.3.
[120] 43 C.F.R. § 3160.0-5 (2015).

The 2015 Rule would have amended 43 C.F.R. § 3162.5-2(d), revising the first sentence of the subsection to require the operator to "isolate all usable water and other mineral-bearing formations and protect them from contamination."[121] The 2015 Rule defines "usable water" as "[g]enerally those waters containing up to 10,000 parts per million (ppm) of total dissolved solids."[122]

The Associations challenged BLM's reasoning for expanding the concept of "usable water" during the rulemaking process for the 2015 Rule. The Associations noted that a TDS concentration of 2,000 ppm is the highest recommended for irrigation and livestock consumption.[123] The Associations cited authorities emphasizing that water "with 10,000 ppm or more 'may cause brain damage or death' in livestock."[124] Other commenters noted that, "[i]n defining 'fresh water,' the World Health Organization's upper limit of acceptable palatable water for human consumption is 1,000 ppm TDS and North Dakota State University Extension Service advises farmers and ranchers that water quality is 'good' if it generally has less than 2,000 ppm TDS."[125]

BLM contended during the rulemaking process for the 2015 Rule that it need not address these arguments because, despite the final rule containing an express revision to Section 3162.5-2(d), the 2015 Rule did not represent any change from previously existing requirements. BLM observed that Onshore Order No. 2, effective since December 1988, provides that "casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones,"[126] and defines "usable water" as "generally those waters containing up to 10,000 ppm of total dissolved solids."[127] BLM asserted that the 1982 regulation (still in the Code of Federal Regulations) "was *superseded* by the Onshore Order 2 definition in 1988."[128] Relying on that assertion, BLM alleges that "[b]ecause the definition of usable water has not substantially changed" in the final rule, "there will be no significant changes in costs of running casing and cement."[129]

As a matter of law, Onshore Orders cannot "supersede" a rule. Nor did Onshore Order No. 2 purport to supersede or repeal the fresh-water rule. BLM may issue Onshore Orders "when

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[121] 80 Fed. Reg. at 16,222.
[122] 43 C.F.R. § 3160.0-5 (2012).
[123] *See* A.R. at DOIAR0056230-31.
[124] *Id.* at DOIAR0056231 (quoting G. Lardy et al., *Livestock & Water*, Table 9 (N.D. State Univ. Extension Serv. June 2008)).
[125] A.R. at DOIPS0365300, Pub. Cmt., Devon Energy Corp. (Aug. 23, 2013).
[126] Onshore Order No. 2 § III.B
[127] Onshore Order No. 2 § II.Y, 53 Fed. Reg. at 46,805.
[128] 80 Fed. Reg. at 16,196 (emphasis added).
[129] 80 Fed. Reg. at 16,142 & 16,196 (attributing an "incremental cost" of "$0" to the change in the usable water standard).

necessary to implement and supplement the regulations in this part [43 C.F.R. Part 3160]."[130] But "implement and supplement" does not mean "supersede." In fact, rather than repeal any element of the 1982 regulations, Onshore Order No. 2 expressly cites the fresh-water rule as one of the authorities the Order implements.[131] And though BLM represented that "Onshore Order 2 superseded the existing regulations in 1988, because it was promulgated pursuant to notice-and-comment rulemaking,"[132] that position is inconsistent with the express statement in the Code of Federal Regulations that Onshore Order No. 2 did *not* supersede any existing authority.[133]

The suggestion that the 2015 Rule did not change previously existing law is also inconsistent with the understanding of senior BLM officials who did acknowledge that the 2015 Rule represented a meaningful change in applicable law.[134] Given that the regulatory preamble to

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[130] 43 C.F.R. § 3164.1(a).

[131] *See* 53 Fed. Reg. at 46,804 ("Specific authority for the provisions contained in this Order is found at . . . § 3162.5-2.").

[132] 80 Fed. Reg. at 16,176.

[133] *See* 43 C.F.R. § 3164.1(b). The Association's research has not disclosed any case in which BLM required an operator after 1988 to protect water zones with greater than 5,000 ppm when the operator's casing and cement was sufficient to protect water zones with less than 5,000 ppm. The only decision that appears relevant is a ruling BLM's State Director for the Montana State Office issued in 1994. *David L. Robertson*, SDR No. 922-94-05 (BLM Mont. State Office, April 21, 1994), available at: http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/operations/sdrs.Par.38840.File.dat/922-94-05.pdf. In *Robertson*, field officers had objected to an operator's proposed casing depth for the initial surface casing string because it was not deep enough to "protect shallow sources of usable water." On appeal, the operator showed that the proposed casing depth would "isolate the fresh water zones." The BLM State Director reversed the field officer's determination, agreeing that "setting the surface casing to a depth of 450 feet would isolate the fresh water sands in the glacial till from deeper aquifers with poorer water quality." *Id.* at 3. Given that "fresh water" was defined by rule as water with less than 1,000 ppm of TDS, this decision is not consistent with BLM's assertion during the 2015 rulemaking that the agency has always enforced a 10,000 TDS standard.

[134] *See, e.g.*, A.R. at DOIAR0005111, Decision Mem. for the Sec'y from Robert V. Abbey (Feb. 25, 2011) ("According to 43 CFR 3162.5-2(d) the operator is, at all times, responsible for ensuring that freshwater-bearing zones are isolated and protected from contamination during drilling and subsequent activities."); *id.* at DOIAR0005309, Mem. from Elizabeth Klein to Jason Bordoff & Dan Utech (Mar. 17, 2011) (same). It is clear that, at the minimum, BLM was aware that the regulated community considered the final rule to effect a change in the law. *See*, *e.g.*, A.R. at DOIAR0021777, E-mail from David E. Blackstun to Steven Wells & Nicholas Douglas (May 22, 2012) (confirming Blackstun's understanding that the hydraulic fracturing rule would "broaden the scope of waters that operators must protect by raising the TDS concentration for usable water to 10,000 ppm"); *id.* at DOIAR0022886, E-mailed notes of Samuel B. Boxerman to Nancy DenHerder & Steven Wells (May 31, 2012) (explaining that under the hydraulic fracturing rule "[u]sable water would be redefined from 5,000 ppm or less of dissolved solids to water containing up to 10,000 ppm of dissolved solids") (citing 43 C.F.R. § 3160.0-5); *id.* at DOIAR0080261, Key Changes in the Hydraulic Fracturing Rule from Supplemental (May 2013) to Draft Final Rule (June 5, 2014) (acknowledging that the final rule "adopts standards set in the SDWA and Onshore Order No. 2"); *id.* at DOIAR0027276, Outline for Meeting Between ConocoPhillips and BLM (Aug. 23, 2012) (raising as a discussion issue that the "Proposed rule replaces current definition of 'fresh water' with 'usable water', defined as water 'containing up to 10,000 ppm of total dissolved solids'"); *id.* at DOIAR0027483, Meeting Notes: Industry Stakeholder Meeting to Discuss BLM's Proposed Hydraulic Fracturing Rule (June 28, 2012) (documenting industry understanding that "measures to protect usable water when operating at a depth that does not affect water introduces a new regulatory scheme"); *Wyoming v. Zinke*, No. 2:15-CV-043-SWS (D. Wyo.), Tr. of Prelim. Inj. Proceedings at

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the 2015 Rule recognizes an "inconsistency" between the 5,000 ppm standard contained in 43 C.F.R. § 3162.5-2(d) and the 10,000 ppm standard in Onshore Order No. 2's definition of usable water, it is clear that the former remained viable at the time the 2015 Rule was issued.[135]

Notwithstanding any disagreement regarding whether the 2015 Rule would have changed the *existing law* defining "usable water," there has never been any disagreement over what the rule's impact would have been on *existing practice* for locating and protecting usable water. For decades, state oil and gas agencies and BLM field offices have informed operators about the location of usable water that must be protected – taking into account local geology – and directed the depths at which it is acceptable to set well casing. Under the 2015 Rule, operators would have been assigned an affirmative obligation to identify the location of usable water to be protected based on a quantitative TDS calculation.[136] This would have posed a new burden.

The approach the 2015 Rule would have adopted disregards the difficulty and expense of measuring the numerical quality of water with the precision the 2015 Rule would have required. No logging tool directly measures TDS. Logs are essential for identifying rock properties, but do not represent an effective tool for measuring water salinity. Operators often run resistivity logs for intermediate and production casing, and these logs might allow the qualitative identification of high-salt-content zones. These logs do not, however, directly measure TDS, and there are too many variables for the signature these logs record to be converted into accurate TDS data.[137] A notable omission from administrative record prepared for the 2015 Rule is a description of any alternative means to comply with the requirement to determine the location of water meeting the agency's numerical definition of "usable water."[138]

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105:8-106:15 (June 23, 2015) (Sgamma) (testifying that BLM field officials presented information materials to oil and natural gas operators indicating that the final rule modified the standard for water to be protected).

[135] *See* 80 Fed. Reg. at 16,141 & 16,196.

[136] *See* 43 C.F.R. § 3162.3-3(d)(1)(iii) (requiring identification of the "estimated depths (measured and true vertical) to the top and bottom of all occurrences of usable water").

[137] *See* A.R. at DOIAR0056164, Pub. Cmt., ConocoPhillips Co. (Aug. 22, 2013) (explaining that that while in controlled conditions one might determine TDS measurements from well logging tools, there has been "little success applying the techniques") (quoting *Borehole Geophysical Techniques for Determining the Water Quality & Reservoir Parameters of Fresh & Saline Water Aquifers in Tex.*, Report 343, Tex. Water Dev. Bd.); A.R. at DOIPS0301574, Pub. Cmt., ANGA & AXPC (Aug. 23, 2013) (observing that while logs may allow an inference that salty water is present, they cannot do so "clearly enough to determine . . . an unambiguous 10,000 [ppm] TDS cutoff").

[138] *See* A.R. at DOIAR0079317, Hydraulic Fracturing Meeting Notes (May 21, 2014) (posing question: "who is going to supply BLM with the usable water TDS information to determine usable water?"); *id.* at DOIPS0435828, Pub. Cmt., Marathon Oil Corp. (Aug. 23, 2013) (noting that "the revised proposed definition would require operators to collect new information regarding aquifers that have little or no potential to be considered future sources of drinking water or water to be used in industrial or agricultural application" and emphasizing that "[t]his would be a significant cost to Operators"). The 2015 Rule also fails to account for the rule's impact on operators that drilled and cased existing wells under the former practice, which includes, under BLM's calculation, any well drilled since at least 1988. The 2015 Rule would have regulated all future hydraulic fracturing in both new and existing

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states only that, "[d]epending on the well design, it may be appropriate to run a CBL and/or other diagnostic tool(s) to determine that the cement integrity is adequate to meet the well design and construction objectives."[245] BLM did not present any analysis considering how frequently well design will support a need to run a CEL on intermediate casing or made any comparison between the costs of a CEL requirement and the "other diagnostic tool(s)" that industry guidance contemplates. To the contrary, BLM acknowledged that it "does not have credible data on the prevalence of voluntary compliance or the prevalence of CEL requirements as conditions of approval."[246]

A lack of data complicates another aspect of BLM's 2015 cost calculation — BLM's assertion that, "[b]ased on field experience, the BLM anticipates that only about [five] percent of wells have intermediate casing to protect usable water."[247] There is no evidentiary or mathematical support for this supposition. Equally important, BLM's "field experience" was based on BLM's application of the rules that existed before the 2015 Rule was promulgated. But as discussed above,[248] the 2015 Rule re-assigns the burden to identify usable water from government agencies to operators and amends the method by which usable water is identified, requiring precise mathematical calculations. Had the 2015 Rule been adopted, these modifications were likely to result in an expansion of the number of wells with intermediate casing to protect this numerically-identified "usable water."

In the end, based on the information that BLM compiled in 2015, and the recognition that individual oil and gas wells are uniquely designed and constructed, there is insufficient data to determine how many wells would incur additional costs for conducting a CEL on intermediate casing. To ensure the Associations' estimates are as reasonable and conservative as possible, the Association have therefore not incorporated any cost in their estimates associated with the requirement to conduct a CEL on intermediate casing where cement is not returned to the surface.

D. ADDITIONAL CASING.

Since ground water levels vary greatly across states and geologic basins, it is not possible to determine exactly how much additional casing will be required under the 2015 Rule for a "typical well."[249] Among other requirements, the new rule places the burden of identifying the location of usable water on operators, a task that state regulators and BLM field officers

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[245] API HF1 § 7.4, at 12.
[246] 80 Fed. Reg. at 16,197.
[247] *Id.*
[248] *See* discussion *supra* Part IV.
[249] Calculating an exact figure would require an engineering examination of each of the geologic basins and the well designs in use – something which is not practical based on available data. The 2015 Rule's numeric definition of "usable water" is so broad that in practical terms, casing would have been required to be run to significantly deeper depths than may be economically practical (particularly for gas wells).

currently perform.[250] The 2015 Rule would have required operators to obtain more hydrologic data which may or may not match data state and federal regulators currently rely upon to determine the depths at which protective casing and cement must be set. The 2015 Rule would have led to instances where operators faced the additional costs of casing and cementing associated with isolating formations that meet the numerical definition of usable water under the final rule, but which are located at depths deeper than the zones that state agencies and BLM field offices have previously designated as requiring isolation.[251]

Current laws in the states require operators to case their wells to protect drinking water aquifers and other "usable" water aquifers, with the recognition that for aquifers to be deemed usable, they should be economically viable. In North Dakota and Montana, for example, operators are currently directed to install protective casing to a depth below the Pierre Shale formation, but the 2015 Rule could have required additional casing and cement when water meeting the 2015 Rule's numeric definition of "usable water" was found at depths deeper than that formation. In Wyoming, casing needs to be set to a level 100 feet below the deepest water well within a one mile radius of either an oil or gas well-- with some exceptions, drinking water aquifers are generally above 1,000 feet in Wyoming. Again, when water meeting the 2015 Rule's definition of usable water is found below these depths, additional casing requirements would have applied.

Because of the significant differences in aquifer depth across states, JDA used a Monte Carlo simulation model based on the depths of existing water wells in each state to arrive at a conservative estimate of 2,350 feet of additional casing that might be required under the 2015 Rule. At a cost of $37 per foot, the additional casing would add $173.9 million in costs.

E. MECHANICAL INTEGRITY TESTS.

The 2015 Rule would have required that operators conduct a mechanical integrity test on all casing and fracturing string that will be subject to pressure during hydraulic fracturing operations, including the horizontal portion of the well that is located within the producing formation.[252] To conduct these tests operators will have to use complicated tools to seal off the toe of the well during testing or rely on tubing conveyed perforation techniques after the pressure test. Either method is likely to increase costs of completing a well, with the lowest potential additional cost being $10,000 per well. If any problems occur as a result of the MIT, these costs could rise by $75,000 to $100,000 per well.

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[250] *See* discussion *supra* Part IV.

[251] BLM asserted in its 2015 Regulatory Impact Analysis that there would be no cost associated with additional casing requirements, since operators already have to protect usable water. As discussed above, this assertion was based on a fundamental misunderstanding of existing law and practice. *See* discussion *supra* Part IV.

[252] For a more complete discussion of the 2015 Rule's MIT requirement, *see* discussion *supra* Part VII.C.

The overwhelming majority of new wells being proposed for federal leaseholds today are horizontal wells; using onshore rig counts as a proxy, the Associations have developed a conservative estimate of how frequently the additional costs associated with testing the horizontal portion of the lateral should apply. As of September 15, 2017, 795 of the 936 rigs operating in the United States, or approximately 85%, were drilling horizontal wells.[253]

Using 85% as a proxy, the Associations estimate that approximately 1,700 horizontal wells would be completed using hydraulic fracturing and would have incurred the additional MIT costs under the 2015 Rule. Assuming, to be conservative, the minimal additional cost of $10,000 per well, the MIT requirement would have resulted in $17 million in costs to operators.

F. RECOVERED FLUIDS COSTS.

JDA's production model can be used to calculate the differences in costs between tanks (which are generally rented for a short period during the completion process) and pits which once constructed can be used for a number of different wells. The model suggests that the costs of fluid storage tanks for a representative well in the thirteen western states is about $4,250 and the cost for digging and lining pits is $365.[254] Based on the assumed 2,000 wells and a distribution across the states being analyzed equal to the current distribution of approved APDs, the average cost to rent water storage tanks per representative well would be $5,111 and for preparing and lining pits $439. Absent any precise data, the Associations will assume that: (i) fifty-percent of operators would have voluntarily chosen to use the small, rigid steel tanks the 2015 Rule requires regardless of cost because those tanks were preferable operationally; and (ii) fifty-percent of operators would have used tanks only because the operator was obligated to select tanks under the 2015 Rule.[255] Applying the calculated difference in cost the Associations estimate between using tanks and lined pits, the Associations estimate that the total additional cost of the tank requirement would have been $4.887 million.

G. SUMMARY.

Cost Component	2015 Rule
Administrative Costs	$17.844 million
Delay Costs	$6.738 million
CEL Requirements	$0
Additional Casing	$173.9 million
Mechanical Integrity Tests	$17 million

[253] Williams, James L., *N. Am. Rotary Rig Counts,* WTRG Economics, available at: http://www.wtrg.com/rotaryrigs html.
[254] *See* n.226, *supra*.
[255] Although the 2015 Rule provides criteria pursuant to which BLM might authorize use of lined pits, the regulatory preamble to the 2015 Rule emphasizes that any "exceptions should be limited and rarely granted." 80 Fed. Reg. at 16,163.

Cost Component	2015 Rule
Recovered Fluids Storage	$4.887 million
Total	**$220.369 million**

Based on highly conservative estimates, rescission of the 2015 Rule will result in cost savings in excess of $220 million per year. Given that the 2015 Rule has no discernible non-economic benefit, rescission of the rule to avoid these costs is rational and appropriate.

Exhibit 2

EXHIBIT A

Environmental Science & Technology

Article

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Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming, Field

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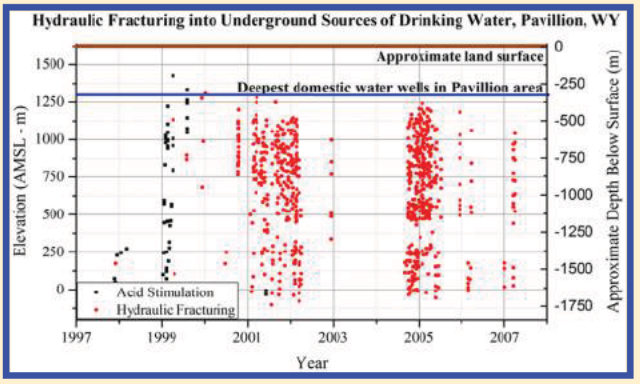
Supporting Information

ABSTRACT: A comprehensive analysis of all publicly available data and reports was conducted to evaluate impact to Underground Sources of Drinking Water (USDWs) as a result of acid stimulation and hydraulic fracturing in the Pavillion, WY, Field. Although injection of stimulation fluids into USDWs in the Pavillion Field was documented by EPA, potential impact to USDWs at the depths of stimulation as a result of this activity was not previously evaluated. Concentrations of major ions in produced water samples outside expected levels in the Wind River Formation, leakoff of stimulation fluids into formation media, and likely loss of zonal isolation during stimulation at several production wells, indicates that impact to USDWs has occurred. Detection of organic compounds used for well stimulation in samples from two monitoring wells installed by EPA, plus anomalies in major ion concentrations in water from one of these monitoring wells, provide additional evidence of impact to USDWs and indicate upward solute migration to depths of current groundwater use. Detections of diesel range organics and other organic compounds in domestic wells <600 m from unlined pits used prior to the mid 1990s to dispose diesel fuel based drilling mud and production fluids suggest impact to domestic wells as a result of legacy pit disposal practices.



INTRODUCTION

Between 2005 and 2013, natural gas production in the U.S. increased by 35% largely due to unconventional gas production in shale and tight gas formations.[1] Between 2013 and 2040, natural gas production is expected to increase another 45% with production from tight gas formations in particular increasing from 4.4 to 7.0 trillion cubic feet (59%) primarily in the Gulf Coast and Dakotas/Rocky Mountain regions.[1] Tight gas formations already account for 26% of total natural gas production in the United States today.[2]

In the U.S. Code of Federal Regulations (CFR), there are two federal regulations for protecting groundwater resources for present and future use relevant to oil and gas extraction − "Underground Source of Drinking Water" (USDW) and "usable water." A USDW is defined in 40 CFR 144.3 in requirements for the Underground Injection Control program promulgated under Part C of the Safe Drinking Water Act (SDWA) as "an aquifer or its portion: (a)(1) Which supplies any public water system; or (2) Which contains a sufficient quantity of ground water to supply a public water system; and (i) Currently supplies drinking water for human consumption; or (ii) Contains fewer than 10 000 mg/L total dissolved solids; and (b) Which is not an exempted aquifer." With the exception of use of diesel fuels, the Energy Policy Act of 2005 ("EPAct") exempted hydraulic fracturing from the SDWA, thereby allowing injection of stimulation fluids into USDWs. However, under Section 1431 of the SDWA, the Administrator of EPA may take action if impact to a USDW "may present an imminent and substantial endangerment to the health of persons."

The term "usable water" applies to lands containing federal or tribal mineral rights regulated by the Bureau of Land Management (BLM). This term is applicable to the Pavillion Field because tribal mineral rights are associated with more than half of production wells there. In the BLM Onshore Oil and Gas Order No. 2, usable water is defined as water containing ≤10 000 mg/L total dissolved solids (TDS) − a definition maintained in the March 2015 BLM rule on hydraulic fracturing (43 CFR 3160). In 43 CFR 3160, BLM retained a threshold for groundwater protection at 10 000 mg/L stating, "Given the increasing scarcity and technological improvements in water treatment, it is not unreasonable to assume aquifers with TDS levels above 5000 ppm are usable now or will be usable in the future." However, on September 30, 2015, the U.S. District Court for Wyoming granted a

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preliminary injunction filed by the States of Wyoming and Colorado to stop implementation of the BLM rule based on the assertion that the EPAct precludes BLM rulemaking.[3]

In 2004, EPA[4] documented the widespread use of hydraulic fracturing in USDWs colocated in formations used for coal bed methane (CBM) recovery. EPA[4] acknowledged likely ground water contamination as a result of this activity but stated that the attenuation factors of dilution, adsorption, and biode gradation would reduce contaminant concentrations to safe levels prior to reaching domestic wells that are generally shallower than production wells. Thus, EPA[4] distinguished impact to USDWs from impact to domestic wells. In 2014, while defining the chemical abstract numbers of fluids designated as diesel fuels, EPA revised its position and stated that injecting stimulation fluids directly into USDWs "presents an immediate risk to public health because it can directly degrade groundwater, especially if the injected fluids do not benefit from any natural attenuation from contact with soil, as they might during movement through an aquifer or separating stratum."[5]

The Pavillion Field (Figure 1) is located east of the Town of Pavillion in Fremont County, WY, in the west central portion

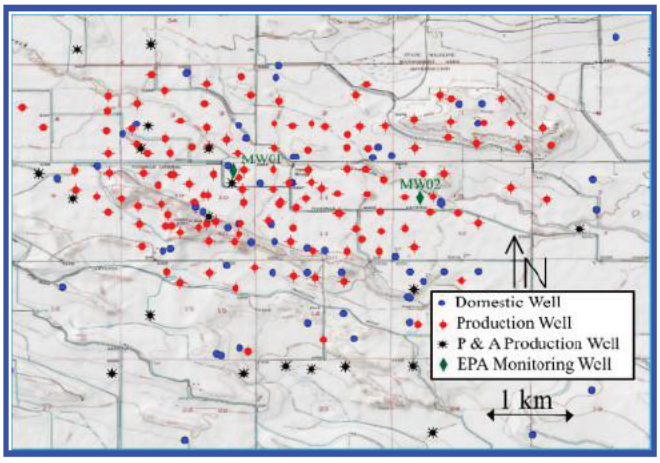

Figure 1. Central portion of the Pavillion Field illustrating locations of domestic water wells, production wells, plugged and abandoned (P&A) wells, and EPA monitoring wells (labeled). The entire Field, with labels for production and domestic wells and approximate locations of unlined pits, is illustrated in Figure SI A5. The geographic area in which the Field is located is illustrated in Figure SI A1.

of the Wind River Basin (WRB) (Figure SI A1). The field consists of 181 production wells including plugged and abandoned wells. Conventional and unconventional (tight gas) hydrocarbon production in the Pavillion Field is primarily natural gas from sandstone units in the Paleocene Fort Union and overlying Early Eocene Wind River Formations. However, oil has also been produced from production wells in these formations, primarily in the western portion of the field close to the suspected location of a fault (SI Sections A.1 and A.2).

In response to complaints regarding foul taste and odor in water from domestic wells within the Pavillion Field, EPA initiated a groundwater investigation in September 2008 under the Comprehensive Environmental Response and Liability Act (CERCLA).[6] This investigation remains the only one in which CERCLA has been invoked to investigate potential ground water contamination due to hydraulic fracturing.[7] Under CERCLA, impact to both groundwater resources and domestic wells is evaluated, in contrast to limiting evaluation to impact to domestic wells as is common in oil and gas field based investigations.

EPA conducted two domestic well sampling events in March 2009 (Phase I)[6] and January 2010 (Phase II).[8] Between June and September 2010, EPA installed two monitoring wells, MW01 and MW02, using mud rotary drilling with screened intervals at 233−239 m and 296−302 m below ground surface (bgs), respectively. These monitoring wells were installed to evaluate potential upward solute transport of compounds associated with well stimulation to maximum depths of current groundwater use (~322 m).[9] EPA sampled MW01 and MW02 during the Phase III (October 2010) and Phase IV (April 2011) sampling events.

In December 2011, EPA[9] released a draft report summarizing results of the Phase I−IV sampling events. EPA documented groundwater contamination in surficial Quaternary uncon solidated alluvium attributable to numerous unlined pits used for disposal of diesel oil based (invert) drilling mud and production fluids including flowback, condensate, and produced water prior to the mid 1990s. EPA[9] also documented injection of stimulation fluids into USDWs and concluded that inorganic and organic geochemical anomalies at MW01 and MW02 appeared to be attributable to production well stimulation. EPA received numerous comments both challeng ing and supporting its findings in the draft EPA report.[10−37] We reviewed and considered these comments when preparing this manuscript.

A substantial amount of data has been collected since publication of the 2011 draft EPA report, adding to an already extensive data set. In April 2012 (Phase V) the EPA[38,39] split samples with the U.S. Geological Survey at MW01[40,41] and MW02.[42] In 2014, the Wyoming Oil and Gas Conservation Commission (WOGCC) released a report on production well integrity[43] and in 2015 released a report on surface pits.[44] In December 2015, the Wyoming Department of Environmental Quality (WDEQ) released a report on sample results of a subset of domestic wells previously sampled by EPA.[45]

We conducted a comprehensive analysis of all publicly available online data and reports, to evaluate impact to USDWs and usable water as a result of acid stimulation and hydraulic fracturing. Although injection of stimulation fluids into USDWs in the Pavillion Field was previously documented by EPA,[9] the potential impact to USDWs at depths of stimulation was not assessed. We evaluate potential upward migration of con taminants to depths of current groundwater use using data from MW01 and MW02. We also evaluate potential impact to domestic wells as a result of legacy disposal of production and drilling fluids in unlined pits.

■ MATERIALS AND METHODS

Sources of EPA reports, versions of the Quality Assurance Project Plan (QAPP), and Audits of Data Quality (ADQs) are provided in Table SI H1. Sources of analytical data and associated information on quality assurance and control are summarized in Table SI H2. ADQs were conducted by EPA for Phase I−IV investigations to verify the quality of analytical data and consistency with requirements specified in the QAPP.

In response to a comprehensive information request by EPA regarding oil and gas production and disposal activities in the Pavillion Field, the field operator, Encana Oil & Gas (U.S.) Inc., provided Material Safety and Data Sheets (MSDSs) of products used for well stimulation to EPA[46] (Table SI C3). During the Phase V sampling event, EPA developed a gas chromatography

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Table 1. Summary of Major Ion Concentrations of Domestic Wells in the Wind River Indian Reservation (WRIR), Fremont County, WY, and within and around the Pavillion Field

	WRIR[a]			Fremont County[b]			within and around Pavillion Field[c]		
parameter (mg/L)	*n*	median	range	*n*	median	range	*n*	median	range
TDS	154	490	211 5110	77	1030	248 5100	65	925[†]	229[†] 4901[†]
Ca	149	10	1 486	77	45	1.7 380	48	50.8	3.32 452
Mg	128	2.2	0.1 195	77	8.2	0.095 99	45	5.32	0.024 147
Na	153	150	5 1500	77	285	4.5 1500	72	260	38.0 1290
K	149	2.0	0.2 30	77	2.45	0.1 30	43	1.36	0.179 10.5
SO_4	154	201	2 3250	77	510	12 3300	88	590	29.0 3640
Cl	154	14	2 466	77	20	3 420	48	21.1	2.60 77.6
F	154	0.7	0.1 8.8	76	0.9	0.2 4.9	46	0.88	0.20 4.1

[a]With the exception of potassium, from Daddow.[48] Information on potassium extracted from Daddow.[53] [b]From Plafcan et al.[51] There is overlap of 19 sample results with Daddow.[48,53] [c]Major ion concentrations in domestic wells[6,8,9,39,45,52] summarized in Table SI B2. Mean values used for domestic wells sampled more than once. [n]Number of sample results. [†]TDS for EPA data estimated using linear regression equation from Daddow[48] TDS (mg/L) = 0.785 × specific conductance (μs/cm) − 130 (n = 151, r^2 = 0.979)

flame ionization based approach to obtain a lower reporting limit (50 μg/L) for methanol compared to commercial laboratory analysis (5000 μg/L). We obtained this data set as the result of a Freedom of Information Act request to EPA.[47]

We reviewed over 1000 publicly available well completion reports, sundry notices, drilling reports, and cement bond and variable density logs accessed from the WOGCC Internet site using API search numbers to determine dates of well completion, depths of surface casing, top of original or primary cement, and numbers and depths of cement squeeze jobs (injection of cement through perforated production casing to remediate or extend existing primary cement). Similarly, we reviewed online information to document well stimulation practices summarized in Tables SI C1 and SI C2.

The field operator analyzed major ions in produced water samples at 42 production wells in 2007 (Table SI D1). EPA collected produced water samples at four production wells in 2010 and analyzed them for organic compounds (Table SI D3).[8] The field operator also conducted mechanical integrity and bradenhead (annular space between production and surface casing) testing between November 2011 and December 2012. In addition to sustained casing pressure at many production wells during that period (Table SI D2), water flowed through the bradenhead valve to the surface at four production wells (SI Section D.3). Aqueous analysis of bradenhead water samples by the field operator was limited to major ions (Table SI D1). Production well string and brandenhead gas samples were collected for benzene, toluene, ethylbenzene, xylenes (BTEX) and light hydrocarbons (Table SI D2).

To evaluate the effect of purging volume on water quality, EPA collected ten samples through time (Table SI 3a) during the Phase V sampling event at MW01. Based on EPA's purging procedure, we developed a model incorporating plug flow in casing and mixing in the screened interval (SI Section E.3, Figure SI E4). Our simulations indicated that virtually all (99.997%) of water entering the sampling train at the surface at the time of the first sample collection at MW01 originated directly from the surrounding formation (i.e., no stagnant casing water) (Figure SI E6). MW02 was a low flow monitoring well. The cause of low flow is unknown but could be due to several factors, including low relative aqueous permeability due to gas flow or insufficient removal of drilling mud during well development. During the Phase V sampling event, MW02 was repeatedly purged over a 6 day period to ensure that sampled water originated from the surrounding formation (SI Section E.2, Figure SI E5). A discussion of monitoring well construction, including schematics for MW01 (Figure SI E1) and MW02 (Figure SI E2), is provided in SI Section E.1.

RESULTS AND DISCUSSION

Groundwater Resources in the Pavillion Area. The Wind River and Fort Union Formations are variably saturated fluvial depositional systems characterized by shale and fine , medium , and coarse grained sandstone sequences. Lithology is highly variable and difficult to correlate from borehole data. No laterally continuous confining layers of shale exist below the maximum depth of groundwater use to retard upward solute migration. A comprehensive review of regional and local geology, including a lithologic cross section in the vicinity of MW01 and MW02 (Figure SI A4), is provided in SI Sections A.1−A.6.

Domestic wells in the Pavillion area draw water from the Wind River Formation—a major aquifer system in the WRB.[48,49] From the surface to approximately 30 m bgs, groundwater exists under unconfined conditions.[50] Below this depth, groundwater is present in lenticular, discontinuous, confined sandstone units with water levels above hydrostatic pressure, and in some instances flowing to the surface,[48,50,51] indicating the presence of strong localized upward gradients. The majority of documented domestic well completions in Fremont County[51] and five municipal wells in the Town of Pavillion[52] west of the Field are completed in the Wind River Formation.

Flow to the surface was observed in a domestic well during the Phase II sampling event,[6] and as mentioned, at four production wells during bradenhead testing in 2012. While the overall vertical groundwater gradient in the Pavillion Field is downward, these observations indicate that localized upward hydraulic gradients exist in the Field, which is relevant to potential upward solute migration from depths of production well stimulation. The deepest domestic wells in the Pavillion Field and immediate surrounding area are 229 and 322 m bgs, respectively (Table SI B1). Two municipal wells were proposed, but not drilled, in the Pavillion Field as replacement water for domestic wells at depths of 305 m bgs,[52] similar to the depth of MW02 installed by EPA.

Major ion concentrations of domestic wells in the Pavillion field (summarized in Table SI B2) are typical of the Wind River Indian Reservation (WRIR),[48] west of the Pavillion Field, and

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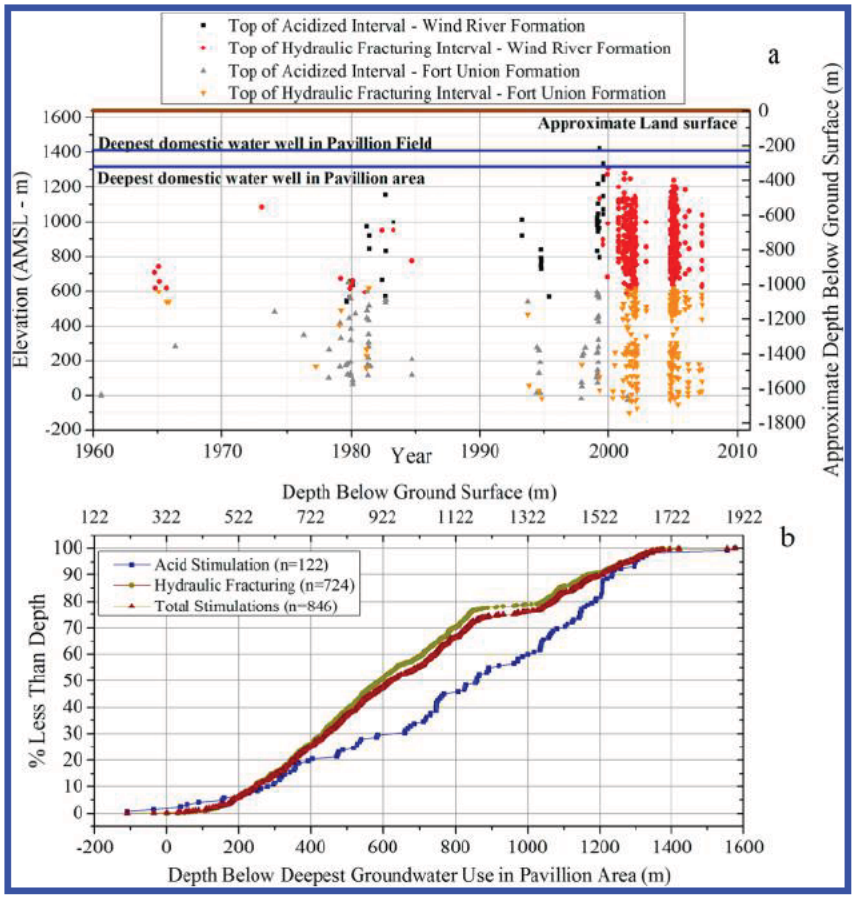

Figure 2. (a) Elevation in absolute mean seal level (AMSL) and approximate depth below ground surface of documented acid and hydraulic fracturing stimulation stages. (b) Cumulative distribution of stimulation stages as a function of depth below deepest groundwater use in the Pavillion Field. Documentation of stimulation stages is absent at a number of production wells so that numbers presented here are a lower bound.

in Fremont County,[51] where the Pavillion Field lies, (Table 1) with TDS levels <5000 mg/L. TDS concentrations in the Wind River Formation appear to vary with lithology rather than depth (white coarse sandstone associated with lower TDS values).[52] There are no apparent trends in TDS levels with depth from data sets from the WRIR,[53] Fremont County,[51] and domestic wells in and around the Pavillion Field.

The Fort Union Formation is not used for water supply in the Pavillion area. However, the formation is highly productive and permeable where fractured[49] with TDS values from 1000 to 5000 mg/L.[54] An aquifer exemption was obtained to enable disposal of produced water in a disposal well perforated in the Fort Union Formation[55] at a location 5.6 km northwest of the Pavillion Field. Use of this well was suspended due to failure of well casing. Thus, the Wind River and Fort Union Formations in the Pavillion Field meet the regulatory definition of USDWs, as explicitly stated by EPA,[9,55] and of usable water as defined by the BLM.

Well Stimulation Depths, Treatments, and Chemical Additives. Exploration of oil and gas in the Pavillion Field commenced in August 1953 with increasingly shallow stimulations through time (Figure 2). The first acid stimulation and hydraulic fracturing stages (injection over one or more discrete intervals) occurred in June 1960 and October 1964, respectively. Acid stimulation ceased in 2001. To date, the last stimulation stage (hydraulic fracturing) occurred in April 2007. Most production wells were completed and stimulated during several periods of increased activity, especially after 1997 (Figure 2a). Acid stimulation and hydraulic fracturing occurred as shallowly as 213 and 322 m bgs, respectively, at depths comparable to deepest domestic groundwater use in the area (Figure 2a). Approximately 10% of stimulation stages were <250 m of deepest domestic groundwater use whereas approximately 50% of stimulation stages were <600 m and 80% were <1 km of deepest domestic groundwater use (Figure 2b).

Surface casing of production wells—the primary line of defense to protect groundwater during conventional and unconventional oil and gas extraction—is relatively shallow in the Pavillion field with a median depth of 185 m bgs (i.e., shallower than the deepest groundwater use) and range of 100−706 m bgs (Figure SI C1). There is no primary cement below surface casing, often for hundreds of meters, for 55 of 106 (~52%) production wells for which cement bond logs are available (Table SI C1, Figure SI CI). There is currently no requirement in Wyoming for placement of primary cement to surface casing or to ground surface.[45]

Instantaneous shut in pressures (ISIP) (wellhead gauge pressure immediately following fracture treatment) were similar for acid stimulation and hydraulic fracturing (Figure SI C2) suggesting that both matrix acidizing and acid fracturing (no proppants used[56]) occurred in the Pavillion Field. Acidizing solutions used in the Pavillion Field typically consisted of a 7.5% or 15% hydrochloric acid solution plus additives described in well completion reports as inhibitors, surfactants, diverters, iron sequestration agents, mutual solvents, and clay stabilizers.

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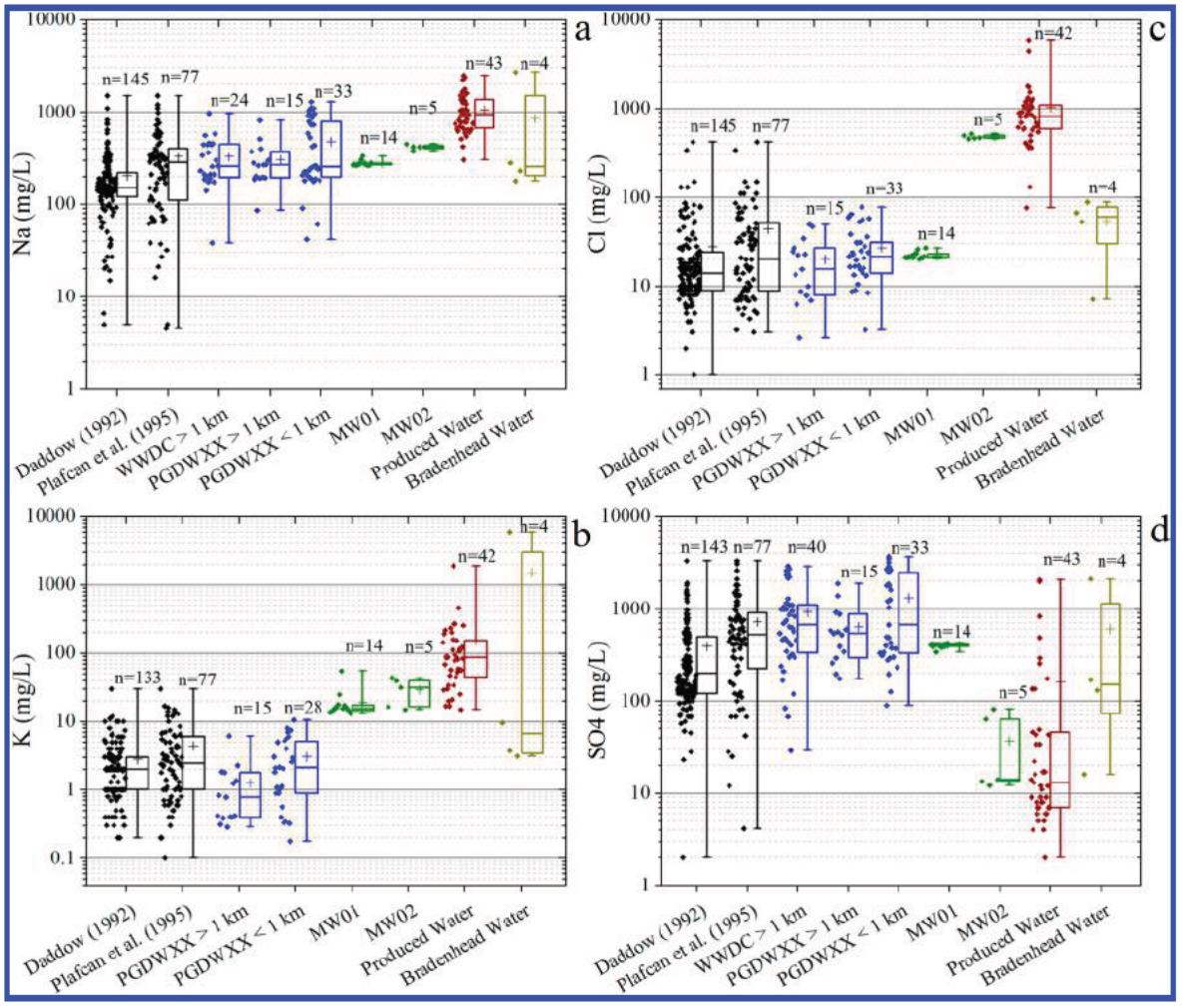

Figure 3. Box and whisker plots of minimum and maximum, quartiles, median (line in boxes), mean (crosses in boxes) of (a) Na, (b) K, (c) Cl, (d) SO_4 for domestic wells inventoried by Daddow[48,53] and Plafcan[51] in the Wind River Indian Reservation and Fremont County, respectively, sampled by EPA[6,8,9,39] and WDEQ[45] (PGDWXX series) greater than and less than 1 km from a production well, Wyoming Water Development Commission[52] (WWDC series) greater than 1 km from a production well, EPA monitoring wells[9,39] (Tables SI E2b, SI E3b), and produced water and bradenhead water samples (Table SI D1). Domestic wells sampled more than once, including data from Daddow,[53] are represented with a mean value. Fourteen measurements in Daddow[53] < 1 mg/L for potassium are not illustrated. Data points at MW01 and MW02 are samples collected during Phase III, IV, and V sample events.

Acidizing solutions were often flushed with a 2, 4, or 6% potassium chloride (KCl) solution. Pad acid, to initiate fractures, contained 10−50% heavy aromatic petroleum naptha. Corrosion inhibitors contained isopropanol and propargyl alcohol. Clay stabilizers contained methanol. Musol solvents used for acid stimulation consisted of 60−100% 2 butoxyetha nol and 10−30% oxylated alcohol (Table SI C3).

Prior to 1999, "salt solutions" were commonly used for hydraulic fracturing. After 1999, a 6% KCl solution was used extensively for hydraulic fracturing often combined with CO_2 foam, with subsequent flushing using a 6% KCl solution. There were reported losses of KCl solutions during stimulation (e.g., at Tribal Pavillion 12−13 "lost thousands of bbls KCl"). Undiluted diesel fuel was used for hydraulic fracturing at three production wells before 1985. From the mid 1970s through 2007, there was widespread use of gelled fracture fluids (gelled water, linear gel, and cross linked gel). Diesel fuel #2 was used for liquid gel concentrates (Table SI C3). Ammonium chloride, potassium hydroxide, potassium metaborate, and a zirconium complex were used as cross linkers.

Gelled fracture fluids were used extensively with CO_2 foam (Table SI C4). Between 2001 and 2005, "WF 125" was used with CO_2 foam (often with a 6% KCl solution) for hydraulic fracturing (Table SI C5). A stimulation report (one of only three publicly available throughout the operating history of the Field) and MSDSs indicate that WF 125 contained diesel fuel #2, 2 butoxyethanol, isopropanol, ethoxylated linear alcohols, ethanol, and methanol. During 2001, WF 125 and unidentified product mixtures were used with a 6% KCl and a 10% methanol solution and CO_2 foam for hydraulic fracturing followed with a 6% KCl and 10% methanol solution flush. Other WF series compound mixtures of unknown composition were also used with CO_2 foam and in some cases with N_2 gas. Methanol, isopropanol, glycols, and 2 butoxyethanol were used in foaming agents (Table SI C3). Ethoxylated linear alcohols, isopropanol, methanol, 2 butoxyethanol, heavy aromatic petroleum naptha, naphthalene, and 1,2,4 trimethylbenzene were used in surfactants (Table SI C3). Slickwater (commonly with a 6% KCl solution) was used for hydraulic fracturing with and without CO_2 foam in 2004 and 2005, respectively (Table SI C6).

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At least 41.5 million liters (or ~11 million gallons) of fluid was used for well stimulation in the Pavillion Field (calculated from Table SI C2). Given lack of information at numerous production wells, this is an underestimate of actual cumulative stimulation volume. The cumulative volume of well stimulation in closely spaced vertical wells in the Pavillion Field is characteristic of high volume hydraulic fracturing in shale units.[57] In evaluating solute attenuation in USDWs, EPA[4] did not consider cumulative volumes of injection of well stimulation fluids in closely spaced vertical production wells common to CBM and tight gas production.

Evaluation of Impact to USDWs and Usable Water. In the Pavillion Field, impact to USDWs and usable waters depends upon the advective dispersive solute transport of compounds (or their degradation products) used for well stimulation to water bearing units (sandstone units at or near water saturation). Water bearing units exist throughout the Wind River and Fort Union Formations in the Pavillion Field. For instance, production well Unit 41X 10 was recommended for plugging and abandonment in 1980 because of "problems with water production and casing failure." In 1980, drilling logs at Tribal Pavillion 14−2 stated "Hit water flow while drilling at 4105−4109 ft" bgs. The magnitude of produced water production in the Pavillion Field is variable with some wells having high produced water production (e.g., 17.9 million liters ~4.7 million gallons at Tribal Pavillion 23−10 from July 2000 to present) (Table SI C2). In some cases, stimulation fluids were injected directly into water bearing units. For instance, at Tribal Pavillion 14−1, a cast iron bridge plug was used to stop water production in 1993 from an interval where hydraulic fracturing occurred using undiluted diesel fuel in 1964 (Table SI C2).

The migration of stimulation fluid to water bearing sand stone units in the Pavillion Field also likely occurred during fracture propagation and subsequent leakoff (loss of fluid into a formation in or near the target stratum). Leakoff increases in complex fracture networks as a result of lithologic variation over short distances and contact of stimulation fluid with permeable strata[58−61] expected during hydraulic fracturing in fluvial depositional environments of the Wind River and Fort Union Formations. Leakoff can remove much or most of the fracturing fluid even for moderate sized induced fractures.[58,59] Maximum ISIP values for acid stimulation and hydraulic fracturing were 19.5 and 40.1 MPa (Figure SI C2), respectively, equivalent to ~2000 and ~4100 m of hydraulic head. Pressure buildup during hydraulic fracturing far in excess of drawdown expected during produced water extraction makes full recovery of stimulation fluids unlikely.[4,62]

The migration of stimulation fluids to water bearing units also likely occurred as a result of loss of zonal isolation during well stimulation (SI Section D.1). Casing failure occurred at five production wells following well stimulation. Cement squeezes were performed above primary cement often days after hydraulic fracturing without explanation[63] at six production wells, potentially because of migration of stimulation fluid above primary cement. At one production well, stimulation fluid was injected just 4 m below an interval lacking cement outside of the production casing with a stimulation pressure of only 1.3 MPa indicating potential entry into the annular space.

Major ion concentrations in produced water sampled after stimulation (Table SI D1) were distinct from values expected in the Wind River Formation as evidenced by sample data from the WRIR,[48,53] Fremont County,[51] and domestic wells in and around the Pavillion Field which were representative of the Wind River Formation regardless of distance from production wells (Table 1, Figure 3). Using combined data sets in and around the Pavillion Field, and the nonparametric Mann−Whitney test (null hypothesis that two sample sets come from the same population), sodium, potassium, and chloride concentrations were higher and sulfate concentrations lower in produced water compared to concentrations expected in the Wind River Formation ($p = 6.6 \times 10^{-19}$, 2.1×10^{-15}, 2.6×10^{-16}, and 4.4×10^{-19}, respectively), providing direct evidence of impact to USDWs at depths of stimulation. Also, potassium increased with calcium concentrations and sulfate increased with TDS concentrations, respectively, in domestic wells but not in production wells (Figures SI D1). Chloride is a major component of TDS concentrations in production wells. Potassium/calcium and chloride/sulfate concentration ratios were higher in production wells than in domestic wells (Figures SI D2), further indicating anomalous potassium, chloride, and sulfate concentrations in production wells.

Produced water samples were collected from gas−water separators at four production wells and analyzed for organic compounds (Table SI D3, Figure SI D3) during the Phase II sampling event.[6] Samples from one production well appeared to be from both an aqueous and an apparent nonaqueous phase liquid with the latter exhibiting thousands of mg/L of benzene, toluene, ethylbenzene, xylenes (BTEX). Synthetic organic compounds methylene chloride and triethylene glycol (TEG) were detected in produced water samples at 0.51 and 17.8 mg/L, respectively indicating anthropogenic origin. Methylene chloride has been detected in flowback water in other systems,[64] including 122 domestic wells above the Barnett Shale TX,[65] and in air sampled near well sites.[66]

Sample Results at MW01 and MW02. Concentrations of potassium in MW01 and MW02 were higher than expected values in the Wind River Formation (Figure 3) at p values of 2.6×10^{-13} and 1.2×10^{-06}, respectively. High pH values (>11 standard units) were observed during purging at both monitoring wells (Tables SI E3b, SI E4b, Figures SI E5, SI E6, SI E7), indicating that elevated potassium concentrations may have been attributable to release of potassium from potassium oxides and sulfates during curing of cement[67−71] used for monitoring well construction. However, a number of observations were inconsistent with cement interaction as a causative factor for elevated pH, and there was extensive use of compounds containing potassium including potassium hydroxide during stimulation (Table SI C3). Water in contact with hydrating cement is saturated or oversaturated to portlandite ($Ca(OH_2)$)[72−74] and remains oversaturated prior to degradation or carbonation.[75−78] In contrast, water from monitoring wells was highly undersaturated to portlandite. Elevated pH in monitoring wells was not observed during monitoring well development until natural gas intrusion occurred in the wells, suggesting degassing as a possible cause of elevated pH (SI Section E.5). Also, potassium was detected at a concentration of 6000 mg/L in a bradenhead water sample having a pH of 10.86 standard units from Tribal Pavillion 13−1 (Table SI D1). This may indicate either high potassium concentration at depths below EPA monitoring wells due to well stimulation (water from bradenhead samples originated at some unknown distance above cement outside production casing at each production well) or interaction of bradenhead water with wellbore cement.

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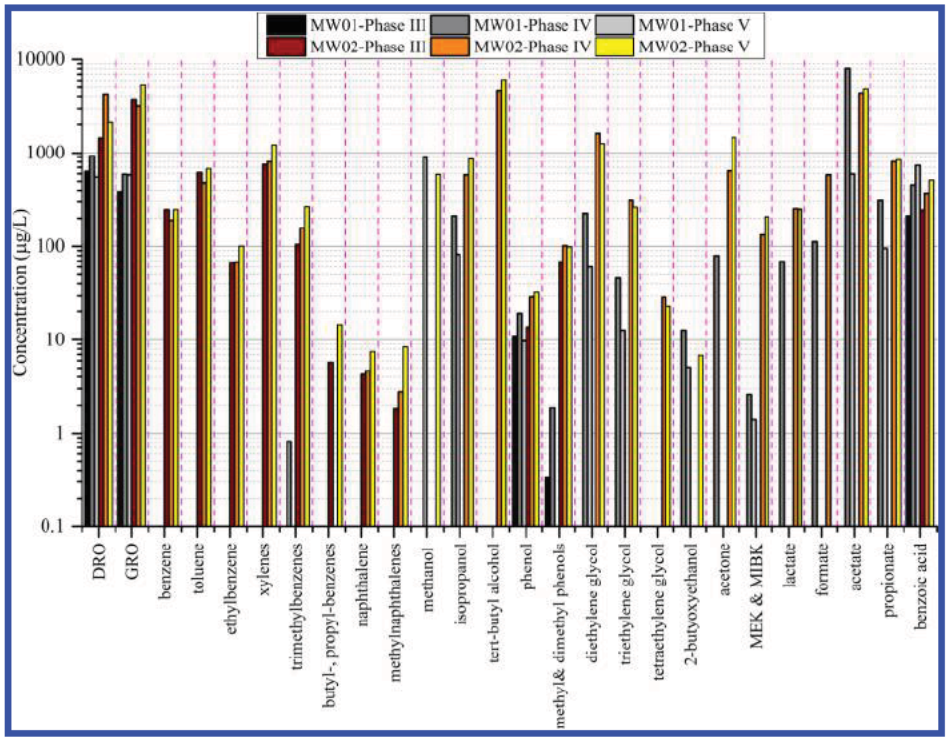

Figure 4. Summary of organic compounds detected by EPA in MW01 and MW02 during Phase III, IV, and V sampling events. Glycols, alcohols, and low molecular weight organic acids were not analyzed in Phase III. Alkylphenols and methanol (GC FID method) were only analyzed in Phase V. Organic compounds detections for MW01 and MW02 are summarized in Table SI E3a and Table SI E4a, respectively.

The median chloride concentration at MW02 was 469 mg/L (Figure 3), well above expected values in the Wind River Formation ($p = 7.0 \times 10^{-07}$). Compounds containing chlorides (e.g., KCl solutions) were used extensively for stimulation in the Pavillion Field. Sulfate concentrations in MW02 were below expected values in the Wind River Formation ($p = 2.7 \times 10^{-07}$) and not dissimilar ($p = 0.40$) to produced water concentrations. The Cl/SO_4 concentration ratio was similar to produced water (Figure SI D2) at MW02. Chloride and sulfate concentrations in MW01 were more typical of the Wind River Formation which may be due variation in well stimulation practices both spatially and over time.

Concentrations of organic compounds detected in MW01 and MW02 are summarized in Tables SI E3a, SI E4a and Figure 4. Diesel range organics (DRO) and gasoline range organics (GRO) were detected in MW01 and MW02 with maximum DRO concentrations of 924 and 4200 μg/L, respectively and GRO concentrations of 760 and 5290 μg/L, respectively. Benzene, toluene, ethylbenzene, *m,p* xylenes, and *o* xylene were detected in MW02 at maximum concentrations of 247, 677, 101, 973, and 253 μg/L, respectively, but were not detected at MW01. The maximum contaminant level (MCL) of benzene is 5 μg/L, so the observed maximum value was 50 times higher than the MCL. Nondetection of BTEX at MW01 is surprising given that the well was gas charged (foaming during sampling, Figure SI E9) with similar light hydrocarbon composition to MW02 (Table SI E5). Nondetection of BTEX may be due to increased dispersion and biodegradation of these compounds at the shallower depth of this well. We could find no published information on BTEX compounds in groundwater at concentrations detected in MW02 occurring above a gas field in the absence of well stimulation. However, further testing, such as compound specific isotope analysis of BTEX components present in natural gas from the Pavillion Field (Table SI D2) and water from MW02, is necessary to attribute detection of BTEX to well stimulation.

1,3,5 , 1,2,4 , and 1,2,3 Trimethylbenzene were detected at maximum concentrations of 71.4, 148, and 45.8 μg/L, respectively in MW02 and at an order of magnitude lower concentrations in MW01. Naphthalene, methylnaphthalenes, and alkylbenzenes were also detected in MW02 at concentrations up to 7.9, 10.2, and 21.2 μg/L, respectively. Similar to BTEX compounds, detection of trimethylbenzenes, alkylbenzenes, and naphthalenes could in principle reflect non anthropogenic origin but natural gas from the Pavillion Field and in EPA monitoring wells is "dry" (ratio of methane to methane through pentane concentration >0.95) (SI Section A.2, Table SI E5). Also, oil production in the vicinity of monitoring wells is very low or zero especially in the vicinity of MW02 (Table SI C2, Figure SI A5). Thus, the detection of higher molecular weight hydrocarbons in groundwater is unexpected. Trimethylbenzenes and naphthalenes were present in mixtures used for well stimulation (Table SI C3).

Other organic compounds used extensively for well stimulation were detected in MW01 and MW02 (Figure 4). Methanol, ethanol, and isopropanol were detected in monitoring wells at up to 863, 28.4, and 862 μg/L, respectively (Figure 4). *Tert* butyl alcohol (TBA) was detected at 6120 μg/L in MW02. Detection of TBA in groundwater has been associated with degradation of *tert* butyl hydroperoxide used for hydraulic fracturing.[79] Another potential source of TBA is degradation of methyl *tert* butyl ether (MTBE) associated with diesel fuel.[80−84]

Diethylene glycol (DEG) and TEG were detected in both monitoring wells at maximum concentrations of 226 and 12.7 μg/L, respectively, in MW01, and at 1570 and 310 μg/L respectively, in MW02 (Figure 4). Tetraethylene glycol was detected only in MW02 at 27.2 μg/L. MSDSs indicate that

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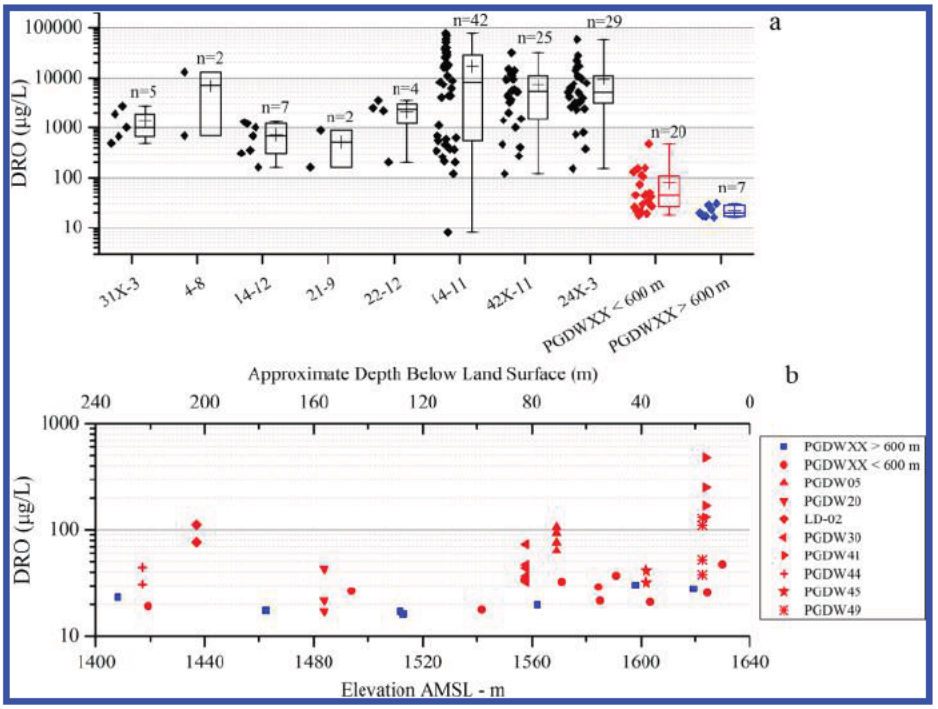

Figure 5. (a) Box and whisker plots of minimum and maximum, quartiles, median (line in boxes), mean (crosses in boxes) of diesel range organics (DRO) in shallow monitoring wells near unlined pits potentially receiving production fluids (abbreviations of production wells in Table SI C1) and domestic wells[6,8,9,39,45] (LD 20 and PGDWXX series) less than and greater than 600 m from pits. Mean values are used for domestic well sampled more than once. (b) DRO as a function of elevation and approximate depth below surface for domestic wells with results of multiple sample events illustrated.

DEG was used for well stimulation. Use of TEG was not specified. Polar organic compounds, including DEG, are commonly used as cement grinding agents.[85−88] DEG and TEG have been detected in leachate from cured cement samples under static (no flow) conditions.[89] Similar to elevated potassium detection, it is possible that detection of glycols could be attributable to cement used for monitoring well construction. However, mass flux scenario modeling, com monly used to evaluate potential concentrations of exposure of compounds released from materials in contact with drinking water under dynamic (flowing) conditions,[90] was conducted on MW01 (SI Section E.7) indicating unlikely impact. The relevance of dynamic testing is corroborated by the observation that detection of DEG and TEG was limited to a water sample from a gas production well[91] with nondetection in water samples from 83 domestic wells at five retrospective study sites[79,91−94] using high performance liquid chromatography with dual mass spectrometry at a reporting limit 5 µg/L in EPA's national study on hydraulic fracturing. 2 Butoxyethanol, a glycol ether used extensively for well stimulation in the Pavillion Field (Table SI C3), was detected in both monitoring wells at a maximum concentration of 12.7 µg/L. 2 Butoxyethanol was not detected in leachate from cured cement.[89].

The low molecular weight organic acids (LMWOAs) lactate, formate, acetate, and propionate were detected in both monitoring wells at maximum concentrations of 253, 584, 8050, and 844 µg/L, respectively (Figure 4). LMWOAs are anaerobic degradation products associated with hydrocarbon contamination in groundwater.[95,96] Acetate has been detected in produced water,[97−99] in impoundments used to hold flowback water from the Marcellus Shale,[100] and in produced water from the Denver Julesburg Basin, CO.[101] Acetate and formate were detected in flowback water from two different fracturing sites in Germany with investigators concluding that these compounds were likely of anthropogenic origin resulting from degradation of polymers used in the fracturing fluid.[102] Formate and acetate are also degradation products of methylene chloride.[103] Benzoic acid, a degradation product of aromatics, was also detected in both monitoring wells at a maximum concentration of 513 µg/L.

Phenols were detected in both monitoring wells with maximum concentrations of phenol, 2 methylphenol, 3&4 methylphenol, and 2,4 dimethylphenol at MW02 at 32.7, 22.2, 39.8, and 46.3 µg/L, respectively. Ketones were also detected in both monitoring wells with maximum concentrations of acetone, 2 butanone (MEK), and 4 methyl 2 pentanone (MIBK) at MW02 at 1460, 208, and 12.5 µg/L, respectively. Acetone, MEK, phenol, 2 methylphenol, 3&4 methylphenol, and 2,4 dimethylphenol were detected in produced water from the Denver Julesburg Basin.[101] MIBK, MEK, and acetone may result from microbial degradation of biopolymers used for hydraulic fracturing.[101] Nonylphenol and octylphenol, com monly present in mixtures of ethoxlyated alcohols, were detected in both monitoring wells with maximum concen trations at MW02 at 28 and 2.9 µg/L, respectively. Ethoxlyated alcohols were used for well stimulation in the Pavillion Field.

Detection of organic compounds, especially those that cannot be attributed to cement, and degradation products of compounds known to have been used for production well stimulation in both MW01 and MW02 provide additional evidence of impact to USDWs and indicate upward solute migration to depths of current groundwater use. Installation of additional monitoring wells at depths similar to MW02, with sample analysis supplemented by state of the art analytical methods better suited to detection of compounds present in

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stimulation fluids (e.g., liquid chromatography coupled with quadrupole time of flight mass spectrometry[104−106]), is necessary to evaluate long term risk to domestic well users in the Pavillion Field.

Assessment of Potential Impact of Unlined Pits to Domestic Wells. EPA[7] previously reported disposal of diesel fuel based (invert) drilling mud and production fluids (flow back, condensate, produced water) in unlined pits in the Pavillion Field and resultant groundwater contamination in surficial Quaternary deposits in shallow monitoring wells sampled by EPA in the vicinity of three unlined pits but did not document the extent of these disposal practices. At least 64 unlined pits were used for disposal of drilling fluids of which invert mud was disposed in 57 pits consisting of up to 79% diesel fuel (Tables SI F1, SI F2). As many as 44 of 64 unlined pits were used or likely used for disposal of production fluids. Unlined pits were emptied and closed in 1995.[107,108]

A summary of information available on disposal of drilling and production fluids in pits is provided in Table SI F2. This summary includes results of soil and groundwater sampling, excavation volumes and associated criteria (1000−8500 mg/kg total petroleum hydrocarbons), proximity and direction of unlined pits to domestic wells, and recommendations by WOGCC[44] for further investigation (or no investigation).

The field operator has collected groundwater samples in surficial Quaternary deposits at 12 unlined pit locations.[44] The highest reported concentrations of GRO and DRO were 91 000 and 78 000 μg/L, respectively (Figure 5, Table SI F2). Benzene, toluene, ethylbenzene, and xylenes were detected at five locations at concentrations up to 1960, 250, 240, and 1200 μg/l, respectively (Table SI F2). Thus, sample results indicate impact to surficial groundwater in Quaternary deposits.

There may be as many as 48 domestic wells within 600 m of unlined pits of which 22 domestic wells were sampled by EPA[6,8,9,39] and 11 were resampled by WDEQ[45] (Table SI F3). DRO concentrations in domestic wells <600 m from unlined pits likely receiving production fluids were elevated ($p = 0.003$) compared to domestic wells >600 m from unlined pits (Figure 5a). DRO was detected at 752 mg/kg in a reverse osmosis filter sample from a domestic well (PGDW20) during the Phase II sampling event[8] (Table SI F3). Concentrations of DRO in domestic wells generally decreased with depth (Figure 5b). Another potential source of DRO in some domestic wells (Table SI G1) is invert mud remaining in boreholes. However, differentiation from other source terms (unlined pits and stimulation) is not possible with currently available data (SI Section G.1).

At two domestic wells (PGDW05 and PGDW30), chromatograms for DRO analysis suggest a diesel fuel source (Figure SI F1a, b). Chromatograms of aqueous (Figure SI F2a) and carbon trap samples (Figure SI F2b) for DRO at another domestic well (PGDW20) indicated the presence of heavy hydrocarbons in water. All three domestic wells are located near unlined pits likely used for disposal of production fluids.

Adamantanes were detected at low aqueous concentrations (<5 μg/L) at four domestic wells (PGDW05, PGDW20, PGDW30, and PGDW32) (Table SI F3). Admantane, 2 methyl adamantane, and 1,3 dimethyladamantane were detected in a reverse osmosis filter sample at PGDW20 at concentrations of 420, 9400, and 2960 μg/kg, respectively. Adamantanes were detected in produced water up to 74 mg/L (Table SI D3) indicating disposal in unlined pits as a potential source term. The inherent molecular stability of admantanes and other diamondoid compounds imparts thermal stability resulting in enrichment in manufactured petroleum distillates.[109] Diamondoids are resistant to biodegradation[110,111] resulting in their use as a fingerprinting tool to characterize petroleum and condensate induced groundwater contamination.[112]

2 Butoxyethanol was detected at 3300 μg/L in a domestic well (PGDW33)[45] (Table SI F3). The depth of this domestic well is only 9.1 m bgs and is located within 134 m of an unlined pit used for disposal of production fluids. Other compounds, including BTEX, associated with production well stimulation (e.g., isopropanol) were detected at lower concentrations (<10 μg/L) in other domestic wells (Table SI F3). Sample results at domestic wells suggest impact from unlined pits and the immediate need for further investigation including installation of monitoring wells in the Wind River Formation. Since flood irrigation is common in the vicinity of unlined pit areas, the lateral extent of groundwater contamination is potentially greater in the Wind River Formation than in overlying surficial Quaternary deposits due to "plume diving" (i.e., uncontaminated water overlies portions of a contaminant plume).[113−115]

Our investigation highlights several important issues related to impact to groundwater from unconventional oil and gas extraction. We have, for the first time, demonstrated impact to USDWs as a result of hydraulic fracturing. Given the high frequency of injection of stimulation fluids into USDWs to support CBM extraction and unknown frequency in tight gas formations, it is unlikely that impact to USDWs is limited to the Pavillion Field requiring investigation elsewhere.

Second, well stimulation in the Pavillion Field occurred many times less than 500 m from ground surface and, in some cases, at or very close to depths of deepest domestic groundwater use in the area. Shallow hydraulic fracturing poses greater risks than deeper fracturing does,[57,116] especially in the presence of well integrity issues[117,118] as documented here in the Pavillion Field. Additional investigations elsewhere are needed.

Finally, while disposal of production fluids in unlined pits is a legacy issue in Wyoming, this practice has nevertheless caused enduring groundwater contamination in the Pavillion Field. Impact to groundwater from unlined pits is unlikely to have occurred only in the Pavillion Field, necessitating investigation elsewhere.

■ ASSOCIATED CONTENT

● Supporting Information

The Supporting Information is available free of charge on the ACS Publications website at DOI: 10.1021/acs.est.5b04970.

Supplemental discussion and tables summarizing data sets are provided in the Supporting Information (SI) portion of the paper (PDF)

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Notes

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EXHIBIT B

SCIENTIFIC AMERICAN™

ENVIRONMENT

Fracking Can Contaminate Drinking Water

It took nearly a decade, but former EPA scientist Dominic DiGiulio has proved that fracking has polluted groundwater in Wyoming

By Gayathri Vaidyanathan, ClimateWire on April 4, 2016



Credit: Education Images / Contributor via Getty Images

Former EPA scientist Dominic DiGiulio never gave up.

Eight years ago, people in Pavillion, Wyo., living in the middle of a natural gas

basin, complained of a bad taste and smell in their drinking water. U.S. EPA launched an inquiry, helmed by DiGiulio, and preliminary testing suggested that the groundwater contained toxic chemicals.

Then, in 2013, the agency suddenly transferred the investigation to state regulators without publishing a final report.

Now, DiGiulio has done it for them.

He published a comprehensive, peer-reviewed study last week in *Environmental Science and Technology* that suggests that people's water wells in Pavillion were contaminated with fracking wastes that are typically stored in unlined pits dug into the ground.

The study also suggests that the entire groundwater resource in the Wind River Basin is contaminated with chemicals linked to hydraulic fracturing, or fracking.

This production technique, which involves cracking shale rock deep underground to extract oil and gas, is popular in the United States. It's also controversial. There are thousands of wells across the American West and in California that are vulnerable to the kind of threat documented in the study, DiGiulio said. He is now a research scholar at Stanford University.

"We showed that groundwater contamination occurred as a result of hydraulic fracturing," DiGiulio said in an interview. "It contaminated the Wind River formation."

The findings underscore the tension at the heart of the Obama administration's climate change policy, which is based on replacing many coal-fired power plants with facilities that burn cleaner natural gas.

That reliance on natural gas has sometimes blinded agencies to local pollution and health impacts associated with the resource, said Rob Jackson, an earth scientist at Stanford and co-author of the study. In 2015, EPA said in a controversial draft study that hydraulic fracturing has not had "widespread, systemic impacts on drinking water resources in the United States" (*Greenwire*, June 4, 2015).

"The national office of EPA has tended to downplay concerns of their own investigators, in part because the Obama administration has promoted natural gas," Jackson said. "Natural gas is here to stay. It behooves us to make it as safe and environmentally friendly as possible."

EPA spokeswoman Julia Valentine said the agency hasn't yet finalized its assessment that natural gas has no "widespread, systemic impacts." As part of that process, the agency will evaluate all recent research, including DiGiulio's study, she said.

Encana Corp., the company that operated in the Pavillion basin, said repeated testing has shown people's water wells are safe for consumption.

"After numerous rounds of testing by both the state of Wyoming and EPA, there is no evidence that the water quality in domestic wells in the Pavillion Field has changed as a result of oil and gas operations; no oil and gas constituents were found to exceed drinking water standards in any samples taken," said Doug Hock, an Encana spokesman.

LABS CAN'T SEE FRACKING CHEMICALS

Water testing began in 2009 when the local EPA office responded to complaints

from residents. EPA headquarters, and DiGiulio, got involved in January 2010.

“Conducting a groundwater investigation related to fracking is extremely complicated,” DiGiulio said. “It is difficult because a lot of the compounds used for hydraulic fracturing are not commonly analyzed for in commercial labs.”

These labs were originally set up for the Superfund program, under which EPA cleans up the most contaminated sites in the nation. They are great at detecting chemicals found at Superfund sites but not as good at detecting chemicals used in fracking, DiGiulio said.

“You have some of these very water-soluble exotic compounds in hydraulic fracturing, which were not amenable to routine lab-type analysis,” he said.

One such chemical was methanol. The simplest alcohol, it can trigger permanent nerve damage and blindness in humans when consumed in sufficient quantities. It was used in fracking in Pavillion as workers pumped thousands of gallons of water and chemicals at high pressure into the wells they were drilling. About 10 percent of the mixture contained methanol, DiGiulio said.

So the presence of methanol in the Pavillion aquifer would indicate that fracking fluid may have contaminated it. But methanol degrades rapidly and is reduced within days to trace amounts. Commercial labs did not have the protocol to detect such small traces, so DiGiulio and his colleagues devised new procedures, using high-performance liquid chromatography, to detect it. They devised techniques for detecting other chemicals, as well.

By then, Pavillion was roiling in controversy as EPA and residents collided with industry. EPA had drilled two monitoring wells, MW01 and MW02, in 2011, and its testing had found benzene, diesel and other toxic chemicals. But these

results were contested by oil and gas industry representatives, who criticized EPA's sampling techniques (*EnergyWire*, Oct. 12, 2012). They pointed to a technical disagreement between EPA and the U.S. Geological Survey on the best methods to cast doubt on EPA's overall findings.

EPA realized it needed a consensus on its water testing methodology. In February 2012, it assembled a technical team from the USGS, Wyoming state regulators and tribal representatives from the Wind River Indian Reservation. They retested the monitoring wells in April 2012.

This time, they also tested for methanol. But EPA never released those results to the public. In 2013, the agency backed out of its investigation in Pavillion, handing it over to state regulators, who moved forward using a $1.5 million grant from Encana (*EnergyWire*, June 21, 2013). DiGiulio said the decision had come from EPA's senior management.

METHANOL, DIESEL AND SALT

Industry representatives repeatedly pointed out that EPA had not published a peer-reviewed study on its findings.

"If the EPA had any confidence in its draft report, which has been intensely criticized by state regulators and other federal agencies, it would proceed with the peer review process," Steve Everley, a spokesman for Energy in Depth, an industry group, said at the time. "But it's not, which says pretty clearly that the agency is finally acknowledging the severity of those flaws and leaning once again on the expertise of state regulators."

In December 2015, state regulators published a draft of their findings. It stated that fracking had not contributed to pollution in Pavillion, according to the *Casper Star Tribune*. The report said the groundwater is generally suitable

for people to use.

When DiGiulio retired from EPA in 2014, he trained his sights on Pavillion. He felt he had to finish his work.

“EPA had basically handed the case over and a peer-reviewed document was never finalized,” he said. “If it is not in the peer-reviewed literature, then it presents a problem with credibility in terms of findings. It is important that the work be seen by other scientists and enter the peer review realm so that other scientists will have access to virtually everything.”

Since 2012, a trove of new data had accumulated from USGS, EPA and state regulators. He obtained EPA’s methanol testing results through a Freedom of Information Act request and downloaded the rest of the information from the Wyoming oil and gas regulator’s website. All of it was publicly available, waiting for the right person to spend a year crunching the information.

The end result: a peer-reviewed study that reaffirms EPA’s findings that there was something suspicious going on in Pavillion. More research is needed.

The sampling wells contained methanol. They also contained high levels of diesel compounds, suggesting they may have been contaminated by open pits where operators had stored chemicals, DiGiulio said.

The deep groundwater in the region contained high levels of salt and anomalous ions that are found in fracking fluid, DiGiulio said. The chemical composition suggests that fracking fluids may have migrated directly into the aquifer through fractures, he said.

Encana had drilled shallow wells at Pavillion, at depths of less than 2,000 feet and within reach of the aquifer zone, said Jackson of Stanford University.

"The shallow hydraulic fracturing is a potential problem because you don't need a problem with well integrity to have chemicals migrate into drinking water," he said.

The study also shows that there is a strong upward flow of groundwater in the basin, which means contamination that is deep underground could migrate closer to the surface over time.

"Right now, we are saying the data suggests impacts, which is a different statement than a definitive impact," DiGiulio said. "We are saying the dots need to be connected here, monitoring wells need to be installed."

SHALLOW WELLS ARE PREVALENT

EPA came to the same conclusion in a blistering response last week to Wyoming's draft findings.

"Many of our recommendations suggest that important information gaps be filled to better support conclusions drawn in the report, and that uncertainties and data gaps be discussed in the report," said Valentine, the EPA spokeswoman.

The state had tested people's water wells and detected 19 concerning chemicals. But regulators had concluded that only two chemicals exceeded safe limits and the water could be used for domestic purposes. EPA disagreed. Nearly half the 19 chemicals are unstudied, and scientists do not know the safe level of exposure, EPA stated.

Keith Guille, spokesman for Wyoming's Department of Environmental Quality,

declined to comment on DiGiulio's study and on EPA's response to the state's draft report. The state is finalizing its findings and has its eyes set on the future, he said.

"We are not done yet," Guille said.

Energy in Depth, the industry group that had earlier criticized EPA for not publishing a peer-reviewed study, said that DiGiulio's study is "a rehash of EPA's old, discredited data by the very researcher who wrote EPA's original report."

Jackson stressed that the contamination seen at Pavillion could occur in other states where, according to a study published last year in *Environmental Science & Technology* on which he was the lead author, fracking sometimes occurs at shallow depths. That includes the Rocky Mountain region, New Mexico, Colorado, Utah, Montana and California. At present, no state has restrictions on how shallowly a company can frack, he said.

"Shallow hydraulic fracturing is surprisingly common, especially in the western U.S.," Jackson said. "Here in California, half of the wells are fracked shallower than about 2,000 feet."

Given the threat, fracking deserves much greater scrutiny than it has so far received from the Obama administration, said Hugh MacMillan, a scientist with the environmental group Food and Water Watch.

"Communities have never argued that every well goes bad; they've argued that when you drill and [are] fracking thousands, too many go bad," he said. "For those living on groundwater, it becomes a matter of luck, and that's not right, because over years, more and more people's luck runs out."

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EXHIBIT C

BREAKING

City could offer early retirement to 53 Casper employees

http://trib.com/business/energy/former-epa-lead-investigator-in-pavillion-releases-study-linking-fracking/article_31b296ee-560c-5832-8768-26bbeff2833a.html

FEATURED

Former EPA lead investigator in Pavillion releases study linking fracking to water contamination

Benjamin Storrow 307-335-5344, Benjamin.Storrow@trib.com Mar 29, 2016



Courtesy, U.S. Environmental Protection Agency

Workers for the U.S. Environmental Protection Agency test a monitoring well near Pavillion for contaminants in December 2010

More than four years after he penned the explosive report linking fracking to contaminated drinking water outside of Pavillion, Dominic DiGiulio is releasing the study he always hoped the U.S. Environmental Protection Agency would: A rebuttal to the years of criticism levied against federal investigators.

The study by DiGiulio and fellow Stanford University researcher Robert Jackson concludes much of the alarm over the EPA's 2011 draft report was warranted.

Poor well construction, the proximity of fracked wells to drinking water sources and the prevalence of unlined disposal pits, where diesel-oil based drilling muds and other production fluids were stored for decades, bolsters the EPA's initial contention that natural gas operations were responsible for a polluted aquifer east of Pavillion, they say.

The researchers pored over more than 1,000 well files, including drilling and completion reports, regulatory actions and cement bond logs. The files provide a link between the chemicals listed in frack treatment reports and compounds later discovered in two EPA monitoring wells, they say.

"We documented impact to a water resource as a result of hydraulic fracturing for the first time," DiGiulio said in an interview Monday.

The researchers say the findings support calls to limit fracking at shallower depths where well stimulations are more likely to contaminate drinking water supplies.

Unlike many unconventional oil and gas plays, where fracking is conducted at deep intervals underground, Pavillion's gas wells were drilled to the same depth as nearby water wells.

"No state has any restrictions on how shallowly you can frack a well," Jackson said. "That needs to change."

The report comes as Wyoming regulators contemplate the next step in their own investigation into the Pavillion field and amid a growing barrage of criticism over the state's inquiry. A draft study released by the Department of Environmental Quality in December found little evidence of oil and gas pollution in water samples taken at 13 domestic water wells.

But the EPA, in a review of Wyoming's investigation released earlier this month, said the state lacked the data to support its claim that much of the pollution was naturally occurring and not attributable to gas production. Wyoming officials have called for additional study, but have yet to provide specific details on what that work would entail.

A spokesman for Encana Corp., the operator of the Pavillion Field, said numerous rounds of testing by state and federal regulators have produced "no evidence that the water quality in domestic wells in the Pavillion Field has changed as a result of oil and gas operations; no oil and gas constituents were found to exceed drinking water standards in any samples taken."

That DiGiulio and Jackson's study was released under the banner of Stanford University and published in the peer-reviewed journal Environmental Science and Technology is telling in its own right.

The draft Pavillion report DiGiulio authored for the EPA in 2011 created a national firestorm, attracting criticism from Congressional Republicans, Wyoming officials and industry representatives, who said the study was based on shoddy science.

EPA dropped its investigation in 2013. DiGiulio, who worked at the agency for 31 years and served as lead investigator in Pavillion, retired the next year. He has been a visiting scholar at Stanford ever since.

A Star-Tribune investigation later showed EPA brass worried it could not successfully defend the study and chose to abandon it.

Many of the criticisms directed at EPA over the years went unaddressed by the agency, enabling misconceptions about the investigation to linger, DiGiulio said.

"When I retired the technical story wasn't fully told," he said."I think it's important for someone to sort through all the data and draw conclusions. And unfortunately that had not be done. That's what motivated me to try and review everything, including comments from industry."

DiGulio and Jackson analysis offer a competing narrative to the criticism directed at the EPA by state regulators and industry representatives.

Industry critics once argued samples from the EPA's groundwater monitoring wells should be discounted because of faulty construction. But the compounds found in those monitoring wells are more commonly associated with fracking—not the cements used to encase a well, DiGiulio and Jackson say.

State regulators have said nearby natural gas wells were properly constructed. DiGiulio and Jackson documented five cases where wells failed after being fracked. The failures raise the possibility that fracking fluid could escape a well.

And water samples taken from EPA's monitoring wells more closely resembled produced water from gas operations than drinking water found throughout the Wind River Formation in Fremont County, belying the claim that the contamination was naturally occurring.

The Stanford researchers stop short of linking fracking to contaminated drinking water samples. Contamination found in domestic wells is more likely connected to 44 unlined pits, where production fluids were disposed between the 1960s and 1990s, they say.

"Cumulatively overtime that's a lot of fluid going into those pits," DiGiulio said. "If I lived in the Pavillion oilfield, I would be much more concerned about those pits. I would view hydraulic fracturing as a long term potential risk in need of further investigation. But if I actually lived out there, I'd be focused on those pits right now."

There is evidence, however, that fracking contaminated the aquifer underlying the Pavillion field. The distinction helps explain the difference in Wyoming's and Stanford's findings.

Wyoming considered 13 drinking water wells, but did not review the findings from EPA monitoring wells. In all, state investigators examined roughly a third of the well files in their review of the Pavillion field, DiGuilio and Jackson say. The Stanford researchers also examined the remaining two-thirds of the documents.

The history of fracking, well failures and monitoring well results, among other factors, tell the wider story of a contaminated aquifer, they say.

"We've shown clear evidence of contamination to the aquifer itself," Jackson said. "Contamination to domestic water wells may have happened. We don't know. If you continue to do this, if you continue to allow this, you will have more problems, even with domestic water wells in the future."

And that points to what the researchers say is the wider problem. Frack jobs in Pavillion were often completed at depths ranging from 750 to 1,050 feet, or in close proximity to water wells. Unlike many horizontal wells, which can travel to depths beyond 15,000 feet, no layer of rock exists to keep frack fluid and water separate, increasing the risk of contamination over time.

"The paper documents issues with well integrity at Pavillion," Jacksons said. "You don't have to have a problem with well integrity though, when the hydraulic fracturing is within a few hundred feet of domestic water wells, and when your surface casing is to shallow and you don't have cement in others."

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Currents



Top 10 offensive linemen in the 2016 NFL Draft



Gallery: Remembering Chyna, 1970-2016



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Today's Birthdays, April 26: Carol Burnett

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Exhibit 3

HYDRAULIC FRACTURING ON PUBLIC LANDS

TRIBAL CONSULTATION SESSION

JANUARY 10, 2012

HYATT HOTEL

TULSA, OKLAHOMA

STEVE TRYON, Bureau of Land Management, Tulsa, OK, Meeting Facilitator

STEVEN WELLS, Bureau of Land Management, Washington, DC

MIKE WORDEN, Bureau of Land Management, Washington, DC

JIM STOCKBRIDGE, Bureau of Land Management, Colorado

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JANUARY 10, 2012

MORNING SESSION

STEVE TRYON: I feel like I'm at church today, where everybody started at the back pews and filled in, so I'm going to come a little forward.

UNIDENTIFIED SPEAKER: Pass the offering plate.

STEVE TRYON: My name is Steve Tryon. I am the Field Manager for the Bureau of Land Management in Oklahoma. My office is based here in Tulsa. We also have a handful of people representing our Moore, Oklahoma, field station. And I look around and I see familiar faces from the Bureau of Indian Affairs, but also primarily from the tribes in Oklahoma.

Our office in Tulsa actually represents federal and Indian minerals in a three-state area. So that includes Kansas, Oklahoma, and Texas. And we have staff who really wander the earth that go as far south as the border with Mexico and on up to the northern stretches of Kansas.

It's an honor to be able to host the first of four listening sessions and tribal consultations on the subject of hydraulic fracturing. Most of you know that hydraulic fracturing, or completion, or stimulation, or any of the things that you may see as shorthand, or

we can do that. We try. And stay tuned on this one. As you know, it's an election year, so anything can happen.

STEVE TRYON: So after lunch, Jim Stockbridge is going to walk us through the schedule that would lead to a draft rule-making and a final rule-making, which, of course, is a public process and everybody in this room has a chance to participate again. I think that would be a chance, when he's doing that presentation, is, does that schedule somehow need something special for Indian tribes in addition to the public outreach that all of you are going to be invited to. So that's a chance to come back on this subject.

If people can hang in there with us, what we had intended to do till about the top of the hour was to talk about water quality and EPA's designs on protecting water quality. If we can do that before we break, that keeps Mike Worden from our Washington office from having to do back-to-back presentations, which I promised him. And then before we break today, we're going to kind of do this all over again about putting your questions and thoughts out there. So give us a chance to get it out first and then come back and revisit it.

So if we can move to Mr. Worden.

MIKE WORDEN: Thank you, Steve.

As Steve said, my name is Mike Worden. I'm a petroleum engineer with our Washington office, I've been there for a year and a half, and I'm the team lead on our hydraulic fracturing attempts at regulation, or thoughts on regulation.

11:26:08AM

This basically started about the time I arrived in Washington. November 30th of 2010, Secretary Salazar held a public forum in Washington, DC on hydraulic fracturing. The BLM subsequently went out in April to

11:26:30AM

Bismark, North Dakota, Little Rock, Arkansas, and Boulder, Colorado, for public listening sessions on what people of the nation felt about hydraulic fracturing. And three of the major points that came out of that were, people wanted to see disclosure -- I think we've

11:26:46AM

seen a lot of that in the newspaper -- of components that are used in hydraulic fracturing fluids. Part of these forums, we had a panel that was -- the public was represented, industry was represented, and in some cases there was tribal representation where there was,

11:27:06AM

particularly in Bismark, where that was -- they were invited and they accepted. So there was a number of different stakeholders involved on the panel.

And, in addition to disclosure, one of the issues was protection of trade secrets. And so we're trying to

:27:26AM

be -- strike that balance.

The other major, second major topic would be wellbore integrity. As Galen pointed out in his presentation, about how we can protect the resources using proper wellbore construction.

11:27:42AM And, finally, one of the big issues, third big issue was water quality. So we made an attempt to address this here today, or are going to make an attempt. I asked EPA to put together a presentation, and up until last night they were going to come and

11:28:02AM present this. So bear with me. I'm not a water quality expert. Like I said, I'm a petroleum engineer. But I'm going to do my best to present the presentation that EPA put together. And when we get on to the rule later on, my actual talk, hopefully, I'll be a little bit better

11:28:20AM at it.

What is water quality? It's the suitability of water for a particular use based upon the physical, chemical and biological characteristics, such as taste, temperature, dissolved mineral content, purity.

11:28:38AM There are several sources of drinking water. There's surface water, rainwater, desalinized seawater if you live close to the ocean, reclaimed wastewater, and of particular interest when we're talking about drilling wells is groundwater.

:28:56AM How do you measure groundwater quality? What are

we looking at? Or what are they looking at when they measure groundwater quality? It's measured at the source. You look at the temperature. You look at the pH, the acid, whether it's alkaline. Dissolved oxygen. Total dissolved solids, which is going to come up again and again in this presentation. Other things you look at in the laboratory, whether it has organic pesticides or benzene or toluene.

One of the main points we're looking at is this total dissolved solids, which is basically a measure of how water tastes, where it's used, what's available for drinking, for livestock, for agriculture. So TDS, you'll hear that term used. It's total dissolved solids, is the measurement of the total salts and compounds dissolved. So you can't see it in the water. It's dissolved into the water.

It can be any mineral, salts, metals, cations, anions. It can also be inorganic salts. A number of things that, as not a chemist, I'd prefer not to talk about.

And we'll get to the next slide, which is some ranges of total dissolved solids. We think about freshwater. EPA has standards that drinking water has to be less than 500 parts per million -- that's less than 500 grams per liter of water -- for it to be

considered drinking water. For agricultural uses, we're looking at in the -- they look in the range up to 2,000 parts per million. You can see down there, saltwater is 30,000 to 50,000 parts per million.

11:31:04AM I remember as a child going swimming in the ocean, you certainly didn't want to be drinking that. And if you're like me, and like raw oysters, you try not to get too much of that in your system.

So that gives us a -- what I had wanted the EPA 11:31:20AM to present was a basis for us to talk on this. What is freshwater? What is drinkable water? What are waters that our rule is going to look to protect, or should be looking to protect? So I wanted to establish this background with this, where we're looking at the 11:31:36AM drinking water is 500 parts per millions and agricultural uses usually start at 2,000 parts per million.

Next slide, please. We'll get into that a little bit more, but all of this is defined in the Safe 11:31:52AM Drinking Water Act, and they define underground sources of drinking water. And it's codified in -- here's some legalese -- 40 CFR 104(b)(6.3), which is of a section of the Safe Drinking Water Act that was passed in 1974. It defines an underground source of drinking water, the :32:20AM definition: Assures that the potential resources of

drinking water are protected as stringently as those sources currently used for drinking water.

So we're looking at potential sources of drinking water, not just those that are being used today. So they're protected the same. They need to be protected the same.

We heard earlier that we want to protect water for our future generations. So if we're not using that water today, we may be using it ten years, a hundred years from now. So we don't want to contaminate it now so it's unusable in the future.

It talks about, the Safe Drinking Water Act talks about aquifers. Definition of an aquifer is a formation capable of yielding a significant amount of water to a well. Does not mandate that the formation currently be used as a producing source, which is what I said earlier, and does not have to be drinking water well -- does not have to have drinking water wells completed into it. But we're trying to protect potential sources that could be used, or the EPA is, under the Safe Drinking Water Act. The EPA is the one authorized to protect drinking water under the Safe Drinking Water Act. The Department of Interior has no authorities under the Safe Drinking Water Act.

This is a nice drawing. It kind of puts it maybe

in a visual perspective of where drinking water would be the, quote/unquote, usable quality of water, and then this brackish and saltwater that it's highly unlikely it's approaching seawater concentrations. And it very much moves from close in surface the deeper you go.

11:34:04AM

It's important to note that it's not the same around the country. So region to region, this same general dynamic follows, but in some areas we're hitting the only usable water at 600 feet. In other areas it's at 2,000 feet, which is important that when the Bureau, BLM, is reviewing permits to drill, that we're looking at where the usable water is and protecting it. That's why we have regional offices or field offices where we've got geologists and petroleum engineers reviewing this for that area. This isn't regulation -- we're not looking to have regulation from on high in Washington saying this is where it's going to cut off. We need that local input. And when the proponent proposes where they're going to set their casings at and where they're going to cement to, this information is being reviewed by the local office to see that these usable sources of water are being protected.

11:34:26AM

11:34:44AM

11:35:02AM

One of the ways we -- next slide, please. Several of the ways you protect groundwater quality, you can see the one that's highlighted. That's the one

we're going to talk about next. Watershed level controls, environmental controls, source water controls, drinking water system controls, groundwater quality standards, and then the Underground Injection Control Program. That's -- under the Safe Drinking Water Act, EPA regulates or gives primacy to states or tribes to regulate disposal wells.

Next slide. The way that -- what they use to regulate these are set out in the law and any further regulation that EPA did after the law was passed in '74.

What the Safe Drinking Water Act is, it gives EPA the authority to set drinking water standards. Required water systems to be monitored to ensure compliance. They created this Underground Injection Control Program to protect drinking water resources from contamination through underground injection. It defined what underground injection is. Defined endangering drinking water sources. These are all in the law itself.

It recommended -- it has recommended compliance of contaminant levels and recommended maximum contaminant levels as specified in the law. And for -- and it also provides treatment techniques for those chemicals that don't -- that don't have maximum contaminant levels.

Next slide, please. It required the EPA to draft

regulations to protect drinking water, which I said earlier. But these regulations, they can -- through the law, it allows states -- and I'm trying to think. I don't know all my states that well, but I believe
11:37:28AM Oklahoma is one that does have primacy, and some tribes in this room may have primacy of regulating their Underground Injection Control Program. But it's -- EPA sets the standard and then states and tribes can apply to demonstrate that they can meet those standards or
11:37:54AM that their standards are more stringent, and then they have primacy over the program.

But what the program does is it sets a threshold for the amount of total dissolved solids, one of the things that's in there, that can be of waters that need
11:38:14AM to be protected. So it -- maybe we should go back to the slide on page 8.

The standard of the Safe Drinking Water Act is this 10,000 parts per million TDS. Any waters above that need to be protected under the Underground
11:38:36AM Injection Control Program, with one caveat, if they're exempted and the agency with primacy can exempt them. But typically all those waters need to be protected.

Current BLM regulations, our Onshore Order II which deals with drilling uses that same value. It was
:38:58AM specifically, when the regulation was written in 1988,

it was decided that this is good for the Underground Injection Control Program. We're another federal agency. That number is a good number. So that is the number that is currently in Onshore Order II, with a little caveat here, getting into my later talk, that we also have regulation that talks about 5,000 TDS being the number, and that was published prior to Onshore Order II. So Onshore Order II actually is the precedent because it came out after. The lawyers tell me that the law that's passed, or regulation that's passed the latest is the one that takes precedence.

So, in theory, or in actuality, we've been using this 10,000 TDS whenever an Application for Permit to Drill is filed, to protect all those waters, to isolate them. As Galen showed earlier, surface casings run through them, cement is circulated back, covering the entire zone, so those zones are protected.

One of the things that we'll talk about this afternoon in the proposed regulation is to rewrite that section in our regs that say 5,000. I just wanted to point that out, that when we change that, it really hasn't changed anything, but it's more of an administrative act because we've already been using this 10,000. But it's very unclear when you look at the BLM's regulations that this is what it is. So we're

11:39:22AM
11:39:44AM
11:40:02AM
11:40:20AM
:40:38AM

trying to basically use this opportunity to clean up that part of our regulations. And I'll discuss that a little bit more this afternoon.

But that's everything I know about water quality, unless you ask me a question and I know more. Are there any questions?

11:40:56AM

ANDREW YATES: Andrew Yates with the Osage. You know, we've used the 10,000 parts per million as our basic USDW. Did you just say that you were going to try to change that to 5,000 parts per million?

11:41:26AM

MIKE WORDEN: No. I'm saying that our current -- one of our two current rules says 5,000, and that's going to be changed to ten so that it all matches.

ANDREW YATES: Okay.

STEVEN WELLS: In the BLM rules.

MIKE WORDEN: Yeah, in the BLM rules, yes. So EPA has the 10,000 parts per million established, and BLM in actuality has it established, but one of our rules says 5,000 and we're going to change that, or we propose changing that to ten so there's no confusion.

11:41:54AM

Thank you for asking a clarifying question. That was what -- that was something I was trying to make a point, and apparently I, by the looks on everybody's faces, I hadn't made that point.

:42:10AM

From:	Kelly.Suzanne@epamail.epa.gov
To:	Dutta, Subijoy
CC:	Kobelski.Bruce@epamail.epa.gov; Kumar.Chitra@epamail.epa.gov; John Ajak; Jollie.Jeff@epamail.epa.gov; Bergman.Ronald@epamail.epa.gov; Steven Wells
Sent:	1/10/2013 3:19:28 PM
Subject:	Re: Fw: Follow up on Dec 19 meeting at EPA-east

Subijoy et. al:

Thanks again for hosting the meeting on 1/8 at your office. As promised I've attached below my signature line some relevant citations and publically vetted language on our USDW definition and comments to expand vs. restrict as promised.

We would be happy to review and or assist in drafting language that might meet your specific need if you find this information is not exactly what you could use regarding background on the nexus between your term usable water and our USDW definition.

Thanks again.

Sue

Suzanne Kelly
US Environmental Protection Agency
Drinking Water Protection Division
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A USDW is defined as an aquifer or a portion of an aquifer that:
Supplies any public water system; or 2. Contains sufficient quantity of groundwater to supply a public water system; and i. currently supplies drinking water for human consumption; or ii. contains fewer than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS); and B. Is not an exempted aquifer
*NOTE: Although aquifers with greater than 500 mg/L TDS are rarely used for drinking water supplies without treatment, the Agency believes that protecting waters with less than 10,000 mg/L TDS will ensure an adequate supply for present and future generations.
Some relevant citations in our regulations regarding the USDW regulation:



Key Concepts.docx

Preamble language on USDW definition:
full text of preamble can be found at http://www.gpo.gov/fdsys/pkg/FR-2010-12-10/pdf/2010-29954.pdf.
The relevant page #s so that you don't have to read the whole preamble are pages 77235 and 77252:

- Page 77235: EPA has defined through its UIC regulations that USDWs are underground aquifers with less than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS) and which contain a sufficient quantity of ground water to supply a public water system (40 CFR 144.3).
- Page 77252: Last column contains relevant summary text on range of comments we recieved on our USDW defintition and a high level response on the agency's position at the time of the rulemaking.

Response to comment language regarding USDW classification under the UIC Program

- Instead of having you read 500 pages I've extracted some of the relevant comments here that explain stakeholders request **for** expanding the current 10,000 TDS USDW classification; including our response.
- You'll probably get more of the protect to 3,000 TDS so I thought these responses would be relevant for understanding the "expansion" type comments.

Letter ID: 0206 Comment ID: 22209 Letter Lines: 66 to 84
Comment Code: 1610 1.3.1 Risks to USDWs
Comment Code: 3100 2.1 Proposed Geologic Siting Requirements (40 CFR 146.83)
Comment: - The USDW classification must be reconsidered when siting Class VI wells. The best sources of drinking water are already being used by utilities. Coupled with challenges resulting from climactic changes, population growth and land development, many utilities are turning to more challenging groundwater sources such as those that are very deep or have high salinity concentrations, also because the pumping costs for these deep wells are no longer prohibitive given the lack of sufficient water elsewhere. Some of these new sources could fall outside of the current definition of a USDW, in that the aquifer has a TDS concentration higher than 10,000 ppm. EPA's proposed rule promises protection of USDWs from endangerment yet there are no anti-degradation provisions in the proposed regulation to protect other groundwater supplies, such as those aquifers that are not classified as a USDW but have been, or may be, identified as a future drinking water source. The TDS criterion was written at a time when many advanced water treatment technologies were generally cost prohibitive. In light of the changes in the hydrological and technological landscape, we recommend that EPA reexamine the classification of USDWs based on TDS when considering the siting of Class VI geosequestration wells. The potential need to use saline aquifers for potable supply, particularly in water-stressed areas,
should take precedence over the sequestration of carbon dioxide there.

EPA Response: The Agency acknowledges commenter concerns about water resources and future water resource availability. However, modifying the definition of a USDW is outside the scope of the GS rulemaking. USDWs are defined as aquifers currently being used as sources of drinking water or those capable of supplying a public water system and they have a total dissolved solids (TDS) content of 10,000 milligrams per liter or less (§144.3). The primary goal of the UIC Program under the SDWA is to protect USDWs in order to ensure a reliable supply of drinking water for the American public. The GS rule, as part of the UIC program regulations, continues the program's tradition of ensuring the protection of USDWs. The permitting, siting, construction, operation, monitoring, and post-injection site care requirements in the GS rule built on a long-standing protective regulatory framework, tailored to the unique characteristics of CO2 GS.

Letter ID: 0213 **Comment ID:** 22922 **Letter Lines:** 158 to 168
Comment Code: 1270 1.1.2 Comments on other rules/issues
Comment: Climate change, drought, and the depletion of traditional ground water supplies due to population growth and land development are causing drinking water utility managers to look at new sources of drinking water that have not traditionally been considered as sources of drinking water. Coupled with improvements in desalination and other treatment technologies, drinking water sources of high salinity are being used for water supply. AMWA recommends that EPA reexamine the current classification of a USDW (i.e., an aquifer with a total dissolved solids (TDS) concentration of less than 10,000 mg/L) when siting Class VI geosequestration wells. The potential need to use saline aquifers for potable supply, particularly in water-stressed areas, should take precedence over the sequestration of carbon dioxide there.
Individual Response: EPA clarifies that addressing climate change, drought, and the depletion of traditional ground water supplies are outside the scope of the Class VI GS rulemaking. Rather, the purpose of the Class VI GS rule is to ensure consistency in permitting underground injection of CO2 at GS operations across the United States and provide requirements to prevent endangerment of USDWs in anticipation of the eventual use of GS to reduce CO2 emissions. The Agency acknowledges commenter concerns about water resources and future water resource availability. However, modifying the definition of a USDW is outside the scope of the Class VI GS rulemaking. USDWs are defined as aquifers currently being used as sources of drinking water or those capable of supplying a public water system and have a total dissolved solids (TDS) content of 10,000 milligrams per liter or less (§144.3). The primary goal of the UIC program under the SDWA is to protect USDWs in order to ensure a reliable supply of drinking water for the American public. The Class VI GS rule, as part of the UIC program regulations, continues the program's tradition of ensuring the protection of USDWs. The permitting, siting, construction, operation, monitoring, and post-injection site care requirements in the GS rule build on a long-standing protective regulatory framework, tailored to the unique characteristics of CO2 injected for the purpose of GS.

Letter ID: 0213 **Comment ID:** 22925 **Letter Lines:** 188 to 209
Comment Code: 2126 1.6.1.2 Comments opposing injection into deep saline
Comment: AMWA is also concerned about using saline aquifers for carbon sequestration. In a climate-stressed and ultimately water-stressed world, it is quite possible that these aquifers will be used as drinking water supplies in the near future. For example, EPA states in the rule proposal that deep saline aquifers that have >10,000 TDS will account for 88% of geosequestration sites. Many of these aquifers may actually be targeted for water supply. The experience of drinking water systems in Florida and other areas has
demonstrated that TDS measurements in USDWs are a moving target. The upper Floridan aquifer is currently about 8000 mg/L TDS. However, in pumping this already brackish aquifer, the upwelling of more saline waters from below is occurring. In addition, some utilities are considering pumping from deeper wells with a higher salinity for drinking water supply and using reverse osmosis to
treat for TDS. As the protection of current and future drinking water supplies is paramount, AMWA suggests that when there are competing uses in an aquifer, the needs of the aquifer for drinking water supply should take precedence over other municipal or

industrial uses and the risk of unintended impacts on potable water supplies is unacceptable. AMWA suggests that EPA require a more rigorous scientific evaluation in the final rule about how potential risk to potable aquifers will be avoided in the site characterization for a CO2 geosequestration project.
Individual Response: EPA clarifies that the final rule requires the Director to notify the director of the state public water system supervision program (PWSS) when a draft permit becomes available for public comment. EPA expects that the PWSS director will provide input to the Director regarding competing needs for water resources and whether to grant a permit. The Agency acknowledges commenter concerns about water resources and future water resource availability. However, modifying the definition of a USDW is outside the scope of the GS rulemaking. USDWs are defined as aquifers currently being used as sources of drinking water or those capable of supplying a public water system and they have a total dissolved solids (TDS) content of 10,000 milligrams per liter or less (§144.3). The primary goal of the UIC Program under the SDWA is to protect USDWs in order to ensure a reliable supply of drinking water for the American public. The GS rule, as part of the UIC program regulations, continues the program's statutory mandate of ensuring the protection of USDWs. The permitting, siting, construction, operation, monitoring, and post-injection site care requirements in the GS rule built on a long-standing protective regulatory framework, tailored to the unique characteristics of CO2 GS. EPA clarifies that a state's Class VI primacy program may be more stringent then the federal requirements. For example, a state has the discretion to ban GS projects from taking place in specific formations or other areas where there are water resource issues. EPA believes that state permitting authorities are in the best position to make determinations about the appropriateness of a particular site based on all available information, including drinking water supply needs.

Letter ID: 0172 **Comment ID:** 23451 **Letter Lines:** 62 to 78
Comment Code: 1220 1.1.1.1 Terminology and definitions
Comment Code: 4400 2.4.4.3 Allowing injection above or between USDWs (seeking comment)
Comment: Potential USDW Above 10,000 TDS:
Since states and water utilities in many areas of the U.S. are currently addressing drought and water rights and availability issues, the proposed rule should provide for states to include protections for well sites with potentially viable sources of drinking water, such as saline aquifers and aquifers above 10,000 (mg/L) total dissolved solids (TDS) level that might serve as a viable drinking water source. ASDWA recommends that states be allowed regulatory flexibility to consider these aquifers as potential drinking water sources.
Please note that there is some variance among states with regard to this issue. While some states would like Congress to consider changing the current Safe Drinking Water Act (SDWA) language to preclude these aquifers as potential sequestration sites, other states are actively looking for additional sequestration sites and would prefer that the proposed regulation and the current Safe Drinking Water Act (SDWA) language keep the current 10,000 TDS (mg/L) definition for a USDW. Thus, we recommend state-specific flexibility on this matter.
Individual Response: EPA is not changing the USDW definition; changing the definition of a USDW is outside the scope of the GS rulemaking. The GS rule focuses on ensuring protection of USDWs, as required under the SDWA, by establishing regulations to ensure the safe injection of CO2 for long-term storage. EPA recognizes that there is increasing demand for water resources and that technology improvements may make high TDS aquifers viable drinking water sources. EPA believes these potential resources should be considered when injection depth waivers are sought. Therefore, the final GS rule at §146.95(b) requires the Director to consider these issues in determining whether an injection depth waiver is appropriate. Specifically, the Director must consider whether alternative injection sites are available; community needs, demands, and supply from drinking water resources; planned needs, potential and/or future use of USDWs and non-USDWs in the area; and a plan for securing alternative resources or treating USDW formation waters in the event of contamination related to the Class VI injection activity. For additional information on the waiver approach, please see the final rule and preamble, as well as EPA's responses to comments on the Notice of Data Availability and Request for Comment.

"Dutta, Subijoy" ---01/08/2013 06:49:54 PM---Jeff: It was good to talk with the awe-inspiring group and the discussion was

From: "Dutta, Subijoy" <sdutta@blm.gov>
To: Jeff Jollie/DC/USEPA/US@EPA
Cc: Ronald Bergman/DC/USEPA/US@EPA, Bruce Kobelski/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, John Ajak <jajak@blm.gov>, Steven Wells <s1wells@blm.gov>, Suzanne Kelly/DC/USEPA/US@EPA
Date: 01/08/2013 06:49 PM
Subject: Re: Fw: Follow up on Dec 19 meeting at EPA-east

Jeff:
It was good to talk with the awe-inspiring group and the discussion was surely quite thought-provoking.
As a follow up, attached are:
1. Short discussion points, unedited... if you/anyone present in the meeting want to add to it and send back to everyone, that would be real nice..
2. BLM Onshore Orders #1, #2 , and #7 which are the existing rules that govern Drilling and Production from Oil &

Gas Operations in the BLM leases and they apply to all wells administered by the BLM, including those on Federal, tribal, and individual Indian trust lands.
In general these rules and regs are generally accessible from the link below: http://www.blm.gov/wy/st/en/programs/energy/Oil_and_Gas/Onshore_Operations.html

Hope this helps.
I look forward to receiving the "Usable Water" piece from Suzanne.

Subijoy

On Mon, Jan 7, 2013 at 1:31 PM, <Jollie.Jeff@epamail.epa.gov> wrote:

Subijoy, just a quick follow up to my email from this morning. As it stands now - Chitra Kumar, Bruce Kobelski, Suzanne Kelly, and I will be traveling to your office tomorrow for our coordination meeting. Ron Bergman has a meeting conflict and will likely not be able to attend.

Jeff
****
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----- Forwarded by Jeff Jollie/DC/USEPA/US on 01/07/2013 01:25 PM -----

From: Jeff Jollie/DC/USEPA/US
To: "Dutta, Subijoy" <sdutta@blm.gov>
Cc: Ronald Bergman/DC/USEPA/US@EPA, Bruce Kobelski/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, "John Ajak" <jajak@blm.gov>, Steven Wells <s1wells@blm.gov>, Suzanne Kelly/DC/USEPA/US@EPA
Date: 01/07/2013 08:36 AM

Subject: Re: Follow up on Dec 19 meeting at EPA-east

Subijoy, thanks for sending your presentation from December 19, it was very informative. We'll get back to you today with confirmation on those that will be coming to your office for tomorrow's meeting. -Jeff
****
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"Dutta, Subijoy" ---01/04/2013 03:48:28 PM---Jeff: Chitra called me around Noon today and asked for a copy of my Dec-19

From: "Dutta, Subijoy" <sdutta@blm.gov>
To: Jeff Jollie/DC/USEPA/US@EPA
Cc: Bruce Kobelski/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, "John Ajak" <jajak@blm.gov>, Ronald Bergman/DC/USEPA/US@EPA, Steven Wells <s1wells@blm.gov>, Suzanne Kelly/DC/USEPA/US@EPA
Date: 01/04/2013 03:48 PM
Subject: Re: Follow up on Dec 19 meeting at EPA-east

Jeff:
Chitra called me around Noon today and asked for a copy of my Dec-19 presentation. I somehow forgot to copy that to the USB provided to me. Anyway, it is attached here.
Chitra also discussed about a follow up meeting next Tuesday at 3 PM at our BLM Office, 20 M Street SE to have consistency between the EPA guidance and the Supplemental HF Rule so that when OMB looks at the siblings they find the uniformity.

Chitra was going to check with Bruce and others and let me know how many of you would come and confirm the time/Date. I will be waiting to hear back on that.

I am available and so is John Ajak. I will check with Steve Wells, our Division Chief if can join us as well.
I have reserved/continued our HF-Team Room for the discussion where we have HF-Sketches all around.

Subijoy
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On Thu, Dec 20, 2012 at 12:05 PM, <Jollie.Jeff@epamail.epa.gov> wrote:

> Subijoy,
>
> It was good to meet with you and John yesterday also. Attached below is a fact sheet that provides the highlights of our UIC Class II permitting guidance. Let me know if you have questions, or comments. I checked ORDs website and it doesn't look like they have posted the HF study progress report yet. If I can get some more information on that I'll let you know. Back in May, we made a table of comparisons between your proposed rule and our guidance. I attached that comparison table below in case it helps with any of your internal discussions.
>
> Jeff
>
> http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/upload/hfdieselfuelsfs.pdf
> *(See attached file: Comparison of BLM regs to HF guidance_May30_2012.docx)*

****

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"Dutta, Subijoy" ---12/20/2012 10:36:07 AM---Hello Jeff et al. It was good to meet with all of you yesterday.

From: "Dutta, Subijoy" <sdutta@blm.gov>
To: Jeff Jollie/DC/USEPA/US@EPA
Cc: Suzanne Kelly/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, Bruce Kobelski/DC/USEPA/US@EPA, Ronald Bergman/DC/USEPA/US@EPA, John Ajak <jajak@blm.gov>, Steven Wells <s1wells@blm.gov>
Date: 12/20/2012 10:36 AM
Subject: Re: Follow up on Dec 19 meeting at EPA-east

Hello Jeff et al.
It was good to meet with all of you yesterday.
Here is another comment from the Tribe - The Ute Tribal Business Council. Hopefully that will provide you with the drift and some insight on the Tribal issue/s.

It'd be of value to get the highlights of your guidance as Chitra and Sue mentioned about sending it to me yesterday/today. Our package editing/insertion of the supplemental rule is in its final phase and will be done tomorrow.

Subijoy

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www.blm.gov; email: sdutta@blm.gov*(See attached file: RHF-Comment42_Ute_Tribal_Business_Council.pdf)*

--
[attachment "SDUTTA-Fracking-Dec19-2012.pdf" deleted by Jeff Jollie/DC/USEPA/US]

Water Management for Hydraulic Fracturing in Unconventional Resources—Part 4

Using Mechanical Vapor Compression as a Desalination Technology

John M. Walsh, Cetco Energy Services

This is the fourth article of a series covering water management in hydraulic fracturing (HF) in unconventional resources. In the first article, published in June, water management and planning were discussed. Fluid properties and characterization were discussed in the second article, published in August. In the third article, published in October, suspended solids removal using coagulation/flocculation and electrocoagulation was discussed. An explanation was given as to why those technologies are justified based on the characteristics of flowback fluids. This article discusses the use of mechanical vapor compression (MVC) as a desalination technology.

The series of articles is intended to identify and explain the technologies used in HF and explore whether they are appropriate and cost effective. When talking with operators, their comments often suggest that there are too many technologies from which to choose and little basis upon which to make the selections. Water management for HF has become a magnet for every water treatment scheme imaginable. Thus, it is helpful to look at a few successful technologies in some detail to understand why they are appropriate.

In general, desalination of recycle flowback water is becoming less important. New formulations of salt-tolerant polymers and fluids are being developed and applied. Some of the HF fluids are more expensive on a per pound basis, but become cost-competitive when overall reduction in water source, treatment, and disposal costs are taken into account. Nevertheless, there is still a need in some regions to desalinate. This is particularly true when specific compounds must be removed, such as boron or scaling components.

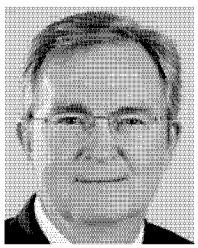
Desalination Technologies

In industrial and municipal water treatment, two technologies used for desalination are thermal processes and membranes. Thermal desalination processes are much older than membrane processes. Despite the rapid advance of membrane processes in the past 2 decades, at least one-third of the installed worldwide desalination capacity is provided by thermal desalination. Other desalination technologies, such as ion exchange, electrodialysis, and softening, are not applicable for the high salinities of HF flowback fluids.

Because of the high fouling tendency of HF flowback fluids and the high salinity in some regions, membrane-based desalination technology is not viable. Spiral wound nanofiltration and reverse osmosis (RO) membranes are the workhorses for onshore applications and offshore desalination of seawater. Neither can be used when the concentration of organic fouling material exceeds a few tens of mg/L. As discussed in Part 2 of this series, the slickwater formulations contain several hundred mg/L of spent polymer. The linear and cross-linked gels (mostly guar-based polymer) contain a few to several thousand mg/L of organic fouling material.

In industrial and municipal water treatment, the main thermal desalination technologies are multistage flash (MSF), multiple-effect distillation (MED), and MVC. The global market shares of these processes are 87%, 12%, and 0.2%, respectively (Global Water Intelligence 2006). A variation of these technologies is a hybrid combination of MED and thermal vapor compression, which has a high energy efficiency compared with the others. MSF process uses multiple evaporation chambers, each having lower pressure and, therefore, lower temperature. The chambers, or stages, are designed for maximum heat recovery.

Thermal desalination processes consume more energy than the RO processes. Depending on the particular technology, the energy required can be as high as 10 to 15 kWh/m^3 of water (1.6 to 2.4 kWh/bbl). This is high compared with 5 kWh/m^3 (0.8 kWh/bbl) for RO in a seawater application, which by itself is considered to have a significant energy requirement for



John M. Walsh *is the director of water treating technology at Cetco Energy Services and co-chairperson of the SPE Water Handling and Management Technical Section. He is a member of the Editorial Board of* Oil and Gas Facilities. *He can be reached at jmwalsh924@gmail.com.*

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pumping. However, the reliability, low fouling tendency, and extensive field experience with the thermal desalination technologies keep them in demand, particularly for large facilities where waste heat is available.

The MSF and MED systems are often applied in cogeneration plants, where power and water are produced simultaneously. Both systems require low-pressure heating steam, which can be easily extracted from the power plant at low cost.

Mechanical Vapor Compression

The MVC system is operated solely on electric power, which can be a benefit or a drawback. It offers an advantage because it can be applied where no waste heat is available. However, the high costs of electricity make it less preferable in the industrial and municipal water industries.

MVC is a niche technology with features that make it appropriate for desalination of flowback fluids in HF. Because it does not require waste heat, it is the preferred desalination technology for use in some HF operations.

Fig. 1 illustrates the MVC process, which includes the following steps:

- Incoming (feed) brine is heated in a waste heat recovery heat exchanger (preheater). The hot effluent brine and fresh water is used to heat the incoming brine.
- The brine enters the MVC unit at the top of the tube bundle where it is sprayed onto the outside of the tubes. The brine flows over the tubes as a thin film.
- Vapor is generated from the brine, which is sucked into the vapor compressor. The compressor has a dual function. It lowers the gas pressure, which promotes evaporation, and it compresses the vapor, which heats it (like a heat pump), and pushes the vapor into the side of the tube bundle.

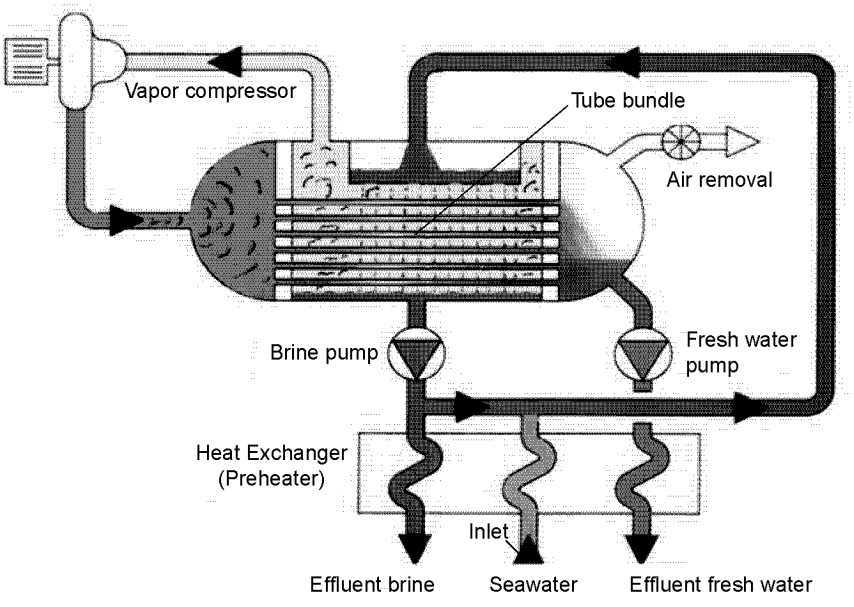

Fig. 1—A process flow diagram for mechanical vapor compression.

- The hot vapor exchanges heat with the cooler brine, thus causing the vapor to condense. The condensed fresh water is discharged.
- A stream of brine is discharged from the bottom of the brine sump and is pumped to the top of the tube bundle, together with incoming brine.
- A fraction of the circulating brine is discharged. Referred to as the drawdown, it is expressed as a fraction of the flow rate of the incoming feed brine. If the drawdown is 10%, then its salinity is 10 times that of the incoming brine. In this case, the recovery is 90%.

In any of the desalination processes, the flow rate of concentrated brine is a critical process parameter. The smaller the flow volume, the greater the concentration of waste brine. Scaling potential is the limiting factor. It is possible to further concentrate the brine into a high-solids sludge, which could be dried into a granular solid, and it is possible to produce salt products. However, the additional process steps add significantly to cost and are generally not practiced. Instead, the concentrated waste brine is disposed, and the economics of desalination must also include the cost of the waste disposal.

An important point that is often overlooked in discussions of MVC is that it does not involve distillation. Distillation requires nucleate boiling, in which vapor is generated on the surface of a heat exchange tube. Since vapor is such a poor conductor of heat, local tube surface temperature can be several degrees above the boiling point of the liquid. If the tube is immersed in the boiling liquid, then there is a hydraulic head that must be overcome to form the vapor, which further increases the temperature of boiling. The presence of vapor on the tube surface and the elevated temperatures create a scaling potential for all but the most pure liquids. Thus, distillation is not appropriate for fluids with high scaling and fouling tendency.

The MVC processes are more precisely referred to as evaporation

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processes. Nucleate boiling is minimized to lower the scaling potential and allow desalination of highly contaminated feed streams. Vapor is generated by heating across a large surface area and with the application of partial vacuum so that the operating temperature is well below the boiling point of the liquid.

MVC has been applied in steamflood (for example, Oxy's Mukhaizna field in Oman) and steam-assisted gravity drainage projects in Alberta, Canada (Heins 2010).

In oilfield application, typical scale-forming components include the carbonates (calcium, magnesium, and iron carbonate) and silica. The carbonates are problematic since their solubility decreases with higher temperature. As carbon dioxide is vaporized out of the brine, the pH of the brine increases, which causes the carbonates to precipitate.

Other techniques used to prevent scale deposits include large surface area (and low thermal driving force), mist mats to prevent liquid carry-over into the vapor, the use of scale inhibitors, softening, ion exchange, pH adjustment, the use of seeded slurry, or the use of ball pigs. Equipment suppliers, such as Sasakura Engineering, provide scale prevention strategies optimized for oilfield brines. Scaling and fouling are also concerns in the auxiliary equipment, such as the heat exchangers. Companies, such as Alfa Laval, have developed large surface area vertical heat exchangers that reduce fouling.

Among various desalination technologies, mechanical vapor recompression (MVR, or alternately MVC) stands out as appropriate for HF application in a semipermanent or modular configuration.

Stages of Field Development Determine Water Treatment Technologies

To understand where and why MVC is appropriate for HF flowback treatment, the unique aspects of the economics of HF flowback water treatment must be considered.

In the June article, the stages of field development were discussed. A brief review emphasizes the reasons why evaporation technologies are being deployed for modular applications and not being deployed from mobile units.

The three stages of shale field development are defined below in terms of the type of water treating equipment deployed. It is important to make a distinction between the stages of field development because they are critical to the selection of water treatment technology.

The stages of field development and the appropriate water treatment technology are:

Stage 1: Remote and isolated well development—mobile water treating systems

Stage 2: Well clusters with some in-field drilling and completions—modular water treating systems

Stage 3: Extensive in-field development with infrastructure to transport water to and from a centralized treatment facility—centralized water treatment plants

Mobile Stage of Development

In the early stage of development of an unconventional field, a number of individual wells are drilled and completed. In the United States, mineral rights are owned by the land leaseholders. The initial wells in a region will typically be drilled in remote and isolated areas. If water recycling is carried out, the water treating equipment must be mobile. Such equipment is compact and placed on a flatbed truck.

The economics of this kind of water treatment are significantly different from those of industrial water treatment. Capital cost is typically a small fraction of the total cost. Most of the cost of water treatment is due to staff time related to transportation to site, setup of the equipment, operation of the equipment, and demobilization and return transportation. If the equipment is complex, additional operators and time are required to mobilize and set up the equipment, adding to the cost. If the capacity is low, additional time is required to process the water volumes. In general, the water treatment rate must be at least 5 to 7 bbl/min of water to justify the cost. Lower capacity will take too long, and the cost of on-site personnel will be too high. Thus, appropriate equipment in this stage of development is compact, simple, and relatively high capacity. Few technologies meet these criteria. Because MVC does not meet the criteria, there are few, if any, mobile MVC units operating successfully in HF flowback applications, to my knowledge.

Modular Stage of Development

As field development progresses, the leases are secured and the drilling campaign becomes more structured. Clusters of wells are drilled and completed. It is then possible for several adjacent wells to be developed in sequence or simultaneously, thus facilitating the use of a modular water treating system.

A daisy chain or hub-and-spoke type of water piping arrangement can be constructed to feed the water treatment unit and convey treated water to the wells that require it. Lay-flat hose, storage tanks, and pond liners are components of the water management tool kit. In this case, a semipermanent/modular water treatment facility is justified. The equipment is transported on a flatbed truck. It requires a few weeks to prepare the site and erect the equipment. When a few or several wells are involved, the construction cost of a modular treating system is justified.

Aquatech and Fountain Quail are among the companies that provide modular treating systems. Aquatech's modularized evaporation system is

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designed for rapid installation. It is transported in modular units and erected with a minimum of field staff. Fountain Quail's system is an MVR evaporator packaged in self-contained skid-mounted units. It is capable of processing 20,000 BWPD and requires three operators. The capacity of the system must be integrated into the storage capacity of spent HF flowback water, the storage capacity of fresh water, the volume of water required for each HF, and the load recovery. The MVR system is being applied in several shale developments, including the Barnett and Marcellus.

Centralized Stage of Development

Later in field life, there may be many wells in relatively close proximity. Over time, the construction of a water conveyance network together with a centralized water treatment facility becomes justified, as is the current trend in the Marcellus Shale. It has also been successfully implemented in the Pinedale Anticline in southwestern Wyoming (Boschee 2012). The capital costs of the water transport system and the water treatment facility are the main cost drivers and contribute significantly to the overall cost. Because of plant automation and the ability to achieve relatively stable steady-state operation, the number of operators is minimized, compared with the previous stages of field development.

In the centralized application of desalination, MVC is not the only thermal desalination that could be applied. If low-grade steam is available, MSF or MED could be used for reduction of energy use. OGF

For Further Reading

2006. 19th IDA Worldwide Desalting Plant Inventory. Global Water Intelligence.

Boschee, P. 2012. **Handling Produced Water from Hydraulic Fracturing.** *Oil and Gas Fac.* **1** (1): 22–26.

Heins, W.F. 2010. **Is a Paradigm Shift in Produced Water Treatment Technology Occurring at SAGD Facilities?** *J. Cdn. Pet. Tech.* **49** (1): 10–15.

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U.S. Department of Energy

The Water-Energy Nexus: Challenges and Opportunities

MARCH 2014

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Foreword

Water resource scarcity, variability, and uncertainty are becoming more prominent both domestically and internationally. Because energy and water are interdependent, the availability and predictability of water resources can directly affect energy systems. We cannot assume the future is like the past in terms of climate, technology, and the evolving decision landscape. These issues present an important set of challenges to address.

DOE can play a leadership role by bringing more science, technology, and analytical capability to the water-energy nexus, drawing on expertise in R&D programs and engaging the strengths of the national labs. Importantly, many issues surrounding the energy-water nexus affect assets owned and operated by private sector entities; developing public-private partnerships in this area can help leverage DOE capacity.

This Water-Energy Nexus: Challenges and Opportunities report builds on the Department's previous work in this area and provides a foundation for future action. This report is a next step towards a comprehensive response to the challenges before us. It presents extensive data and analysis to frame the opportunities. We hope it will also encourage others to engage in a dialogue and work together to address the challenges. Systematically and proactively addressing the water-energy nexus will help us all ensure a reliable and sustainable energy system.

Ernest J. Moniz

DOIAR0075711

The highly fragmented federal authority and responsibilities in managing the country's water has contributed to the deterioration of water quality in many parts of the country, according to Gleick and Christian-Smith (2012). States' role in overseeing water rights allocation and permitting is equally important.

4.2.1 Water Rights and Permitting at the State Level

State-level water rights and permitting inform the decision making of any significant water user. Because water issues vary greatly by region, water resource policies—even policy frameworks—can vary greatly from state to state (Kimmell and Veil 2009). With respect to surface water, states generally follow some variation of two governance doctrines—the prior appropriation doctrine and the riparian doctrine. Groundwater governance is slightly more complex.

Table 4.1. Framework for Surface Water Law

Legal Framework in the West	Western States
Pure prior appropriation (9)	Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming
Prior appropriation, formerly riparian (6)	Kansas, North Dakota, South Dakota, Oregon, Texas, and Washington
Mixed riparian-appropriation (3)	California, Nebraska, and Oklahoma
Legal Framework in the East	***Eastern States***
Pure riparian (8)	New Hampshire, Vermont, Rhode Island, West Virginia, Ohio, Tennessee, Missouri, and Louisiana
Regulated riparian (21)	Alabama, Arkansas, Connecticut, Delaware, New York, New Jersey, Maryland, Illinois, Indiana, Iowa, Kentucky, Massachusetts, Pennsylvania, Mississippi, Minnesota, North Carolina, South Carolina, Georgia, Florida, Virginia, and Wisconsin

Source: Gleick and Christian-Smith 2012

Prior Appropriation Doctrine

The vast majority of the states in the arid Western climate follow the prior appropriation doctrine, under which water allocation is made on a first-come, first-serve basis and not linked to land ownership (Getches 2009). Because of relative water scarcity, water rights are linked to a specific basin and many states prohibit transfers between basins. Furthermore, users must prove that their rights are being exercised and put to a beneficial use or the rights can be deemed abandoned and terminated. In times of water shortage, those who last obtained a legal right to use the water must yield to the senior right holders, although if any of the latter's rights have not been exercised and put to a beneficial use, such a right could be deemed forfeited.

Riparian Doctrine

The riparian doctrine, also called the "common law" doctrine, is tied to land ownership and mostly recognized in Eastern states where water is relatively abundant. Owners of land bordering waterways have a right to use water that flows past the land for any reasonable purpose. In addition, all landowners have an equal right to use the water because no one possesses a greater right through prior use. Water rights may not be bought or sold and when water runs short, users have to "share the shortage in proportion to their rights" (Kimmell and Veil 2009). About half of the Eastern states have also adopted what is called regulated riparianism, or water-use permits for non-riparian landowners to acquire water rights for a limited period of "reasonable" use (Gleick and Christian-Smith 2012).

Figure 4.3. Water governance policies in the United States, by state.

DOIAR0075762

Power plants in riparian areas have had fewer issues finding and using surface water for cooling, mainly due to relative water abundance. As a result, open-loop cooling, which requires higher water withdrawal but also enables greater generation efficiency, is more prevalent in these areas. As shown in Figure 4.4, power plants in riparian states withdraw more water on a per power plant and average basis than plants in prior appropriation states.[23] Power plants in areas generally following prior appropriation rules (Western states) do seem more prone to utilizing non-surface water or alternative sources of water (e.g., brackish water, seawater, reclaimed water, and groundwater) (see Figures 4.5 and 4.6).

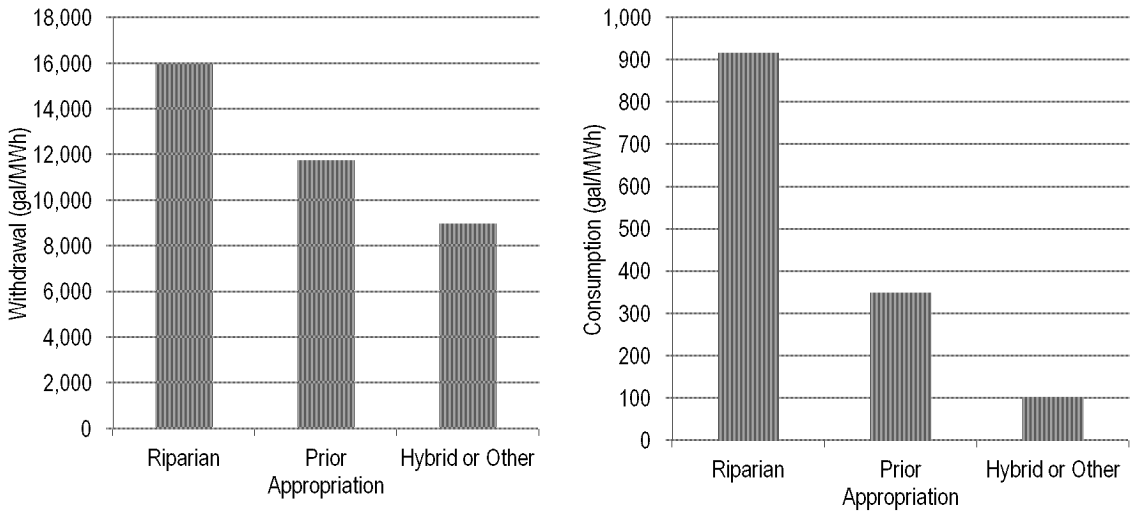

Figure 4.4. Average water withdrawal and consumption per power plant in areas of riparian, prior appropriation, and hybrid or other doctrine.
Data source: EIA Form 860, 923 (EIA 2013a, EIA 2013b)[24]

[23] This is based on both fresh and non-fresh water source use.
[24] The type of water governance information is from Gleick and Christian-Smith (2012). Riparian includes pure riparian and regulated riparian states. Prior Appropriation includes states that have been prior appropriation doctrine implementers all along (pure prior appropriation states) or currently prior appropriation states that are formerly riparian states (prior appropriation, formerly riparian states). Hybrid or Other includes states that implement both prior appropriation and riparian doctrines and states like Hawaii that has a completely different doctrine than other states.

DOIAR0075763

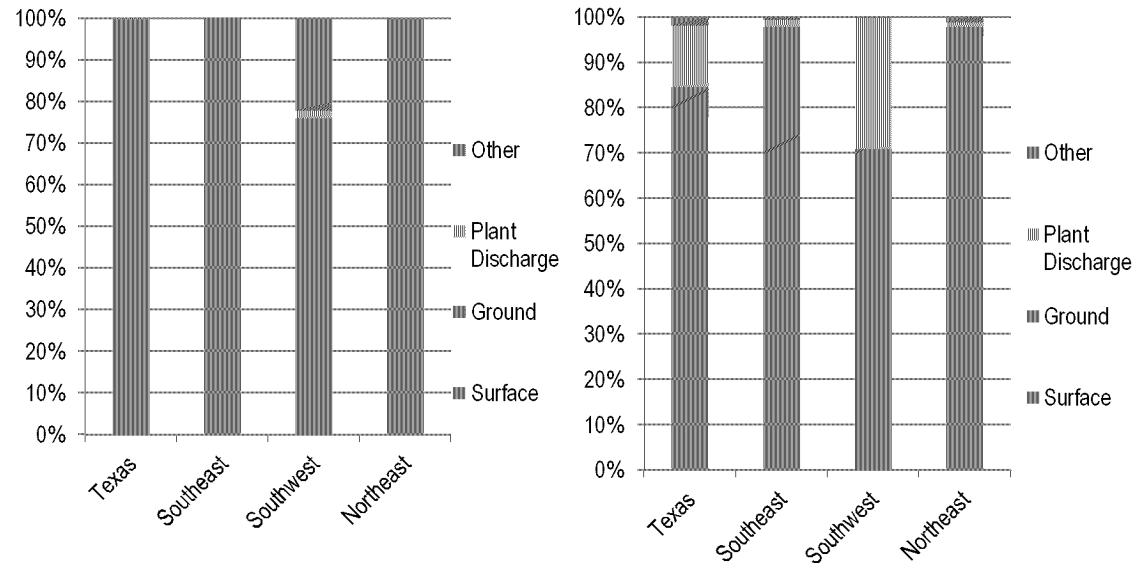

Figure 4.5. Percent of water withdrawn and consumed at thermoelectric power plants by water source in four regions of the United States.
Data source: EIA Form 860, 923 (EIA 2013a, EIA 2013b)[25]

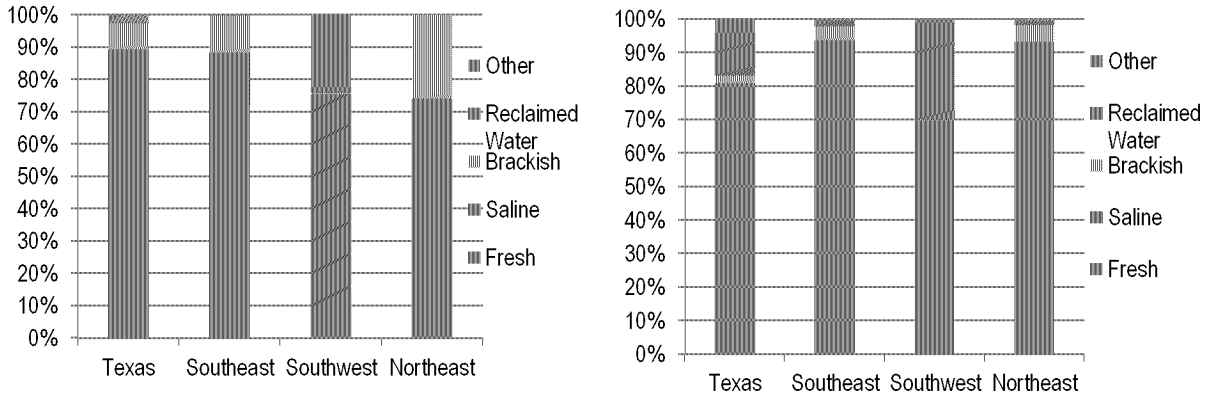

Figure 4.6. Percent of water withdrawn and consumed at thermoelectric power plants by water quality type in four regions of the United States.
Data source: EIA Form 860, 923 (EIA 2013a, EIA 2013b)

Some of the Western states administer a hybrid doctrine. In general, these are states that initially enforced a riparian rights system and continue to recognize riparian uses even though they later adopted a prior appropriations doctrine. Three western states—California, Nebraska, and Oklahoma—that follow a hybrid system allow riparian landowners under some circumstances to assert new uses superior to those with appropriative rights.

[25] Regional breakdowns are as follows: Southwest - California, Arizona, Utah, Nevada, Colorado, New Mexico, Wyoming; Southeast - Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee; Northeast (and Ohio) - Connecticut, Delaware, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Vermont.

DOIAR0075764

From: Michael Freeman
To: "BLM_MT_BillingsFO_Lease_EA@blm.gov"
Subject: FW: Comments on draft EAs and FONSIs for March 2018 oil and gas lease sale
Date: Monday, October 30, 2017 1:08:53 PM
Attachments: EJ - NPRC- Katz -Martinell comments - FINAL with exhibits.pdf

---

Dear Mr. Sparks – attached please find comments from Earthjustice, Northern Plains Resource Council, David Katz, and Jack and Bonnie Martinell, on the draft EAs and FONSIs for the Montana-Dakotas office's scheduled March 13, 2018 oil and gas lease sale. We are re-sending because of a typo in the original email message.

Regards,

Mike Freeman

From: Michael Freeman
Sent: Monday, October 30, 2017 11:01 AM
To: 'BLM_MT_Billings_FO_Lease_EA@blm.gov' <BLM_MT_Billings_FO_Lease_EA@blm.gov>; 'BLM_MT_Butte_FO_Lease_EA@blm.gov' <BLM_MT_Butte_FO_Lease_EA@blm.gov>; 'BLM_MT_Great_Falls_Lease_EA@blm.gov' <BLM_MT_Great_Falls_Lease_EA@blm.gov>; 'blm_MT_North_Dakotafo_Lease_EA@blm.gov' <blm_MT_North_Dakotafo_Lease_EA@blm.gov>
Subject: Comments on draft EAs and FONSIs for March 2018 oil and gas lease sale

Dear Sirs – attached please find comments from Earthjustice, Northern Plains Resource Council, David Katz, and Jack and Bonnie Martinell, on the draft EAs and FONSIs for the Montana-Dakotas office's scheduled March 13, 2018 oil and gas lease sale.

Regards,

Mike Freeman

Michael Freeman

Staff Attorney

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EARTHJUSTICE

October 30, 2017

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Re: Comments on March 13, 2018 Oil and Gas Lease Sale for BLM Montana-Dakotas Office

Dear Sirs:

We appreciate the opportunity to comment on the Bureau of Land Management (BLM) draft environmental assessments (EAs) and draft Findings of No Significant Impact for the scheduled March 13, 2018 oil and gas lease sale for the Montana-Dakotas Office. Please accept these comments on behalf of Earthjustice, Northern Plains Resource Council, David Katz, and Jack and Bonnie Martinell. At the March 2018 sale, BLM proposes to offer 110 lease parcels in the Billings, Great Falls, Butte and North Dakota field offices. As discussed below, however, the four EAs addressing the sale fail to analyze and disclose the reasonably foreseeable impacts to groundwater from oil and gas development on those leases, as required by the National Environmental Policy Act (NEPA). We request that BLM defer offering these leases until it has prepared such an analysis, and can ensure that development of the leases will not impact aquifers that may have usable water.

ROCKY MOUNTAIN 633 17TH STREET, SUITE 1600 DENVER, CO 80202

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Discussion

Since 1988, BLM's Onshore Order No. 2 has required operators to construct wells to isolate and protect aquifers containing "usable water," defined as having up to 10,000 ppm total dissolved solids (TDS). 53 Fed. Reg. 46,798, 46,801, 46,805 (Nov. 18, 1988). BLM adopted the 10,000 ppm standard because it matched the definition of "underground source of drinking water" used by EPA in administering the Safe Drinking Water Act (SDWA). See id. at 46,798 (citing 40 C.F.R. § 144.3).

When BLM issued its 2015 hydraulic fracturing rule, it made a housekeeping change amending the applicable provision in the Code of Federal Regulations to conform with the Onshore Order No. 2 usable water requirement. 80 Fed. Reg. 16,128, 16,141–42 (Mar. 26, 2015). But in opposing the hydraulic fracturing rule, several industry trade associations and states informed the court that there has been widespread non-compliance with the 10,000 ppm standard, despite the fact that Onshore Order No. 2 is a legally-binding regulation promulgated by notice-and-comment rulemaking. See 53 Fed. Reg. at 46,798; 43 C.F.R. § 3164.1(b). Based in part on concern that the hydraulic fracturing rule would require companies to change their practices, the U.S. District Court for Wyoming enjoined the rule in 2015. Order on Motions for Preliminary Injunction at 30-33, 53-54, ECF No. 130, Wyoming v. Jewell, 2:15-cv-00043-SWS (D. Wyo. Sept. 30, 2015) (Wyoming v. Jewell).

Since then, industry trade associations have continued to highlight that there is a widespread industry practice of failing to protect underground sources of drinking water. For example, in their September 25, 2017 comments supporting BLM's proposed rescission of the hydraulic fracturing rule, Western Energy Alliance and the Independent Petroleum Association of America (collectively, WEA), told the agency that the 10,000 ppm standard is inconsistent with "existing practice for locating and protecting usable water." Sept. 25, 2017 WEA comments at 59 (WEA comments), excerpts attached as Ex. 1.[1] Instead, companies in Wyoming typically set well casing to a depth of only "100 feet below the deepest water well within a one mile radius of [the] oil or gas well"—usually 1,000 feet below ground or less. Id. at 84. And in Montana and North Dakota, WEA states that companies only install protective casing for the Pierre Shale formation, regardless of whether underground sources of drinking water may exist below that formation. Id. The draft EAs for the March 2018 sale also focus only on nearby domestic water wells, rather than on underground sources of drinking water that may be used in the future. See, e.g., Great Falls Office EA at 35-36.

WEA has explained that requiring companies to protect all underground sources of drinking water would result in substantial additional costs for "casing and cementing associated with isolating formations that meet the numerical definition of usable water under the [Onshore Order No. 2 standard], but which are located at depths deeper than the zones that state agencies and BLM field offices have previously designated as requiring isolation." WEA comments at 84. WEA predicted that complying with the 10,000 ppm standard would cost industry nearly $174 million per year in additional well casing expenses. Id. at 84-85.

[1] A complete copy of WEA's comments is available at: https://www.regulations.gov/document?D=BLM-2017-0001-0412 .

Industry's admissions raise a significant environmental concern that BLM must address before issuing new leases. Accepting WEA's statements as true, BLM and energy companies have been putting numerous underground sources of drinking water at risk. In its 2016 hydraulic fracturing study, the Environmental Protection Agency (EPA) noted that "the depth of the surface casing relative to the base of the drinking water resource to be protected is an important factor in protecting the drinking water resource."[2]

While water with salinity approaching 10,000 ppm TDS is considered "brackish," such aquifers are increasingly being used for drinking water. In fact, EPA adopted the 10,000 ppm standard based on the 1974 legislative history of SDWA, which explained that Congress intended SDWA to "protect not only currently-used sources of drinking water, but also potential drinking water sources for the future." H.R. Rep. No. 93-1185 (1974), 1974 U.S.C.C.A.N. 6454, 6484.

Similarly, BLM explained in 2015 that "[g]iven the increasing water scarcity [in much of the United States] and technological improvements in water treatment equipment, it is not unreasonable to assume [these] aquifers . . . are usable now or will be usable in the future." 80 Fed. Reg. at 16,142. The agency noted that even "if we're not using that water today we may be using it ten years [or] a hundred years from now. So we don't want to contaminate it now so it's unusable in the future." Wyoming v. Jewell admin. record at DOIAR0009703, attached as Ex. 3. Comments from EPA and the Association of Metropolitan Water Agencies (AMWA) supported this conclusion. Id. at DOIAR0038117. AMWA reported that brackish groundwater is already being used for drinking in some parts of the country. See id. at DOIAR0038118 (pumping 8,000 ppm TDS groundwater in Florida); id. at DOIAR0068337 (desalination already being used for municipal water treatment in some areas). AMWA explained that because of "challenges resulting from climactic changes, population growth and land development, many utilities are turning to more challenging groundwater sources such as those that are very deep or have high salinity concentrations . . . given the lack of sufficient water elsewhere." Id. at DOIAR0038118. Higher salinity water is also being used today for some industrial purposes. See, e.g., id. at DOIAR0075763 (power plant cooling).

Our concerns are underscored by recent research showing that it is very common in this region for hydraulic fracturing and oil and gas production to occur in shallow formations that have only limited vertical separation from underground sources of drinking water. Fracturing and production also sometimes occur within an aquifer that represents an underground source of drinking water. For example, EPA's 2016 report found that "hydraulic fracturing within a drinking water resource" is "concentrated in some areas in the western United States" that include "the Wind River Basin near Pavillion, Wyoming, and the Powder River Basin of Montana and Wyoming."[3] Where that occurs, EPA explained that:

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[2] EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States at 6-19 (2016) (EPA Study), available at: https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990 .

[3] EPA Study at ES-27; see also id. at 6-44 to 6-50.

> hydraulic fracturing within drinking water resources introduces hydraulic fracturing fluid into formations that may currently serve, or in the future could serve, as a drinking water source for public or private use. This is of concern in the short-term if people are currently using these formations as a drinking water supply. It is also of concern in the long-term, because drought or other conditions may necessitate the future use of these formations for drinking water.

Id. Other recent studies have made similar findings. Researchers investigating the oil and gas-related contamination in Pavillion, Wyoming reported that shallow fracturing also occurs in New Mexico, Colorado, Utah and Montana. Gayathri Vaidyanathan, Fracking Can Contaminate Drinking Water at 8, Sci. Am. (Apr. 4, 2016) (Sci. Am. Article), attached as Ex. 2B. The researchers concluded that "it is unlikely that impact to [underground sources of drinking water] is limited to the Pavillion Field . . . ." Dominic C. DiGiulio & Robert A. Jackson, Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming Field, 50 Am. Chem. Society, Envtl. Sci. & Tech. 4524, 4532 (Mar. 29, 2016), attached as Ex. 2A. Another study found that approximately three quarters of all hydraulic fracturing in California occur in shallow wells less than 2,000 feet deep.[4]

WEA's description of widespread non-compliance with Onshore Order No. 2, and the evidence of shallow production and fracturing, raise a significant environmental issue that must be addressed as a reasonably foreseeable effect of the lease sale. See Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983) (an agency must "consider every significant aspect of the environmental impact of a proposed action"); see also Davis v. Mineta, 302 F.3d 1104, 1123 (10th Cir. 2002). Moreover, BLM's analysis must "state how alternatives considered in it and decisions based on it will or will not achieve the requirements of [NEPA] and other environmental laws and policies." 40 C.F.R. § 1502.2(d); League of Wilderness Defenders v. USFS, 585 Fed. Appx. 613, 614 (9th Cir. 2014); Montana Wilderness Association v. McAllister, 658 F. Supp. 2d 1249, 1255-56 (D. Mont. 2009). The Council on Environmental Quality regulations also require a discussion of possible conflicts with the objectives of state, local and federal land use plans, policies and controls for the area concerned. 40 C.F.R. § 1502.16(c). An assessment of this problem requires an EIS because the cumulative effects of such widespread noncompliance plainly may have a significant impact on groundwater and public health. The fact that BLM proposes to use four separate EAs for the same lease sale further illustrates how the existing analyses fail to address such cumulative impacts. Unfortunately, the EAs make no mention of this problem at all. See, e.g., Great Falls Office EA at 37-38.

Ignoring evidence of widespread noncompliance with BLM's standards for protecting underground sources of drinking water would violate NEPA. To make an informed decision on whether to lease these lands BLM needs to know whether doing so will put underground sources of drinking water at risk, and what additional stipulations or other steps are needed to prevent

[4] California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California at Executive Summary 10 (2015), http://ccst.us/publications/2015/2015SB4-v2ES.pdf ; see also Sci. Am. Article at 8 (similar finding about California).

such contamination. The information necessary to make such an assessment is readily available in BLM's own permitting files for existing oil and gas wells, from produced water records on existing wells, and from other sources such as US Geological Survey reports. 80 Fed. Reg. at 16,151–52. Moreover, to the extent any information gaps exist, it is incumbent on BLM to obtain that additional information before making an irreversible commitment of resources by issuing the leases. Additional data on, for example, aquifer quality or well construction practices is "essential to a reasoned choice among alternatives" and can be collected at a cost that is not "exorbitant." See 40 C.F.R. § 1502.22.

Conclusion

For the reasons stated above, we request that BLM defer offering all of the parcels under consideration, and that the agency develop an analysis of groundwater impacts that complies with NEPA.

Thank you for your consideration of these comments.

Sincerely,

Michael S. Freeman
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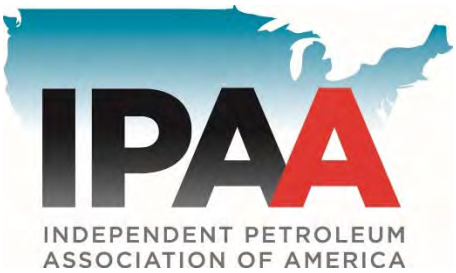
/Enclosures

Exhibit 1





September 25, 2017

Via e-filing on www.regulations.gov

Ms. Katharine S. MacGregor, Deputy Assistant Secretary
United States Department of the Interior

Mr. Michael D. Nedd, Acting Director
Bureau of Land Management

Attn: 1004-AE52
Mail Stop 2134LM
1849 C Street NW
Washington, DC 20240

Re: RIN 1004-AE52. *Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule* (82 Fed. Reg. 34,464).

Dear Ms. MacGregor and Mr. Nedd:

On July 25, 2017, the Bureau of Land Management ("BLM") published a proposed rule that would rescind a final rule BLM issued in March 2015. The "2015 Rule" was designed to regulate hydraulic fracturing on federal and Indian lands.[1] This submission constitutes comments on the July 2017 proposal from the Independent Petroleum Association of America ("IPAA") and the Western Energy Alliance (the "Alliance") (collectively, the "Associations"). The Associations collectively represent thousands of independent oil and natural gas explorers and producers, as well as the service and supply industries that support their efforts. It is the members of these groups that the proposed rescission will most significantly affect.[2] Independent

[1] 80 Fed. Reg. 16,128 (Mar. 26, 2015).

[2] The typical independent oil and natural gas producer is a small business which employs twelve full-time and three part time employees. *See* Independent Petroleum Ass'n of Am., *Profile of Independent Producers* at 2 (2012-2013) (describing the median size of independent oil and natural gas producing firms based on a survey of IPAA members), available at:
http://www.ipaa.org/wp-content/uploads/downloads/2014/07/2012-2013ProfileOfIndependentProducers.pdf.

And BLM acknowledged in the regulatory preamble that "disposal of recovered fluids is generally done . . . under the authority of other agencies such as the EPA (for underground injection)."[115]

BLM has taken an identical position with respect to hydraulic fracturing using diesel. During the rulemaking for the 2015 Rule, numerous commentators requested that BLM ban the use of diesel in hydraulic fracturing operations. BLM rejected these entreaties, emphasizing that the "regulation of diesel fuel in hydraulic fracturing fluids is committed to EPA under the SDWA and Energy Policy Act of 2005."[116] In fact, the 2015 Rule represents BLM's only ever attempt to regulate any form of underground injection, as the SDWA defines that term. But EPA's original source for authority over all forms of underground injection is the SDWA. BLM concedes that it cannot regulate enhanced oil recovery, disposal wells, or hydraulic fracturing using diesel because Congress has designated EPA as the agency with regulatory authority over those forms of underground injection in the SDWA and the same conclusion should apply with respect to non-diesel hydraulic fracturing. Given that BLM lacked the authority to issue the 2015 Rule in the first place, withdrawal of the rule at this point is appropriate.

IV. THE 2015 RULE'S REDEFINING OF "USABLE WATER" DISREGARDED EXISTING LAW AND PRACTICE.

The heart of the 2015 Rule is the identification and isolation of "usable water." Since 1982, operators have been required to "isolate freshwater-bearing [formations] and other usable water containing 5,000 ppm ["parts per million"] or less of dissolved solids . . . and protect them from contamination."[117] Under the 1982 rule, "fresh water" is defined to mean "water containing not more than 1,000 ppm of total dissolved solids" or other toxic constituents.[118] The 1,000 ppm standard for "fresh water" is double the secondary maximum contaminant level EPA has designated for total dissolved solids ("TDS") in drinking water (500 ppm).[119]

The 2015 Rule would have redefined "usable water," modifying the term's definition to include "those waters containing up to 10,000 parts per million (ppm) of total dissolved solids."[120] This despite a lack of any empirical evidence or science-based support for a need to protect water that is so saline that it can kill livestock, and which expands the scope of protected waters well beyond EPA's regulations under the Safe Drinking Water Act. Equally important, because the 2015 Rule was premised on an inaccurate view of the law, BLM did not properly account for any of the significant costs complying with the new standards would have caused operators to incur.

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[115] 80 Fed. Reg. at 16,166.
[116] 80 Fed. Reg. at 16,191.
[117] 43 C.F.R. § 3162.5-2(d) (2014).
[118] 43 C.F.R. § 3160.0-5 (2014).
[119] *See* 40 C.F.R. § 143.3.
[120] 43 C.F.R. § 3160.0-5 (2015).

The 2015 Rule would have amended 43 C.F.R. § 3162.5-2(d), revising the first sentence of the subsection to require the operator to "isolate all usable water and other mineral-bearing formations and protect them from contamination."[121] The 2015 Rule defines "usable water" as "[g]enerally those waters containing up to 10,000 parts per million (ppm) of total dissolved solids."[122]

The Associations challenged BLM's reasoning for expanding the concept of "usable water" during the rulemaking process for the 2015 Rule. The Associations noted that a TDS concentration of 2,000 ppm is the highest recommended for irrigation and livestock consumption.[123] The Associations cited authorities emphasizing that water "with 10,000 ppm or more 'may cause brain damage or death' in livestock."[124] Other commenters noted that, "[i]n defining 'fresh water,' the World Health Organization's upper limit of acceptable palatable water for human consumption is 1,000 ppm TDS and North Dakota State University Extension Service advises farmers and ranchers that water quality is 'good' if it generally has less than 2,000 ppm TDS."[125]

BLM contended during the rulemaking process for the 2015 Rule that it need not address these arguments because, despite the final rule containing an express revision to Section 3162.5-2(d), the 2015 Rule did not represent any change from previously existing requirements. BLM observed that Onshore Order No. 2, effective since December 1988, provides that "casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones,"[126] and defines "usable water" as "generally those waters containing up to 10,000 ppm of total dissolved solids."[127] BLM asserted that the 1982 regulation (still in the Code of Federal Regulations) "was *superseded* by the Onshore Order 2 definition in 1988."[128] Relying on that assertion, BLM alleges that "[b]ecause the definition of usable water has not substantially changed" in the final rule, "there will be no significant changes in costs of running casing and cement."[129]

As a matter of law, Onshore Orders cannot "supersede" a rule. Nor did Onshore Order No. 2 purport to supersede or repeal the fresh-water rule. BLM may issue Onshore Orders "when

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[121] 80 Fed. Reg. at 16,222.
[122] 43 C.F.R. § 3160.0-5 (2012).
[123] *See* A.R. at DOIAR0056230-31.
[124] *Id.* at DOIAR0056231 (quoting G. Lardy et al., *Livestock & Water*, Table 9 (N.D. State Univ. Extension Serv. June 2008)).
[125] A.R. at DOIPS0365300, Pub. Cmt., Devon Energy Corp. (Aug. 23, 2013).
[126] Onshore Order No. 2 § III.B
[127] Onshore Order No. 2 § II.Y, 53 Fed. Reg. at 46,805.
[128] 80 Fed. Reg. at 16,196 (emphasis added).
[129] 80 Fed. Reg. at 16,142 & 16,196 (attributing an "incremental cost" of "$0" to the change in the usable water standard).

necessary to implement and supplement the regulations in this part [43 C.F.R. Part 3160]."[130] But "implement and supplement" does not mean "supersede." In fact, rather than repeal any element of the 1982 regulations, Onshore Order No. 2 expressly cites the fresh-water rule as one of the authorities the Order implements.[131] And though BLM represented that "Onshore Order 2 superseded the existing regulations in 1988, because it was promulgated pursuant to notice-and-comment rulemaking,"[132] that position is inconsistent with the express statement in the Code of Federal Regulations that Onshore Order No. 2 did *not* supersede any existing authority.[133]

The suggestion that the 2015 Rule did not change previously existing law is also inconsistent with the understanding of senior BLM officials who did acknowledge that the 2015 Rule represented a meaningful change in applicable law.[134] Given that the regulatory preamble to

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[130] 43 C.F.R. § 3164.1(a).

[131] *See* 53 Fed. Reg. at 46,804 ("Specific authority for the provisions contained in this Order is found at . . . § 3162.5-2.").

[132] 80 Fed. Reg. at 16,176.

[133] *See* 43 C.F.R. § 3164.1(b). The Association's research has not disclosed any case in which BLM required an operator after 1988 to protect water zones with greater than 5,000 ppm when the operator's casing and cement was sufficient to protect water zones with less than 5,000 ppm. The only decision that appears relevant is a ruling BLM's State Director for the Montana State Office issued in 1994. *David L. Robertson*, SDR No. 922-94-05 (BLM Mont. State Office, April 21, 1994), available at: http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/operations/sdrs.Par.38840.File.dat/922-94-05.pdf. In *Robertson*, field officers had objected to an operator's proposed casing depth for the initial surface casing string because it was not deep enough to "protect shallow sources of usable water." On appeal, the operator showed that the proposed casing depth would "isolate the fresh water zones." The BLM State Director reversed the field officer's determination, agreeing that "setting the surface casing to a depth of 450 feet would isolate the fresh water sands in the glacial till from deeper aquifers with poorer water quality." *Id.* at 3. Given that "fresh water" was defined by rule as water with less than 1,000 ppm of TDS, this decision is not consistent with BLM's assertion during the 2015 rulemaking that the agency has always enforced a 10,000 TDS standard.

[134] *See, e.g.*, A.R. at DOIAR0005111, Decision Mem. for the Sec'y from Robert V. Abbey (Feb. 25, 2011) ("According to 43 CFR 3162.5-2(d) the operator is, at all times, responsible for ensuring that freshwater-bearing zones are isolated and protected from contamination during drilling and subsequent activities."); *id.* at DOIAR0005309, Mem. from Elizabeth Klein to Jason Bordoff & Dan Utech (Mar. 17, 2011) (same). It is clear that, at the minimum, BLM was aware that the regulated community considered the final rule to effect a change in the law. *See*, *e.g.*, A.R. at DOIAR0021777, E-mail from David E. Blackstun to Steven Wells & Nicholas Douglas (May 22, 2012) (confirming Blackstun's understanding that the hydraulic fracturing rule would "broaden the scope of waters that operators must protect by raising the TDS concentration for usable water to 10,000 ppm"); *id.* at DOIAR0022886, E-mailed notes of Samuel B. Boxerman to Nancy DenHerder & Steven Wells (May 31, 2012) (explaining that under the hydraulic fracturing rule "[u]sable water would be redefined from 5,000 ppm or less of dissolved solids to water containing up to 10,000 ppm of dissolved solids") (citing 43 C.F.R. § 3160.0-5); *id.* at DOIAR0080261, Key Changes in the Hydraulic Fracturing Rule from Supplemental (May 2013) to Draft Final Rule (June 5, 2014) (acknowledging that the final rule "adopts standards set in the SDWA and Onshore Order No. 2"); *id.* at DOIAR0027276, Outline for Meeting Between ConocoPhillips and BLM (Aug. 23, 2012) (raising as a discussion issue that the "Proposed rule replaces current definition of 'fresh water' with 'usable water', defined as water 'containing up to 10,000 ppm of total dissolved solids'"); *id.* at DOIAR0027483, Meeting Notes: Industry Stakeholder Meeting to Discuss BLM's Proposed Hydraulic Fracturing Rule (June 28, 2012) (documenting industry understanding that "measures to protect usable water when operating at a depth that does not affect water introduces a new regulatory scheme"); *Wyoming v. Zinke*, No. 2:15-CV-043-SWS (D. Wyo.), Tr. of Prelim. Inj. Proceedings at

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the 2015 Rule recognizes an "inconsistency" between the 5,000 ppm standard contained in 43 C.F.R. § 3162.5-2(d) and the 10,000 ppm standard in Onshore Order No. 2's definition of usable water, it is clear that the former remained viable at the time the 2015 Rule was issued.[135]

Notwithstanding any disagreement regarding whether the 2015 Rule would have changed the *existing law* defining "usable water," there has never been any disagreement over what the rule's impact would have been on *existing practice* for locating and protecting usable water. For decades, state oil and gas agencies and BLM field offices have informed operators about the location of usable water that must be protected – taking into account local geology – and directed the depths at which it is acceptable to set well casing. Under the 2015 Rule, operators would have been assigned an affirmative obligation to identify the location of usable water to be protected based on a quantitative TDS calculation.[136] This would have posed a new burden.

The approach the 2015 Rule would have adopted disregards the difficulty and expense of measuring the numerical quality of water with the precision the 2015 Rule would have required. No logging tool directly measures TDS. Logs are essential for identifying rock properties, but do not represent an effective tool for measuring water salinity. Operators often run resistivity logs for intermediate and production casing, and these logs might allow the qualitative identification of high-salt-content zones. These logs do not, however, directly measure TDS, and there are too many variables for the signature these logs record to be converted into accurate TDS data.[137] A notable omission from administrative record prepared for the 2015 Rule is a description of any alternative means to comply with the requirement to determine the location of water meeting the agency's numerical definition of "usable water."[138]

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105:8-106:15 (June 23, 2015) (Sgamma) (testifying that BLM field officials presented information materials to oil and natural gas operators indicating that the final rule modified the standard for water to be protected).

[135] *See* 80 Fed. Reg. at 16,141 & 16,196.

[136] *See* 43 C.F.R. § 3162.3-3(d)(1)(iii) (requiring identification of the "estimated depths (measured and true vertical) to the top and bottom of all occurrences of usable water").

[137] *See* A.R. at DOIAR0056164, Pub. Cmt., ConocoPhillips Co. (Aug. 22, 2013) (explaining that that while in controlled conditions one might determine TDS measurements from well logging tools, there has been "little success applying the techniques") (quoting *Borehole Geophysical Techniques for Determining the Water Quality & Reservoir Parameters of Fresh & Saline Water Aquifers in Tex.*, Report 343, Tex. Water Dev. Bd.); A.R. at DOIPS0301574, Pub. Cmt., ANGA & AXPC (Aug. 23, 2013) (observing that while logs may allow an inference that salty water is present, they cannot do so "clearly enough to determine . . . an unambiguous 10,000 [ppm] TDS cutoff").

[138] *See* A.R. at DOIAR0079317, Hydraulic Fracturing Meeting Notes (May 21, 2014) (posing question: "who is going to supply BLM with the usable water TDS information to determine usable water?"); *id.* at DOIPS0435828, Pub. Cmt., Marathon Oil Corp. (Aug. 23, 2013) (noting that "the revised proposed definition would require operators to collect new information regarding aquifers that have little or no potential to be considered future sources of drinking water or water to be used in industrial or agricultural application" and emphasizing that "[t]his would be a significant cost to Operators"). The 2015 Rule also fails to account for the rule's impact on operators that drilled and cased existing wells under the former practice, which includes, under BLM's calculation, any well drilled since at least 1988. The 2015 Rule would have regulated all future hydraulic fracturing in both new and existing

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states only that, "[d]epending on the well design, it may be appropriate to run a CBL and/or other diagnostic tool(s) to determine that the cement integrity is adequate to meet the well design and construction objectives."[245] BLM did not present any analysis considering how frequently well design will support a need to run a CEL on intermediate casing or made any comparison between the costs of a CEL requirement and the "other diagnostic tool(s)" that industry guidance contemplates. To the contrary, BLM acknowledged that it "does not have credible data on the prevalence of voluntary compliance or the prevalence of CEL requirements as conditions of approval."[246]

A lack of data complicates another aspect of BLM's 2015 cost calculation — BLM's assertion that, "[b]ased on field experience, the BLM anticipates that only about [five] percent of wells have intermediate casing to protect usable water."[247] There is no evidentiary or mathematical support for this supposition. Equally important, BLM's "field experience" was based on BLM's application of the rules that existed before the 2015 Rule was promulgated. But as discussed above,[248] the 2015 Rule re-assigns the burden to identify usable water from government agencies to operators and amends the method by which usable water is identified, requiring precise mathematical calculations. Had the 2015 Rule been adopted, these modifications were likely to result in an expansion of the number of wells with intermediate casing to protect this numerically-identified "usable water."

In the end, based on the information that BLM compiled in 2015, and the recognition that individual oil and gas wells are uniquely designed and constructed, there is insufficient data to determine how many wells would incur additional costs for conducting a CEL on intermediate casing. To ensure the Associations' estimates are as reasonable and conservative as possible, the Association have therefore not incorporated any cost in their estimates associated with the requirement to conduct a CEL on intermediate casing where cement is not returned to the surface.

D. ADDITIONAL CASING.

Since ground water levels vary greatly across states and geologic basins, it is not possible to determine exactly how much additional casing will be required under the 2015 Rule for a "typical well."[249] Among other requirements, the new rule places the burden of identifying the location of usable water on operators, a task that state regulators and BLM field officers

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[245] API HF1 § 7.4, at 12.
[246] 80 Fed. Reg. at 16,197.
[247] *Id.*
[248] *See* discussion *supra* Part IV.
[249] Calculating an exact figure would require an engineering examination of each of the geologic basins and the well designs in use – something which is not practical based on available data. The 2015 Rule's numeric definition of "usable water" is so broad that in practical terms, casing would have been required to be run to significantly deeper depths than may be economically practical (particularly for gas wells).

currently perform.[250] The 2015 Rule would have required operators to obtain more hydrologic data which may or may not match data state and federal regulators currently rely upon to determine the depths at which protective casing and cement must be set. The 2015 Rule would have led to instances where operators faced the additional costs of casing and cementing associated with isolating formations that meet the numerical definition of usable water under the final rule, but which are located at depths deeper than the zones that state agencies and BLM field offices have previously designated as requiring isolation.[251]

Current laws in the states require operators to case their wells to protect drinking water aquifers and other "usable" water aquifers, with the recognition that for aquifers to be deemed usable, they should be economically viable. In North Dakota and Montana, for example, operators are currently directed to install protective casing to a depth below the Pierre Shale formation, but the 2015 Rule could have required additional casing and cement when water meeting the 2015 Rule's numeric definition of "usable water" was found at depths deeper than that formation. In Wyoming, casing needs to be set to a level 100 feet below the deepest water well within a one mile radius of either an oil or gas well-- with some exceptions, drinking water aquifers are generally above 1,000 feet in Wyoming. Again, when water meeting the 2015 Rule's definition of usable water is found below these depths, additional casing requirements would have applied.

Because of the significant differences in aquifer depth across states, JDA used a Monte Carlo simulation model based on the depths of existing water wells in each state to arrive at a conservative estimate of 2,350 feet of additional casing that might be required under the 2015 Rule. At a cost of $37 per foot, the additional casing would add $173.9 million in costs.

E. MECHANICAL INTEGRITY TESTS.

The 2015 Rule would have required that operators conduct a mechanical integrity test on all casing and fracturing string that will be subject to pressure during hydraulic fracturing operations, including the horizontal portion of the well that is located within the producing formation.[252] To conduct these tests operators will have to use complicated tools to seal off the toe of the well during testing or rely on tubing conveyed perforation techniques after the pressure test. Either method is likely to increase costs of completing a well, with the lowest potential additional cost being $10,000 per well. If any problems occur as a result of the MIT, these costs could rise by $75,000 to $100,000 per well.

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[250] *See* discussion *supra* Part IV.

[251] BLM asserted in its 2015 Regulatory Impact Analysis that there would be no cost associated with additional casing requirements, since operators already have to protect usable water. As discussed above, this assertion was based on a fundamental misunderstanding of existing law and practice. *See* discussion *supra* Part IV.

[252] For a more complete discussion of the 2015 Rule's MIT requirement, *see* discussion *supra* Part VII.C.

The overwhelming majority of new wells being proposed for federal leaseholds today are horizontal wells; using onshore rig counts as a proxy, the Associations have developed a conservative estimate of how frequently the additional costs associated with testing the horizontal portion of the lateral should apply. As of September 15, 2017, 795 of the 936 rigs operating in the United States, or approximately 85%, were drilling horizontal wells.[253]

Using 85% as a proxy, the Associations estimate that approximately 1,700 horizontal wells would be completed using hydraulic fracturing and would have incurred the additional MIT costs under the 2015 Rule. Assuming, to be conservative, the minimal additional cost of $10,000 per well, the MIT requirement would have resulted in $17 million in costs to operators.

F. RECOVERED FLUIDS COSTS.

JDA's production model can be used to calculate the differences in costs between tanks (which are generally rented for a short period during the completion process) and pits which once constructed can be used for a number of different wells. The model suggests that the costs of fluid storage tanks for a representative well in the thirteen western states is about $4,250 and the cost for digging and lining pits is $365.[254] Based on the assumed 2,000 wells and a distribution across the states being analyzed equal to the current distribution of approved APDs, the average cost to rent water storage tanks per representative well would be $5,111 and for preparing and lining pits $439. Absent any precise data, the Associations will assume that: (i) fifty-percent of operators would have voluntarily chosen to use the small, rigid steel tanks the 2015 Rule requires regardless of cost because those tanks were preferable operationally; and (ii) fifty-percent of operators would have used tanks only because the operator was obligated to select tanks under the 2015 Rule.[255] Applying the calculated difference in cost the Associations estimate between using tanks and lined pits, the Associations estimate that the total additional cost of the tank requirement would have been $4.887 million.

G. SUMMARY.

Cost Component	2015 Rule
Administrative Costs	$17.844 million
Delay Costs	$6.738 million
CEL Requirements	$0
Additional Casing	$173.9 million
Mechanical Integrity Tests	$17 million

[253] Williams, James L., *N. Am. Rotary Rig Counts,* WTRG Economics, available at: http://www.wtrg.com/rotaryrigs html.
[254] *See* n.226, *supra*.
[255] Although the 2015 Rule provides criteria pursuant to which BLM might authorize use of lined pits, the regulatory preamble to the 2015 Rule emphasizes that any "exceptions should be limited and rarely granted." 80 Fed. Reg. at 16,163.

Cost Component	2015 Rule
Recovered Fluids Storage	$4.887 million
Total	**$220.369 million**

Based on highly conservative estimates, rescission of the 2015 Rule will result in cost savings in excess of $220 million per year. Given that the 2015 Rule has no discernible non-economic benefit, rescission of the rule to avoid these costs is rational and appropriate.

Exhibit 2

EXHIBIT A

Environmental Science & Technology

Article

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Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming, Field

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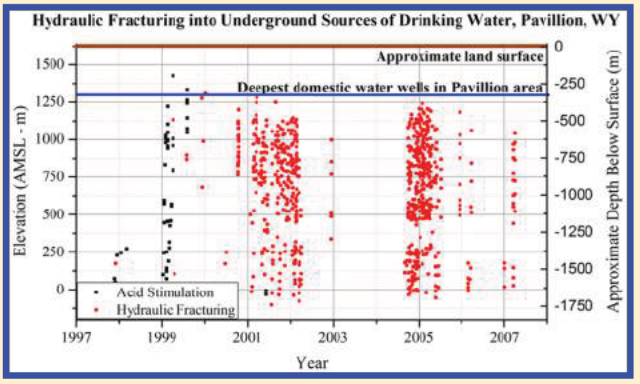
Supporting Information

ABSTRACT: A comprehensive analysis of all publicly available data and reports was conducted to evaluate impact to Underground Sources of Drinking Water (USDWs) as a result of acid stimulation and hydraulic fracturing in the Pavillion, WY, Field. Although injection of stimulation fluids into USDWs in the Pavillion Field was documented by EPA, potential impact to USDWs at the depths of stimulation as a result of this activity was not previously evaluated. Concentrations of major ions in produced water samples outside expected levels in the Wind River Formation, leakoff of stimulation fluids into formation media, and likely loss of zonal isolation during stimulation at several production wells, indicates that impact to USDWs has occurred. Detection of organic compounds used for well stimulation in samples from two monitoring wells installed by EPA, plus anomalies in major ion concentrations in water from one of these monitoring wells, provide additional evidence of impact to USDWs and indicate upward solute migration to depths of current groundwater use. Detections of diesel range organics and other organic compounds in domestic wells <600 m from unlined pits used prior to the mid 1990s to dispose diesel fuel based drilling mud and production fluids suggest impact to domestic wells as a result of legacy pit disposal practices.



INTRODUCTION

Between 2005 and 2013, natural gas production in the U.S. increased by 35% largely due to unconventional gas production in shale and tight gas formations.[1] Between 2013 and 2040, natural gas production is expected to increase another 45% with production from tight gas formations in particular increasing from 4.4 to 7.0 trillion cubic feet (59%) primarily in the Gulf Coast and Dakotas/Rocky Mountain regions.[1] Tight gas formations already account for 26% of total natural gas production in the United States today.[2]

In the U.S. Code of Federal Regulations (CFR), there are two federal regulations for protecting groundwater resources for present and future use relevant to oil and gas extraction − "Underground Source of Drinking Water" (USDW) and "usable water." A USDW is defined in 40 CFR 144.3 in requirements for the Underground Injection Control program promulgated under Part C of the Safe Drinking Water Act (SDWA) as "an aquifer or its portion: (a)(1) Which supplies any public water system; or (2) Which contains a sufficient quantity of ground water to supply a public water system; and (i) Currently supplies drinking water for human consumption; or (ii) Contains fewer than 10 000 mg/L total dissolved solids; and (b) Which is not an exempted aquifer." With the exception of use of diesel fuels, the Energy Policy Act of 2005 ("EPAct") exempted hydraulic fracturing from the SDWA, thereby allowing injection of stimulation fluids into USDWs. However, under Section 1431 of the SDWA, the Administrator of EPA may take action if impact to a USDW "may present an imminent and substantial endangerment to the health of persons."

The term "usable water" applies to lands containing federal or tribal mineral rights regulated by the Bureau of Land Management (BLM). This term is applicable to the Pavillion Field because tribal mineral rights are associated with more than half of production wells there. In the BLM Onshore Oil and Gas Order No. 2, usable water is defined as water containing ≤10 000 mg/L total dissolved solids (TDS) − a definition maintained in the March 2015 BLM rule on hydraulic fracturing (43 CFR 3160). In 43 CFR 3160, BLM retained a threshold for groundwater protection at 10 000 mg/L stating, "Given the increasing scarcity and technological improvements in water treatment, it is not unreasonable to assume aquifers with TDS levels above 5000 ppm are usable now or will be usable in the future." However, on September 30, 2015, the U.S. District Court for Wyoming granted a

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preliminary injunction filed by the States of Wyoming and Colorado to stop implementation of the BLM rule based on the assertion that the EPAct precludes BLM rulemaking.[3]

In 2004, EPA[4] documented the widespread use of hydraulic fracturing in USDWs colocated in formations used for coal bed methane (CBM) recovery. EPA[4] acknowledged likely ground water contamination as a result of this activity but stated that the attenuation factors of dilution, adsorption, and biode gradation would reduce contaminant concentrations to safe levels prior to reaching domestic wells that are generally shallower than production wells. Thus, EPA[4] distinguished impact to USDWs from impact to domestic wells. In 2014, while defining the chemical abstract numbers of fluids designated as diesel fuels, EPA revised its position and stated that injecting stimulation fluids directly into USDWs "presents an immediate risk to public health because it can directly degrade groundwater, especially if the injected fluids do not benefit from any natural attenuation from contact with soil, as they might during movement through an aquifer or separating stratum."[5]

The Pavillion Field (Figure 1) is located east of the Town of Pavillion in Fremont County, WY, in the west central portion

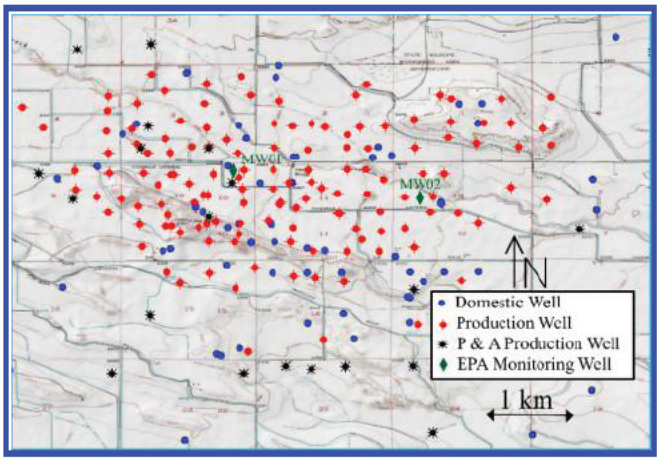

Figure 1. Central portion of the Pavillion Field illustrating locations of domestic water wells, production wells, plugged and abandoned (P&A) wells, and EPA monitoring wells (labeled). The entire Field, with labels for production and domestic wells and approximate locations of unlined pits, is illustrated in Figure SI A5. The geographic area in which the Field is located is illustrated in Figure SI A1.

of the Wind River Basin (WRB) (Figure SI A1). The field consists of 181 production wells including plugged and abandoned wells. Conventional and unconventional (tight gas) hydrocarbon production in the Pavillion Field is primarily natural gas from sandstone units in the Paleocene Fort Union and overlying Early Eocene Wind River Formations. However, oil has also been produced from production wells in these formations, primarily in the western portion of the field close to the suspected location of a fault (SI Sections A.1 and A.2).

In response to complaints regarding foul taste and odor in water from domestic wells within the Pavillion Field, EPA initiated a groundwater investigation in September 2008 under the Comprehensive Environmental Response and Liability Act (CERCLA).[6] This investigation remains the only one in which CERCLA has been invoked to investigate potential ground water contamination due to hydraulic fracturing.[7] Under CERCLA, impact to both groundwater resources and domestic wells is evaluated, in contrast to limiting evaluation to impact to domestic wells as is common in oil and gas field based investigations.

EPA conducted two domestic well sampling events in March 2009 (Phase I)[6] and January 2010 (Phase II).[8] Between June and September 2010, EPA installed two monitoring wells, MW01 and MW02, using mud rotary drilling with screened intervals at 233−239 m and 296−302 m below ground surface (bgs), respectively. These monitoring wells were installed to evaluate potential upward solute transport of compounds associated with well stimulation to maximum depths of current groundwater use (~322 m).[9] EPA sampled MW01 and MW02 during the Phase III (October 2010) and Phase IV (April 2011) sampling events.

In December 2011, EPA[9] released a draft report summarizing results of the Phase I−IV sampling events. EPA documented groundwater contamination in surficial Quaternary uncon solidated alluvium attributable to numerous unlined pits used for disposal of diesel oil based (invert) drilling mud and production fluids including flowback, condensate, and produced water prior to the mid 1990s. EPA[9] also documented injection of stimulation fluids into USDWs and concluded that inorganic and organic geochemical anomalies at MW01 and MW02 appeared to be attributable to production well stimulation. EPA received numerous comments both challeng ing and supporting its findings in the draft EPA report.[10−37] We reviewed and considered these comments when preparing this manuscript.

A substantial amount of data has been collected since publication of the 2011 draft EPA report, adding to an already extensive data set. In April 2012 (Phase V) the EPA[38,39] split samples with the U.S. Geological Survey at MW01[40,41] and MW02.[42] In 2014, the Wyoming Oil and Gas Conservation Commission (WOGCC) released a report on production well integrity[43] and in 2015 released a report on surface pits.[44] In December 2015, the Wyoming Department of Environmental Quality (WDEQ) released a report on sample results of a subset of domestic wells previously sampled by EPA.[45]

We conducted a comprehensive analysis of all publicly available online data and reports, to evaluate impact to USDWs and usable water as a result of acid stimulation and hydraulic fracturing. Although injection of stimulation fluids into USDWs in the Pavillion Field was previously documented by EPA,[9] the potential impact to USDWs at depths of stimulation was not assessed. We evaluate potential upward migration of con taminants to depths of current groundwater use using data from MW01 and MW02. We also evaluate potential impact to domestic wells as a result of legacy disposal of production and drilling fluids in unlined pits.

■ MATERIALS AND METHODS

Sources of EPA reports, versions of the Quality Assurance Project Plan (QAPP), and Audits of Data Quality (ADQs) are provided in Table SI H1. Sources of analytical data and associated information on quality assurance and control are summarized in Table SI H2. ADQs were conducted by EPA for Phase I−IV investigations to verify the quality of analytical data and consistency with requirements specified in the QAPP.

In response to a comprehensive information request by EPA regarding oil and gas production and disposal activities in the Pavillion Field, the field operator, Encana Oil & Gas (U.S.) Inc., provided Material Safety and Data Sheets (MSDSs) of products used for well stimulation to EPA[46] (Table SI C3). During the Phase V sampling event, EPA developed a gas chromatography

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Table 1. Summary of Major Ion Concentrations of Domestic Wells in the Wind River Indian Reservation (WRIR), Fremont County, WY, and within and around the Pavillion Field

	WRIR[a]			Fremont County[b]			within and around Pavillion Field[c]		
parameter (mg/L)	*n*	median	range	*n*	median	range	*n*	median	range
TDS	154	490	211 5110	77	1030	248 5100	65	925[†]	229[†] 4901[†]
Ca	149	10	1 486	77	45	1.7 380	48	50.8	3.32 452
Mg	128	2.2	0.1 195	77	8.2	0.095 99	45	5.32	0.024 147
Na	153	150	5 1500	77	285	4.5 1500	72	260	38.0 1290
K	149	2.0	0.2 30	77	2.45	0.1 30	43	1.36	0.179 10.5
SO_4	154	201	2 3250	77	510	12 3300	88	590	29.0 3640
Cl	154	14	2 466	77	20	3 420	48	21.1	2.60 77.6
F	154	0.7	0.1 8.8	76	0.9	0.2 4.9	46	0.88	0.20 4.1

[a]With the exception of potassium, from Daddow.[48] Information on potassium extracted from Daddow.[53] [b]From Plafcan et al.[51] There is overlap of 19 sample results with Daddow.[48,53] [c]Major ion concentrations in domestic wells[6,8,9,39,45,52] summarized in Table SI B2. Mean values used for domestic wells sampled more than once. [n]Number of sample results. [†]TDS for EPA data estimated using linear regression equation from Daddow[48] TDS (mg/L) = 0.785 × specific conductance (μs/cm) − 130 (n = 151, r^2 = 0.979)

flame ionization based approach to obtain a lower reporting limit (50 μg/L) for methanol compared to commercial laboratory analysis (5000 μg/L). We obtained this data set as the result of a Freedom of Information Act request to EPA.[47]

We reviewed over 1000 publicly available well completion reports, sundry notices, drilling reports, and cement bond and variable density logs accessed from the WOGCC Internet site using API search numbers to determine dates of well completion, depths of surface casing, top of original or primary cement, and numbers and depths of cement squeeze jobs (injection of cement through perforated production casing to remediate or extend existing primary cement). Similarly, we reviewed online information to document well stimulation practices summarized in Tables SI C1 and SI C2.

The field operator analyzed major ions in produced water samples at 42 production wells in 2007 (Table SI D1). EPA collected produced water samples at four production wells in 2010 and analyzed them for organic compounds (Table SI D3).[8] The field operator also conducted mechanical integrity and bradenhead (annular space between production and surface casing) testing between November 2011 and December 2012. In addition to sustained casing pressure at many production wells during that period (Table SI D2), water flowed through the bradenhead valve to the surface at four production wells (SI Section D.3). Aqueous analysis of bradenhead water samples by the field operator was limited to major ions (Table SI D1). Production well string and brandenhead gas samples were collected for benzene, toluene, ethylbenzene, xylenes (BTEX) and light hydrocarbons (Table SI D2).

To evaluate the effect of purging volume on water quality, EPA collected ten samples through time (Table SI 3a) during the Phase V sampling event at MW01. Based on EPA's purging procedure, we developed a model incorporating plug flow in casing and mixing in the screened interval (SI Section E.3, Figure SI E4). Our simulations indicated that virtually all (99.997%) of water entering the sampling train at the surface at the time of the first sample collection at MW01 originated directly from the surrounding formation (i.e., no stagnant casing water) (Figure SI E6). MW02 was a low flow monitoring well. The cause of low flow is unknown but could be due to several factors, including low relative aqueous permeability due to gas flow or insufficient removal of drilling mud during well development. During the Phase V sampling event, MW02 was repeatedly purged over a 6 day period to ensure that sampled water originated from the surrounding formation (SI Section E.2, Figure SI E5). A discussion of monitoring well construction, including schematics for MW01 (Figure SI E1) and MW02 (Figure SI E2), is provided in SI Section E.1.

RESULTS AND DISCUSSION

Groundwater Resources in the Pavillion Area. The Wind River and Fort Union Formations are variably saturated fluvial depositional systems characterized by shale and fine , medium , and coarse grained sandstone sequences. Lithology is highly variable and difficult to correlate from borehole data. No laterally continuous confining layers of shale exist below the maximum depth of groundwater use to retard upward solute migration. A comprehensive review of regional and local geology, including a lithologic cross section in the vicinity of MW01 and MW02 (Figure SI A4), is provided in SI Sections A.1−A.6.

Domestic wells in the Pavillion area draw water from the Wind River Formation—a major aquifer system in the WRB.[48,49] From the surface to approximately 30 m bgs, groundwater exists under unconfined conditions.[50] Below this depth, groundwater is present in lenticular, discontinuous, confined sandstone units with water levels above hydrostatic pressure, and in some instances flowing to the surface,[48,50,51] indicating the presence of strong localized upward gradients. The majority of documented domestic well completions in Fremont County[51] and five municipal wells in the Town of Pavillion[52] west of the Field are completed in the Wind River Formation.

Flow to the surface was observed in a domestic well during the Phase II sampling event,[6] and as mentioned, at four production wells during bradenhead testing in 2012. While the overall vertical groundwater gradient in the Pavillion Field is downward, these observations indicate that localized upward hydraulic gradients exist in the Field, which is relevant to potential upward solute migration from depths of production well stimulation. The deepest domestic wells in the Pavillion Field and immediate surrounding area are 229 and 322 m bgs, respectively (Table SI B1). Two municipal wells were proposed, but not drilled, in the Pavillion Field as replacement water for domestic wells at depths of 305 m bgs,[52] similar to the depth of MW02 installed by EPA.

Major ion concentrations of domestic wells in the Pavillion field (summarized in Table SI B2) are typical of the Wind River Indian Reservation (WRIR),[48] west of the Pavillion Field, and

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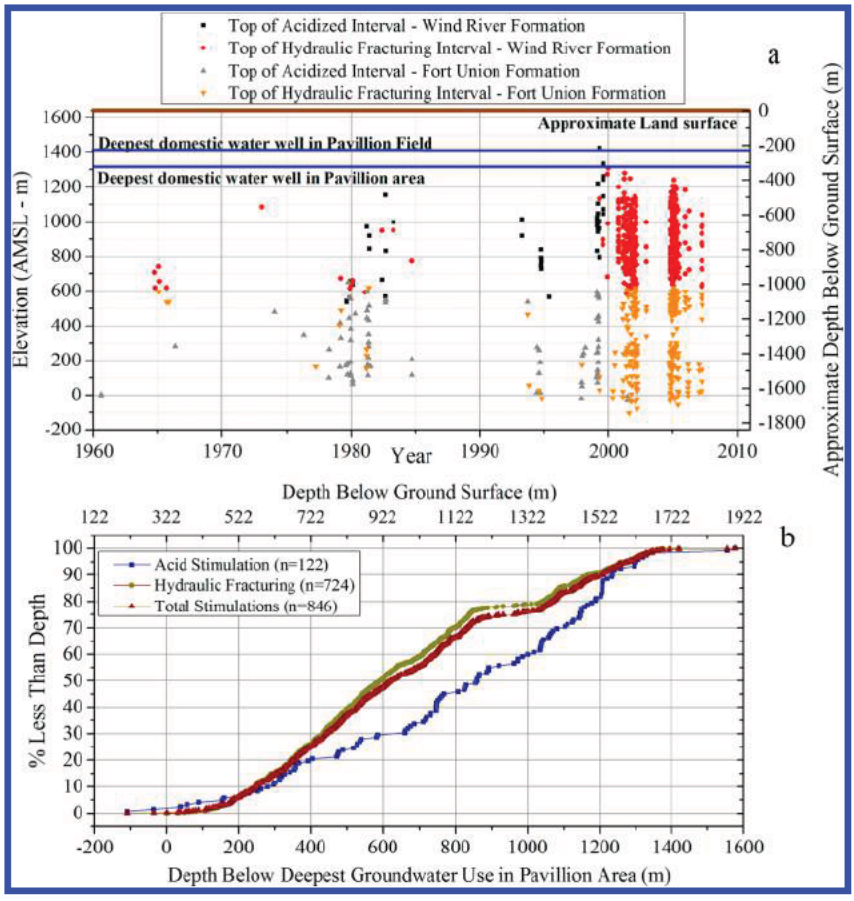

Figure 2. (a) Elevation in absolute mean seal level (AMSL) and approximate depth below ground surface of documented acid and hydraulic fracturing stimulation stages. (b) Cumulative distribution of stimulation stages as a function of depth below deepest groundwater use in the Pavillion Field. Documentation of stimulation stages is absent at a number of production wells so that numbers presented here are a lower bound.

in Fremont County,[51] where the Pavillion Field lies, (Table 1) with TDS levels <5000 mg/L. TDS concentrations in the Wind River Formation appear to vary with lithology rather than depth (white coarse sandstone associated with lower TDS values).[52] There are no apparent trends in TDS levels with depth from data sets from the WRIR,[53] Fremont County,[51] and domestic wells in and around the Pavillion Field.

The Fort Union Formation is not used for water supply in the Pavillion area. However, the formation is highly productive and permeable where fractured[49] with TDS values from 1000 to 5000 mg/L.[54] An aquifer exemption was obtained to enable disposal of produced water in a disposal well perforated in the Fort Union Formation[55] at a location 5.6 km northwest of the Pavillion Field. Use of this well was suspended due to failure of well casing. Thus, the Wind River and Fort Union Formations in the Pavillion Field meet the regulatory definition of USDWs, as explicitly stated by EPA,[9,55] and of usable water as defined by the BLM.

Well Stimulation Depths, Treatments, and Chemical Additives. Exploration of oil and gas in the Pavillion Field commenced in August 1953 with increasingly shallow stimulations through time (Figure 2). The first acid stimulation and hydraulic fracturing stages (injection over one or more discrete intervals) occurred in June 1960 and October 1964, respectively. Acid stimulation ceased in 2001. To date, the last stimulation stage (hydraulic fracturing) occurred in April 2007. Most production wells were completed and stimulated during several periods of increased activity, especially after 1997 (Figure 2a). Acid stimulation and hydraulic fracturing occurred as shallowly as 213 and 322 m bgs, respectively, at depths comparable to deepest domestic groundwater use in the area (Figure 2a). Approximately 10% of stimulation stages were <250 m of deepest domestic groundwater use whereas approximately 50% of stimulation stages were <600 m and 80% were <1 km of deepest domestic groundwater use (Figure 2b).

Surface casing of production wells—the primary line of defense to protect groundwater during conventional and unconventional oil and gas extraction—is relatively shallow in the Pavillion field with a median depth of 185 m bgs (i.e., shallower than the deepest groundwater use) and range of 100−706 m bgs (Figure SI C1). There is no primary cement below surface casing, often for hundreds of meters, for 55 of 106 (~52%) production wells for which cement bond logs are available (Table SI C1, Figure SI CI). There is currently no requirement in Wyoming for placement of primary cement to surface casing or to ground surface.[45]

Instantaneous shut in pressures (ISIP) (wellhead gauge pressure immediately following fracture treatment) were similar for acid stimulation and hydraulic fracturing (Figure SI C2) suggesting that both matrix acidizing and acid fracturing (no proppants used[56]) occurred in the Pavillion Field. Acidizing solutions used in the Pavillion Field typically consisted of a 7.5% or 15% hydrochloric acid solution plus additives described in well completion reports as inhibitors, surfactants, diverters, iron sequestration agents, mutual solvents, and clay stabilizers.

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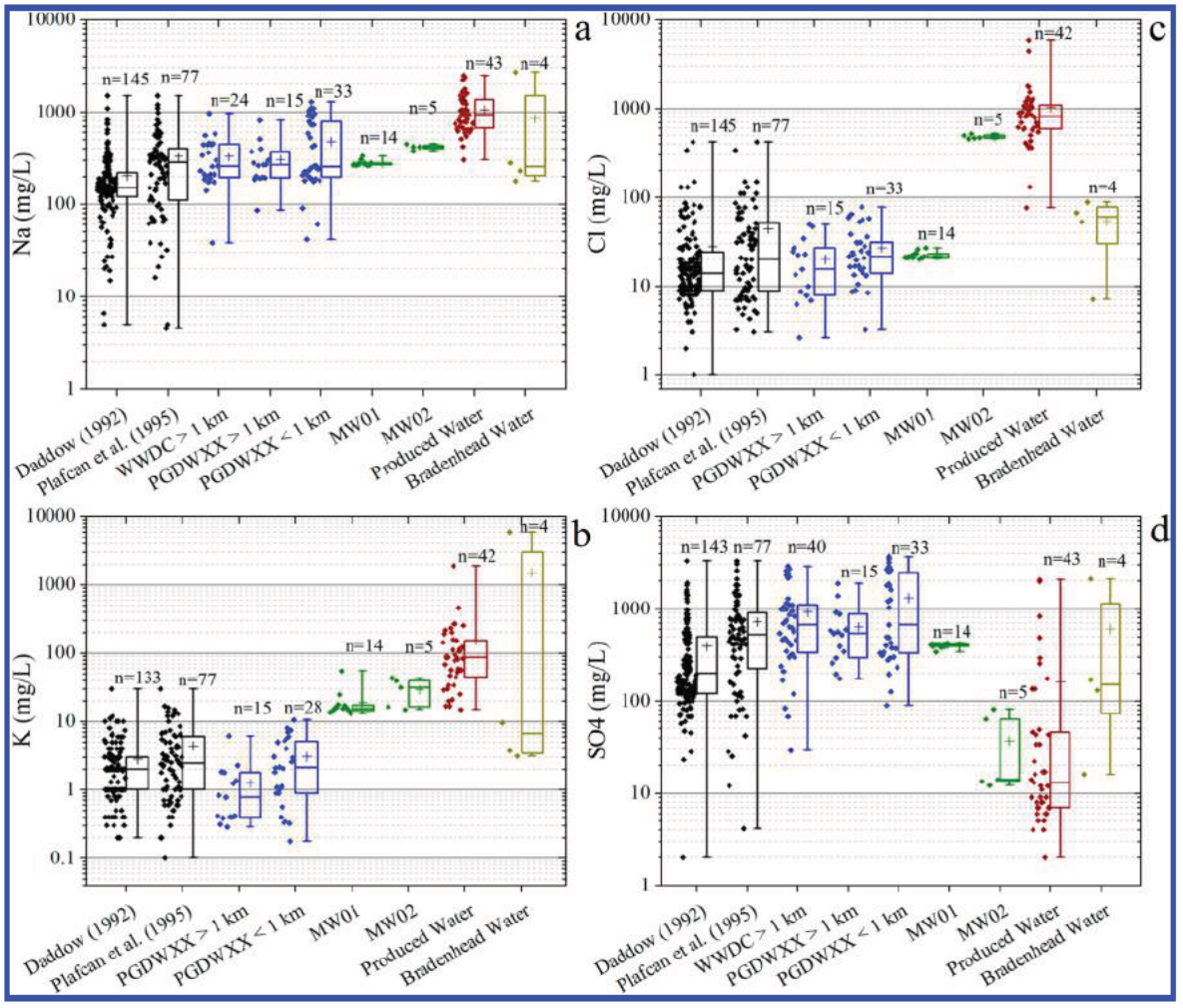

Figure 3. Box and whisker plots of minimum and maximum, quartiles, median (line in boxes), mean (crosses in boxes) of (a) Na, (b) K, (c) Cl, (d) SO_4 for domestic wells inventoried by Daddow[48,53] and Plafcan[51] in the Wind River Indian Reservation and Fremont County, respectively, sampled by EPA[6,8,9,39] and WDEQ[45] (PGDWXX series) greater than and less than 1 km from a production well, Wyoming Water Development Commission[52] (WWDC series) greater than 1 km from a production well, EPA monitoring wells[9,39] (Tables SI E2b, SI E3b), and produced water and bradenhead water samples (Table SI D1). Domestic wells sampled more than once, including data from Daddow,[53] are represented with a mean value. Fourteen measurements in Daddow[53] < 1 mg/L for potassium are not illustrated. Data points at MW01 and MW02 are samples collected during Phase III, IV, and V sample events.

Acidizing solutions were often flushed with a 2, 4, or 6% potassium chloride (KCl) solution. Pad acid, to initiate fractures, contained 10−50% heavy aromatic petroleum naptha. Corrosion inhibitors contained isopropanol and propargyl alcohol. Clay stabilizers contained methanol. Musol solvents used for acid stimulation consisted of 60−100% 2 butoxyetha nol and 10−30% oxylated alcohol (Table SI C3).

Prior to 1999, "salt solutions" were commonly used for hydraulic fracturing. After 1999, a 6% KCl solution was used extensively for hydraulic fracturing often combined with CO_2 foam, with subsequent flushing using a 6% KCl solution. There were reported losses of KCl solutions during stimulation (e.g., at Tribal Pavillion 12−13 "lost thousands of bbls KCl"). Undiluted diesel fuel was used for hydraulic fracturing at three production wells before 1985. From the mid 1970s through 2007, there was widespread use of gelled fracture fluids (gelled water, linear gel, and cross linked gel). Diesel fuel #2 was used for liquid gel concentrates (Table SI C3). Ammonium chloride, potassium hydroxide, potassium metaborate, and a zirconium complex were used as cross linkers.

Gelled fracture fluids were used extensively with CO_2 foam (Table SI C4). Between 2001 and 2005, "WF 125" was used with CO_2 foam (often with a 6% KCl solution) for hydraulic fracturing (Table SI C5). A stimulation report (one of only three publicly available throughout the operating history of the Field) and MSDSs indicate that WF 125 contained diesel fuel #2, 2 butoxyethanol, isopropanol, ethoxylated linear alcohols, ethanol, and methanol. During 2001, WF 125 and unidentified product mixtures were used with a 6% KCl and a 10% methanol solution and CO_2 foam for hydraulic fracturing followed with a 6% KCl and 10% methanol solution flush. Other WF series compound mixtures of unknown composition were also used with CO_2 foam and in some cases with N_2 gas. Methanol, isopropanol, glycols, and 2 butoxyethanol were used in foaming agents (Table SI C3). Ethoxylated linear alcohols, isopropanol, methanol, 2 butoxyethanol, heavy aromatic petroleum naptha, naphthalene, and 1,2,4 trimethylbenzene were used in surfactants (Table SI C3). Slickwater (commonly with a 6% KCl solution) was used for hydraulic fracturing with and without CO_2 foam in 2004 and 2005, respectively (Table SI C6).

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At least 41.5 million liters (or ~11 million gallons) of fluid was used for well stimulation in the Pavillion Field (calculated from Table SI C2). Given lack of information at numerous production wells, this is an underestimate of actual cumulative stimulation volume. The cumulative volume of well stimulation in closely spaced vertical wells in the Pavillion Field is characteristic of high volume hydraulic fracturing in shale units.[57] In evaluating solute attenuation in USDWs, EPA[4] did not consider cumulative volumes of injection of well stimulation fluids in closely spaced vertical production wells common to CBM and tight gas production.

Evaluation of Impact to USDWs and Usable Water. In the Pavillion Field, impact to USDWs and usable waters depends upon the advective dispersive solute transport of compounds (or their degradation products) used for well stimulation to water bearing units (sandstone units at or near water saturation). Water bearing units exist throughout the Wind River and Fort Union Formations in the Pavillion Field. For instance, production well Unit 41X 10 was recommended for plugging and abandonment in 1980 because of "problems with water production and casing failure." In 1980, drilling logs at Tribal Pavillion 14−2 stated "Hit water flow while drilling at 4105−4109 ft" bgs. The magnitude of produced water production in the Pavillion Field is variable with some wells having high produced water production (e.g., 17.9 million liters ~4.7 million gallons at Tribal Pavillion 23−10 from July 2000 to present) (Table SI C2). In some cases, stimulation fluids were injected directly into water bearing units. For instance, at Tribal Pavillion 14−1, a cast iron bridge plug was used to stop water production in 1993 from an interval where hydraulic fracturing occurred using undiluted diesel fuel in 1964 (Table SI C2).

The migration of stimulation fluid to water bearing sand stone units in the Pavillion Field also likely occurred during fracture propagation and subsequent leakoff (loss of fluid into a formation in or near the target stratum). Leakoff increases in complex fracture networks as a result of lithologic variation over short distances and contact of stimulation fluid with permeable strata[58−61] expected during hydraulic fracturing in fluvial depositional environments of the Wind River and Fort Union Formations. Leakoff can remove much or most of the fracturing fluid even for moderate sized induced fractures.[58,59] Maximum ISIP values for acid stimulation and hydraulic fracturing were 19.5 and 40.1 MPa (Figure SI C2), respectively, equivalent to ~2000 and ~4100 m of hydraulic head. Pressure buildup during hydraulic fracturing far in excess of drawdown expected during produced water extraction makes full recovery of stimulation fluids unlikely.[4,62]

The migration of stimulation fluids to water bearing units also likely occurred as a result of loss of zonal isolation during well stimulation (SI Section D.1). Casing failure occurred at five production wells following well stimulation. Cement squeezes were performed above primary cement often days after hydraulic fracturing without explanation[63] at six production wells, potentially because of migration of stimulation fluid above primary cement. At one production well, stimulation fluid was injected just 4 m below an interval lacking cement outside of the production casing with a stimulation pressure of only 1.3 MPa indicating potential entry into the annular space.

Major ion concentrations in produced water sampled after stimulation (Table SI D1) were distinct from values expected in the Wind River Formation as evidenced by sample data from the WRIR,[48,53] Fremont County,[51] and domestic wells in and around the Pavillion Field which were representative of the Wind River Formation regardless of distance from production wells (Table 1, Figure 3). Using combined data sets in and around the Pavillion Field, and the nonparametric Mann−Whitney test (null hypothesis that two sample sets come from the same population), sodium, potassium, and chloride concentrations were higher and sulfate concentrations lower in produced water compared to concentrations expected in the Wind River Formation ($p = 6.6 \times 10^{-19}$, 2.1×10^{-15}, 2.6×10^{-16}, and 4.4×10^{-19}, respectively), providing direct evidence of impact to USDWs at depths of stimulation. Also, potassium increased with calcium concentrations and sulfate increased with TDS concentrations, respectively, in domestic wells but not in production wells (Figures SI D1). Chloride is a major component of TDS concentrations in production wells. Potassium/calcium and chloride/sulfate concentration ratios were higher in production wells than in domestic wells (Figures SI D2), further indicating anomalous potassium, chloride, and sulfate concentrations in production wells.

Produced water samples were collected from gas−water separators at four production wells and analyzed for organic compounds (Table SI D3, Figure SI D3) during the Phase II sampling event.[6] Samples from one production well appeared to be from both an aqueous and an apparent nonaqueous phase liquid with the latter exhibiting thousands of mg/L of benzene, toluene, ethylbenzene, xylenes (BTEX). Synthetic organic compounds methylene chloride and triethylene glycol (TEG) were detected in produced water samples at 0.51 and 17.8 mg/L, respectively indicating anthropogenic origin. Methylene chloride has been detected in flowback water in other systems,[64] including 122 domestic wells above the Barnett Shale TX,[65] and in air sampled near well sites.[66]

Sample Results at MW01 and MW02. Concentrations of potassium in MW01 and MW02 were higher than expected values in the Wind River Formation (Figure 3) at p values of 2.6×10^{-13} and 1.2×10^{-06}, respectively. High pH values (>11 standard units) were observed during purging at both monitoring wells (Tables SI E3b, SI E4b, Figures SI E5, SI E6, SI E7), indicating that elevated potassium concentrations may have been attributable to release of potassium from potassium oxides and sulfates during curing of cement[67−71] used for monitoring well construction. However, a number of observations were inconsistent with cement interaction as a causative factor for elevated pH, and there was extensive use of compounds containing potassium including potassium hydroxide during stimulation (Table SI C3). Water in contact with hydrating cement is saturated or oversaturated to portlandite ($Ca(OH_2)$)[72−74] and remains oversaturated prior to degradation or carbonation.[75−78] In contrast, water from monitoring wells was highly undersaturated to portlandite. Elevated pH in monitoring wells was not observed during monitoring well development until natural gas intrusion occurred in the wells, suggesting degassing as a possible cause of elevated pH (SI Section E.5). Also, potassium was detected at a concentration of 6000 mg/L in a bradenhead water sample having a pH of 10.86 standard units from Tribal Pavillion 13−1 (Table SI D1). This may indicate either high potassium concentration at depths below EPA monitoring wells due to well stimulation (water from bradenhead samples originated at some unknown distance above cement outside production casing at each production well) or interaction of bradenhead water with wellbore cement.

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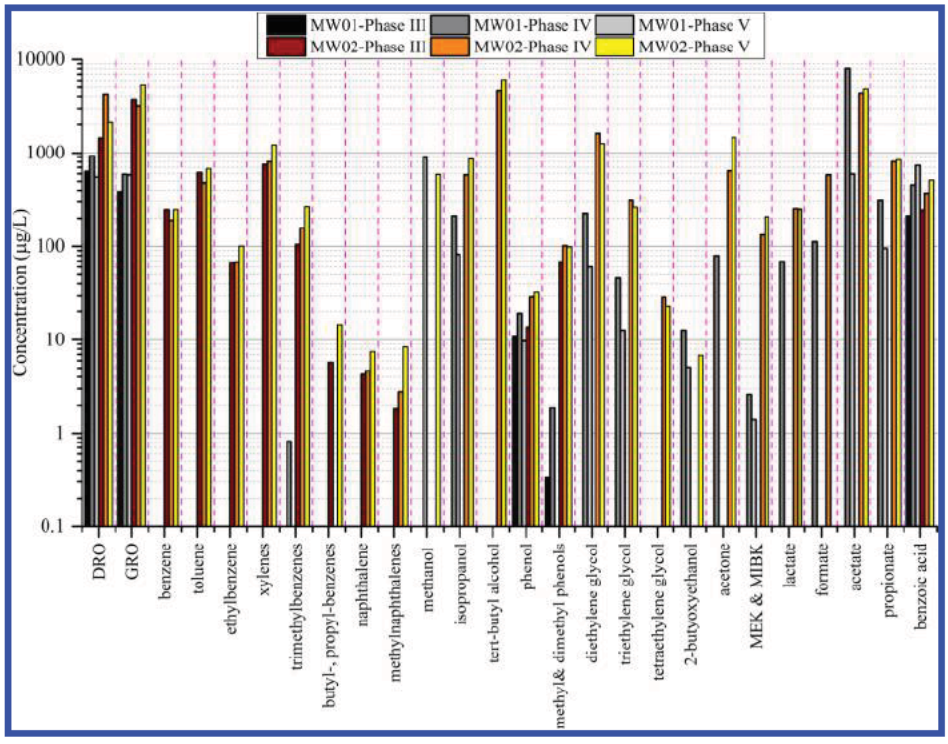

Figure 4. Summary of organic compounds detected by EPA in MW01 and MW02 during Phase III, IV, and V sampling events. Glycols, alcohols, and low molecular weight organic acids were not analyzed in Phase III. Alkylphenols and methanol (GC FID method) were only analyzed in Phase V. Organic compounds detections for MW01 and MW02 are summarized in Table SI E3a and Table SI E4a, respectively.

The median chloride concentration at MW02 was 469 mg/L (Figure 3), well above expected values in the Wind River Formation ($p = 7.0 \times 10^{-07}$). Compounds containing chlorides (e.g., KCl solutions) were used extensively for stimulation in the Pavillion Field. Sulfate concentrations in MW02 were below expected values in the Wind River Formation ($p = 2.7 \times 10^{-07}$) and not dissimilar ($p = 0.40$) to produced water concentrations. The Cl/SO_4 concentration ratio was similar to produced water (Figure SI D2) at MW02. Chloride and sulfate concentrations in MW01 were more typical of the Wind River Formation which may be due variation in well stimulation practices both spatially and over time.

Concentrations of organic compounds detected in MW01 and MW02 are summarized in Tables SI E3a, SI E4a and Figure 4. Diesel range organics (DRO) and gasoline range organics (GRO) were detected in MW01 and MW02 with maximum DRO concentrations of 924 and 4200 μg/L, respectively and GRO concentrations of 760 and 5290 μg/L, respectively. Benzene, toluene, ethylbenzene, *m,p* xylenes, and *o* xylene were detected in MW02 at maximum concentrations of 247, 677, 101, 973, and 253 μg/L, respectively, but were not detected at MW01. The maximum contaminant level (MCL) of benzene is 5 μg/L, so the observed maximum value was 50 times higher than the MCL. Nondetection of BTEX at MW01 is surprising given that the well was gas charged (foaming during sampling, Figure SI E9) with similar light hydrocarbon composition to MW02 (Table SI E5). Nondetection of BTEX may be due to increased dispersion and biodegradation of these compounds at the shallower depth of this well. We could find no published information on BTEX compounds in groundwater at concentrations detected in MW02 occurring above a gas field in the absence of well stimulation. However, further testing, such as compound specific isotope analysis of BTEX components present in natural gas from the Pavillion Field (Table SI D2) and water from MW02, is necessary to attribute detection of BTEX to well stimulation.

1,3,5 , 1,2,4 , and 1,2,3 Trimethylbenzene were detected at maximum concentrations of 71.4, 148, and 45.8 μg/L, respectively in MW02 and at an order of magnitude lower concentrations in MW01. Naphthalene, methylnaphthalenes, and alkylbenzenes were also detected in MW02 at concentrations up to 7.9, 10.2, and 21.2 μg/L, respectively. Similar to BTEX compounds, detection of trimethylbenzenes, alkylbenzenes, and naphthalenes could in principle reflect non anthropogenic origin but natural gas from the Pavillion Field and in EPA monitoring wells is "dry" (ratio of methane to methane through pentane concentration >0.95) (SI Section A.2, Table SI E5). Also, oil production in the vicinity of monitoring wells is very low or zero especially in the vicinity of MW02 (Table SI C2, Figure SI A5). Thus, the detection of higher molecular weight hydrocarbons in groundwater is unexpected. Trimethylbenzenes and naphthalenes were present in mixtures used for well stimulation (Table SI C3).

Other organic compounds used extensively for well stimulation were detected in MW01 and MW02 (Figure 4). Methanol, ethanol, and isopropanol were detected in monitoring wells at up to 863, 28.4, and 862 μg/L, respectively (Figure 4). *Tert* butyl alcohol (TBA) was detected at 6120 μg/L in MW02. Detection of TBA in groundwater has been associated with degradation of *tert* butyl hydroperoxide used for hydraulic fracturing.[79] Another potential source of TBA is degradation of methyl *tert* butyl ether (MTBE) associated with diesel fuel.[80−84]

Diethylene glycol (DEG) and TEG were detected in both monitoring wells at maximum concentrations of 226 and 12.7 μg/L, respectively, in MW01, and at 1570 and 310 μg/L respectively, in MW02 (Figure 4). Tetraethylene glycol was detected only in MW02 at 27.2 μg/L. MSDSs indicate that

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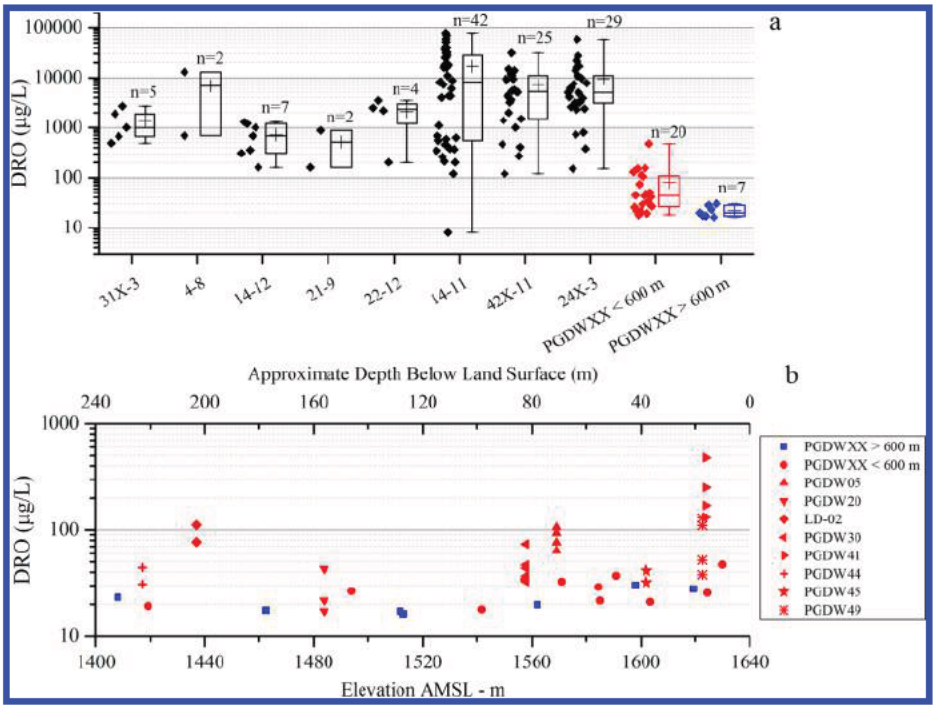

Figure 5. (a) Box and whisker plots of minimum and maximum, quartiles, median (line in boxes), mean (crosses in boxes) of diesel range organics (DRO) in shallow monitoring wells near unlined pits potentially receiving production fluids (abbreviations of production wells in Table SI C1) and domestic wells[6,8,9,39,45] (LD 20 and PGDWXX series) less than and greater than 600 m from pits. Mean values are used for domestic well sampled more than once. (b) DRO as a function of elevation and approximate depth below surface for domestic wells with results of multiple sample events illustrated.

DEG was used for well stimulation. Use of TEG was not specified. Polar organic compounds, including DEG, are commonly used as cement grinding agents.[85−88] DEG and TEG have been detected in leachate from cured cement samples under static (no flow) conditions.[89] Similar to elevated potassium detection, it is possible that detection of glycols could be attributable to cement used for monitoring well construction. However, mass flux scenario modeling, com monly used to evaluate potential concentrations of exposure of compounds released from materials in contact with drinking water under dynamic (flowing) conditions,[90] was conducted on MW01 (SI Section E.7) indicating unlikely impact. The relevance of dynamic testing is corroborated by the observation that detection of DEG and TEG was limited to a water sample from a gas production well[91] with nondetection in water samples from 83 domestic wells at five retrospective study sites[79,91−94] using high performance liquid chromatography with dual mass spectrometry at a reporting limit 5 µg/L in EPA's national study on hydraulic fracturing. 2 Butoxyethanol, a glycol ether used extensively for well stimulation in the Pavillion Field (Table SI C3), was detected in both monitoring wells at a maximum concentration of 12.7 µg/L. 2 Butoxyethanol was not detected in leachate from cured cement.[89].

The low molecular weight organic acids (LMWOAs) lactate, formate, acetate, and propionate were detected in both monitoring wells at maximum concentrations of 253, 584, 8050, and 844 µg/L, respectively (Figure 4). LMWOAs are anaerobic degradation products associated with hydrocarbon contamination in groundwater.[95,96] Acetate has been detected in produced water,[97−99] in impoundments used to hold flowback water from the Marcellus Shale,[100] and in produced water from the Denver Julesburg Basin, CO.[101] Acetate and formate were detected in flowback water from two different fracturing sites in Germany with investigators concluding that these compounds were likely of anthropogenic origin resulting from degradation of polymers used in the fracturing fluid.[102] Formate and acetate are also degradation products of methylene chloride.[103] Benzoic acid, a degradation product of aromatics, was also detected in both monitoring wells at a maximum concentration of 513 µg/L.

Phenols were detected in both monitoring wells with maximum concentrations of phenol, 2 methylphenol, 3&4 methylphenol, and 2,4 dimethylphenol at MW02 at 32.7, 22.2, 39.8, and 46.3 µg/L, respectively. Ketones were also detected in both monitoring wells with maximum concentrations of acetone, 2 butanone (MEK), and 4 methyl 2 pentanone (MIBK) at MW02 at 1460, 208, and 12.5 µg/L, respectively. Acetone, MEK, phenol, 2 methylphenol, 3&4 methylphenol, and 2,4 dimethylphenol were detected in produced water from the Denver Julesburg Basin.[101] MIBK, MEK, and acetone may result from microbial degradation of biopolymers used for hydraulic fracturing.[101] Nonylphenol and octylphenol, com monly present in mixtures of ethoxlyated alcohols, were detected in both monitoring wells with maximum concen trations at MW02 at 28 and 2.9 µg/L, respectively. Ethoxlyated alcohols were used for well stimulation in the Pavillion Field.

Detection of organic compounds, especially those that cannot be attributed to cement, and degradation products of compounds known to have been used for production well stimulation in both MW01 and MW02 provide additional evidence of impact to USDWs and indicate upward solute migration to depths of current groundwater use. Installation of additional monitoring wells at depths similar to MW02, with sample analysis supplemented by state of the art analytical methods better suited to detection of compounds present in

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stimulation fluids (e.g., liquid chromatography coupled with quadrupole time of flight mass spectrometry[104−106]), is necessary to evaluate long term risk to domestic well users in the Pavillion Field.

Assessment of Potential Impact of Unlined Pits to Domestic Wells. EPA[7] previously reported disposal of diesel fuel based (invert) drilling mud and production fluids (flow back, condensate, produced water) in unlined pits in the Pavillion Field and resultant groundwater contamination in surficial Quaternary deposits in shallow monitoring wells sampled by EPA in the vicinity of three unlined pits but did not document the extent of these disposal practices. At least 64 unlined pits were used for disposal of drilling fluids of which invert mud was disposed in 57 pits consisting of up to 79% diesel fuel (Tables SI F1, SI F2). As many as 44 of 64 unlined pits were used or likely used for disposal of production fluids. Unlined pits were emptied and closed in 1995.[107,108]

A summary of information available on disposal of drilling and production fluids in pits is provided in Table SI F2. This summary includes results of soil and groundwater sampling, excavation volumes and associated criteria (1000−8500 mg/kg total petroleum hydrocarbons), proximity and direction of unlined pits to domestic wells, and recommendations by WOGCC[44] for further investigation (or no investigation).

The field operator has collected groundwater samples in surficial Quaternary deposits at 12 unlined pit locations.[44] The highest reported concentrations of GRO and DRO were 91 000 and 78 000 μg/L, respectively (Figure 5, Table SI F2). Benzene, toluene, ethylbenzene, and xylenes were detected at five locations at concentrations up to 1960, 250, 240, and 1200 μg/l, respectively (Table SI F2). Thus, sample results indicate impact to surficial groundwater in Quaternary deposits.

There may be as many as 48 domestic wells within 600 m of unlined pits of which 22 domestic wells were sampled by EPA[6,8,9,39] and 11 were resampled by WDEQ[45] (Table SI F3). DRO concentrations in domestic wells <600 m from unlined pits likely receiving production fluids were elevated ($p = 0.003$) compared to domestic wells >600 m from unlined pits (Figure 5a). DRO was detected at 752 mg/kg in a reverse osmosis filter sample from a domestic well (PGDW20) during the Phase II sampling event[8] (Table SI F3). Concentrations of DRO in domestic wells generally decreased with depth (Figure 5b). Another potential source of DRO in some domestic wells (Table SI G1) is invert mud remaining in boreholes. However, differentiation from other source terms (unlined pits and stimulation) is not possible with currently available data (SI Section G.1).

At two domestic wells (PGDW05 and PGDW30), chromatograms for DRO analysis suggest a diesel fuel source (Figure SI F1a, b). Chromatograms of aqueous (Figure SI F2a) and carbon trap samples (Figure SI F2b) for DRO at another domestic well (PGDW20) indicated the presence of heavy hydrocarbons in water. All three domestic wells are located near unlined pits likely used for disposal of production fluids.

Adamantanes were detected at low aqueous concentrations (<5 μg/L) at four domestic wells (PGDW05, PGDW20, PGDW30, and PGDW32) (Table SI F3). Admantane, 2 methyl adamantane, and 1,3 dimethyladamantane were detected in a reverse osmosis filter sample at PGDW20 at concentrations of 420, 9400, and 2960 μg/kg, respectively. Adamantanes were detected in produced water up to 74 mg/L (Table SI D3) indicating disposal in unlined pits as a potential source term. The inherent molecular stability of admantanes and other diamondoid compounds imparts thermal stability resulting in enrichment in manufactured petroleum distillates.[109] Diamondoids are resistant to biodegradation[110,111] resulting in their use as a fingerprinting tool to characterize petroleum and condensate induced groundwater contamination.[112]

2 Butoxyethanol was detected at 3300 μg/L in a domestic well (PGDW33)[45] (Table SI F3). The depth of this domestic well is only 9.1 m bgs and is located within 134 m of an unlined pit used for disposal of production fluids. Other compounds, including BTEX, associated with production well stimulation (e.g., isopropanol) were detected at lower concentrations (<10 μg/L) in other domestic wells (Table SI F3). Sample results at domestic wells suggest impact from unlined pits and the immediate need for further investigation including installation of monitoring wells in the Wind River Formation. Since flood irrigation is common in the vicinity of unlined pit areas, the lateral extent of groundwater contamination is potentially greater in the Wind River Formation than in overlying surficial Quaternary deposits due to "plume diving" (i.e., uncontaminated water overlies portions of a contaminant plume).[113−115]

Our investigation highlights several important issues related to impact to groundwater from unconventional oil and gas extraction. We have, for the first time, demonstrated impact to USDWs as a result of hydraulic fracturing. Given the high frequency of injection of stimulation fluids into USDWs to support CBM extraction and unknown frequency in tight gas formations, it is unlikely that impact to USDWs is limited to the Pavillion Field requiring investigation elsewhere.

Second, well stimulation in the Pavillion Field occurred many times less than 500 m from ground surface and, in some cases, at or very close to depths of deepest domestic groundwater use in the area. Shallow hydraulic fracturing poses greater risks than deeper fracturing does,[57,116] especially in the presence of well integrity issues[117,118] as documented here in the Pavillion Field. Additional investigations elsewhere are needed.

Finally, while disposal of production fluids in unlined pits is a legacy issue in Wyoming, this practice has nevertheless caused enduring groundwater contamination in the Pavillion Field. Impact to groundwater from unlined pits is unlikely to have occurred only in the Pavillion Field, necessitating investigation elsewhere.

■ ASSOCIATED CONTENT

● Supporting Information

The Supporting Information is available free of charge on the ACS Publications website at DOI: 10.1021/acs.est.5b04970.

Supplemental discussion and tables summarizing data sets are provided in the Supporting Information (SI) portion of the paper (PDF)

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Notes

The authors declare no competing financial interest.

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EXHIBIT B

SCIENTIFIC AMERICAN™

ENVIRONMENT

Fracking Can Contaminate Drinking Water

It took nearly a decade, but former EPA scientist Dominic DiGiulio has proved that fracking has polluted groundwater in Wyoming

By Gayathri Vaidyanathan, ClimateWire on April 4, 2016



Credit: Education Images / Contributor via Getty Images

Former EPA scientist Dominic DiGiulio never gave up.

Eight years ago, people in Pavillion, Wyo., living in the middle of a natural gas

basin, complained of a bad taste and smell in their drinking water. U.S. EPA launched an inquiry, helmed by DiGiulio, and preliminary testing suggested that the groundwater contained toxic chemicals.

Then, in 2013, the agency suddenly transferred the investigation to state regulators without publishing a final report.

Now, DiGiulio has done it for them.

He published a comprehensive, peer-reviewed study last week in *Environmental Science and Technology* that suggests that people's water wells in Pavillion were contaminated with fracking wastes that are typically stored in unlined pits dug into the ground.

The study also suggests that the entire groundwater resource in the Wind River Basin is contaminated with chemicals linked to hydraulic fracturing, or fracking.

This production technique, which involves cracking shale rock deep underground to extract oil and gas, is popular in the United States. It's also controversial. There are thousands of wells across the American West and in California that are vulnerable to the kind of threat documented in the study, DiGiulio said. He is now a research scholar at Stanford University.

"We showed that groundwater contamination occurred as a result of hydraulic fracturing," DiGiulio said in an interview. "It contaminated the Wind River formation."

The findings underscore the tension at the heart of the Obama administration's climate change policy, which is based on replacing many coal-fired power plants with facilities that burn cleaner natural gas.

That reliance on natural gas has sometimes blinded agencies to local pollution and health impacts associated with the resource, said Rob Jackson, an earth scientist at Stanford and co-author of the study. In 2015, EPA said in a controversial draft study that hydraulic fracturing has not had "widespread, systemic impacts on drinking water resources in the United States" (*Greenwire*, June 4, 2015).

"The national office of EPA has tended to downplay concerns of their own investigators, in part because the Obama administration has promoted natural gas," Jackson said. "Natural gas is here to stay. It behooves us to make it as safe and environmentally friendly as possible."

EPA spokeswoman Julia Valentine said the agency hasn't yet finalized its assessment that natural gas has no "widespread, systemic impacts." As part of that process, the agency will evaluate all recent research, including DiGiulio's study, she said.

Encana Corp., the company that operated in the Pavillion basin, said repeated testing has shown people's water wells are safe for consumption.

"After numerous rounds of testing by both the state of Wyoming and EPA, there is no evidence that the water quality in domestic wells in the Pavillion Field has changed as a result of oil and gas operations; no oil and gas constituents were found to exceed drinking water standards in any samples taken," said Doug Hock, an Encana spokesman.

LABS CAN'T SEE FRACKING CHEMICALS

Water testing began in 2009 when the local EPA office responded to complaints

from residents. EPA headquarters, and DiGiulio, got involved in January 2010.

“Conducting a groundwater investigation related to fracking is extremely complicated,” DiGiulio said. “It is difficult because a lot of the compounds used for hydraulic fracturing are not commonly analyzed for in commercial labs.”

These labs were originally set up for the Superfund program, under which EPA cleans up the most contaminated sites in the nation. They are great at detecting chemicals found at Superfund sites but not as good at detecting chemicals used in fracking, DiGiulio said.

“You have some of these very water-soluble exotic compounds in hydraulic fracturing, which were not amenable to routine lab-type analysis,” he said.

One such chemical was methanol. The simplest alcohol, it can trigger permanent nerve damage and blindness in humans when consumed in sufficient quantities. It was used in fracking in Pavillion as workers pumped thousands of gallons of water and chemicals at high pressure into the wells they were drilling. About 10 percent of the mixture contained methanol, DiGiulio said.

So the presence of methanol in the Pavillion aquifer would indicate that fracking fluid may have contaminated it. But methanol degrades rapidly and is reduced within days to trace amounts. Commercial labs did not have the protocol to detect such small traces, so DiGiulio and his colleagues devised new procedures, using high-performance liquid chromatography, to detect it. They devised techniques for detecting other chemicals, as well.

By then, Pavillion was roiling in controversy as EPA and residents collided with industry. EPA had drilled two monitoring wells, MW01 and MW02, in 2011, and its testing had found benzene, diesel and other toxic chemicals. But these

results were contested by oil and gas industry representatives, who criticized EPA's sampling techniques (*EnergyWire*, Oct. 12, 2012). They pointed to a technical disagreement between EPA and the U.S. Geological Survey on the best methods to cast doubt on EPA's overall findings.

EPA realized it needed a consensus on its water testing methodology. In February 2012, it assembled a technical team from the USGS, Wyoming state regulators and tribal representatives from the Wind River Indian Reservation. They retested the monitoring wells in April 2012.

This time, they also tested for methanol. But EPA never released those results to the public. In 2013, the agency backed out of its investigation in Pavillion, handing it over to state regulators, who moved forward using a $1.5 million grant from Encana (*EnergyWire*, June 21, 2013). DiGiulio said the decision had come from EPA's senior management.

METHANOL, DIESEL AND SALT

Industry representatives repeatedly pointed out that EPA had not published a peer-reviewed study on its findings.

"If the EPA had any confidence in its draft report, which has been intensely criticized by state regulators and other federal agencies, it would proceed with the peer review process," Steve Everley, a spokesman for Energy in Depth, an industry group, said at the time. "But it's not, which says pretty clearly that the agency is finally acknowledging the severity of those flaws and leaning once again on the expertise of state regulators."

In December 2015, state regulators published a draft of their findings. It stated that fracking had not contributed to pollution in Pavillion, according to the *Casper Star Tribune*. The report said the groundwater is generally suitable

for people to use.

When DiGiulio retired from EPA in 2014, he trained his sights on Pavillion. He felt he had to finish his work.

“EPA had basically handed the case over and a peer-reviewed document was never finalized,” he said. “If it is not in the peer-reviewed literature, then it presents a problem with credibility in terms of findings. It is important that the work be seen by other scientists and enter the peer review realm so that other scientists will have access to virtually everything.”

Since 2012, a trove of new data had accumulated from USGS, EPA and state regulators. He obtained EPA’s methanol testing results through a Freedom of Information Act request and downloaded the rest of the information from the Wyoming oil and gas regulator’s website. All of it was publicly available, waiting for the right person to spend a year crunching the information.

The end result: a peer-reviewed study that reaffirms EPA’s findings that there was something suspicious going on in Pavillion. More research is needed.

The sampling wells contained methanol. They also contained high levels of diesel compounds, suggesting they may have been contaminated by open pits where operators had stored chemicals, DiGiulio said.

The deep groundwater in the region contained high levels of salt and anomalous ions that are found in fracking fluid, DiGiulio said. The chemical composition suggests that fracking fluids may have migrated directly into the aquifer through fractures, he said.

Encana had drilled shallow wells at Pavillion, at depths of less than 2,000 feet and within reach of the aquifer zone, said Jackson of Stanford University.

"The shallow hydraulic fracturing is a potential problem because you don't need a problem with well integrity to have chemicals migrate into drinking water," he said.

The study also shows that there is a strong upward flow of groundwater in the basin, which means contamination that is deep underground could migrate closer to the surface over time.

"Right now, we are saying the data suggests impacts, which is a different statement than a definitive impact," DiGiulio said. "We are saying the dots need to be connected here, monitoring wells need to be installed."

SHALLOW WELLS ARE PREVALENT

EPA came to the same conclusion in a blistering response last week to Wyoming's draft findings.

"Many of our recommendations suggest that important information gaps be filled to better support conclusions drawn in the report, and that uncertainties and data gaps be discussed in the report," said Valentine, the EPA spokeswoman.

The state had tested people's water wells and detected 19 concerning chemicals. But regulators had concluded that only two chemicals exceeded safe limits and the water could be used for domestic purposes. EPA disagreed. Nearly half the 19 chemicals are unstudied, and scientists do not know the safe level of exposure, EPA stated.

Keith Guille, spokesman for Wyoming's Department of Environmental Quality,

declined to comment on DiGiulio's study and on EPA's response to the state's draft report. The state is finalizing its findings and has its eyes set on the future, he said.

"We are not done yet," Guille said.

Energy in Depth, the industry group that had earlier criticized EPA for not publishing a peer-reviewed study, said that DiGiulio's study is "a rehash of EPA's old, discredited data by the very researcher who wrote EPA's original report."

Jackson stressed that the contamination seen at Pavillion could occur in other states where, according to a study published last year in *Environmental Science & Technology* on which he was the lead author, fracking sometimes occurs at shallow depths. That includes the Rocky Mountain region, New Mexico, Colorado, Utah, Montana and California. At present, no state has restrictions on how shallowly a company can frack, he said.

"Shallow hydraulic fracturing is surprisingly common, especially in the western U.S.," Jackson said. "Here in California, half of the wells are fracked shallower than about 2,000 feet."

Given the threat, fracking deserves much greater scrutiny than it has so far received from the Obama administration, said Hugh MacMillan, a scientist with the environmental group Food and Water Watch.

"Communities have never argued that every well goes bad; they've argued that when you drill and [are] fracking thousands, too many go bad," he said. "For those living on groundwater, it becomes a matter of luck, and that's not right, because over years, more and more people's luck runs out."

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EXHIBIT C

BREAKING

City could offer early retirement to 53 Casper employees

http://trib.com/business/energy/former-epa-lead-investigator-in-pavillion-releases-study-linking-fracking/article_31b296ee-560c-5832-8768-26bbeff2833a.html

FEATURED

Former EPA lead investigator in Pavillion releases study linking fracking to water contamination

Benjamin Storrow 307-335-5344, Benjamin.Storrow@trib.com Mar 29, 2016



Courtesy, U.S. Environmental Protection Agency

Workers for the U.S. Environmental Protection Agency test a monitoring well near Pavillion for contaminants in December 2010

More than four years after he penned the explosive report linking fracking to contaminated drinking water outside of Pavillion, Dominic DiGiulio is releasing the study he always hoped the U.S. Environmental Protection Agency would: A rebuttal to the years of criticism levied against federal investigators.

The study by DiGiulio and fellow Stanford University researcher Robert Jackson concludes much of the alarm over the EPA's 2011 draft report was warranted.

Poor well construction, the proximity of fracked wells to drinking water sources and the prevalence of unlined disposal pits, where diesel-oil based drilling muds and other production fluids were stored for decades, bolsters the EPA's initial contention that natural gas operations were responsible for a polluted aquifer east of Pavillion, they say.

The researchers pored over more than 1,000 well files, including drilling and completion reports, regulatory actions and cement bond logs. The files provide a link between the chemicals listed in frack treatment reports and compounds later discovered in two EPA monitoring wells, they say.

"We documented impact to a water resource as a result of hydraulic fracturing for the first time," DiGiulio said in an interview Monday.

The researchers say the findings support calls to limit fracking at shallower depths where well stimulations are more likely to contaminate drinking water supplies.

Unlike many unconventional oil and gas plays, where fracking is conducted at deep intervals underground, Pavillion's gas wells were drilled to the same depth as nearby water wells.

"No state has any restrictions on how shallowly you can frack a well," Jackson said. "That needs to change."

The report comes as Wyoming regulators contemplate the next step in their own investigation into the Pavillion field and amid a growing barrage of criticism over the state's inquiry. A draft study released by the Department of Environmental Quality in December found little evidence of oil and gas pollution in water samples taken at 13 domestic water wells.

But the EPA, in a review of Wyoming's investigation released earlier this month, said the state lacked the data to support its claim that much of the pollution was naturally occurring and not attributable to gas production. Wyoming officials have called for additional study, but have yet to provide specific details on what that work would entail.

A spokesman for Encana Corp., the operator of the Pavillion Field, said numerous rounds of testing by state and federal regulators have produced "no evidence that the water quality in domestic wells in the Pavillion Field has changed as a result of oil and gas operations; no oil and gas constituents were found to exceed drinking water standards in any samples taken."

That DiGiulio and Jackson's study was released under the banner of Stanford University and published in the peer-reviewed journal Environmental Science and Technology is telling in its own right.

The draft Pavillion report DiGiulio authored for the EPA in 2011 created a national firestorm, attracting criticism from Congressional Republicans, Wyoming officials and industry representatives, who said the study was based on shoddy science.

EPA dropped its investigation in 2013. DiGiulio, who worked at the agency for 31 years and served as lead investigator in Pavillion, retired the next year. He has been a visiting scholar at Stanford ever since.

A Star-Tribune investigation later showed EPA brass worried it could not successfully defend the study and chose to abandon it.

Many of the criticisms directed at EPA over the years went unaddressed by the agency, enabling misconceptions about the investigation to linger, DiGiulio said.

"When I retired the technical story wasn't fully told," he said."I think it's important for someone to sort through all the data and draw conclusions. And unfortunately that had not be done. That's what motivated me to try and review everything, including comments from industry."

DiGulio and Jackson analysis offer a competing narrative to the criticism directed at the EPA by state regulators and industry representatives.

Industry critics once argued samples from the EPA's groundwater monitoring wells should be discounted because of faulty construction. But the compounds found in those monitoring wells are more commonly associated with fracking—not the cements used to encase a well, DiGiulio and Jackson say.

State regulators have said nearby natural gas wells were properly constructed. DiGiulio and Jackson documented five cases where wells failed after being fracked. The failures raise the possibility that fracking fluid could escape a well.

And water samples taken from EPA's monitoring wells more closely resembled produced water from gas operations than drinking water found throughout the Wind River Formation in Fremont County, belying the claim that the contamination was naturally occurring.

The Stanford researchers stop short of linking fracking to contaminated drinking water samples. Contamination found in domestic wells is more likely connected to 44 unlined pits, where production fluids were disposed between the 1960s and 1990s, they say.

"Cumulatively overtime that's a lot of fluid going into those pits," DiGiulio said. "If I lived in the Pavillion oilfield, I would be much more concerned about those pits. I would view hydraulic fracturing as a long term potential risk in need of further investigation. But if I actually lived out there, I'd be focused on those pits right now."

There is evidence, however, that fracking contaminated the aquifer underlying the Pavillion field. The distinction helps explain the difference in Wyoming's and Stanford's findings.

Wyoming considered 13 drinking water wells, but did not review the findings from EPA monitoring wells. In all, state investigators examined roughly a third of the well files in their review of the Pavillion field, DiGuilio and Jackson say. The Stanford researchers also examined the remaining two-thirds of the documents.

The history of fracking, well failures and monitoring well results, among other factors, tell the wider story of a contaminated aquifer, they say.

"We've shown clear evidence of contamination to the aquifer itself," Jackson said. "Contamination to domestic water wells may have happened. We don't know. If you continue to do this, if you continue to allow this, you will have more problems, even with domestic water wells in the future."

And that points to what the researchers say is the wider problem. Frack jobs in Pavillion were often completed at depths ranging from 750 to 1,050 feet, or in close proximity to water wells. Unlike many horizontal wells, which can travel to depths beyond 15,000 feet, no layer of rock exists to keep frack fluid and water separate, increasing the risk of contamination over time.

"The paper documents issues with well integrity at Pavillion," Jacksons said. "You don't have to have a problem with well integrity though, when the hydraulic fracturing is within a few hundred feet of domestic water wells, and when your surface casing is to shallow and you don't have cement in others."

Follow energy reporter Benjamin Storrow on Twitter @bstorrow.

Benjamin Storrow


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Currents



Top 10 offensive linemen in the 2016 NFL Draft



Gallery: Remembering Chyna, 1970-2016



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Exhibit 3

HYDRAULIC FRACTURING ON PUBLIC LANDS

TRIBAL CONSULTATION SESSION

JANUARY 10, 2012

HYATT HOTEL

TULSA, OKLAHOMA

STEVE TRYON, Bureau of Land Management, Tulsa, OK, Meeting Facilitator

STEVEN WELLS, Bureau of Land Management, Washington, DC

MIKE WORDEN, Bureau of Land Management, Washington, DC

JIM STOCKBRIDGE, Bureau of Land Management, Colorado

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JANUARY 10, 2012

MORNING SESSION

STEVE TRYON: I feel like I'm at church today, where everybody started at the back pews and filled in, so I'm going to come a little forward.

UNIDENTIFIED SPEAKER: Pass the offering plate.

STEVE TRYON: My name is Steve Tryon. I am the Field Manager for the Bureau of Land Management in Oklahoma. My office is based here in Tulsa. We also have a handful of people representing our Moore, Oklahoma, field station. And I look around and I see familiar faces from the Bureau of Indian Affairs, but also primarily from the tribes in Oklahoma.

Our office in Tulsa actually represents federal and Indian minerals in a three-state area. So that includes Kansas, Oklahoma, and Texas. And we have staff who really wander the earth that go as far south as the border with Mexico and on up to the northern stretches of Kansas.

It's an honor to be able to host the first of four listening sessions and tribal consultations on the subject of hydraulic fracturing. Most of you know that hydraulic fracturing, or completion, or stimulation, or any of the things that you may see as shorthand, or

we can do that. We try. And stay tuned on this one. As you know, it's an election year, so anything can happen.

STEVE TRYON: So after lunch, Jim Stockbridge is going to walk us through the schedule that would lead to a draft rule-making and a final rule-making, which, of course, is a public process and everybody in this room has a chance to participate again. I think that would be a chance, when he's doing that presentation, is, does that schedule somehow need something special for Indian tribes in addition to the public outreach that all of you are going to be invited to. So that's a chance to come back on this subject.

If people can hang in there with us, what we had intended to do till about the top of the hour was to talk about water quality and EPA's designs on protecting water quality. If we can do that before we break, that keeps Mike Worden from our Washington office from having to do back-to-back presentations, which I promised him. And then before we break today, we're going to kind of do this all over again about putting your questions and thoughts out there. So give us a chance to get it out first and then come back and revisit it.

So if we can move to Mr. Worden.

MIKE WORDEN: Thank you, Steve.

As Steve said, my name is Mike Worden. I'm a petroleum engineer with our Washington office, I've been there for a year and a half, and I'm the team lead on our hydraulic fracturing attempts at regulation, or thoughts on regulation.

11:26:08AM

This basically started about the time I arrived in Washington. November 30th of 2010, Secretary Salazar held a public forum in Washington, DC on hydraulic fracturing. The BLM subsequently went out in April to

11:26:30AM

Bismark, North Dakota, Little Rock, Arkansas, and Boulder, Colorado, for public listening sessions on what people of the nation felt about hydraulic fracturing. And three of the major points that came out of that were, people wanted to see disclosure -- I think we've

11:26:46AM

seen a lot of that in the newspaper -- of components that are used in hydraulic fracturing fluids. Part of these forums, we had a panel that was -- the public was represented, industry was represented, and in some cases there was tribal representation where there was,

11:27:06AM

particularly in Bismark, where that was -- they were invited and they accepted. So there was a number of different stakeholders involved on the panel.

And, in addition to disclosure, one of the issues was protection of trade secrets. And so we're trying to

:27:26AM

be -- strike that balance.

The other major, second major topic would be wellbore integrity. As Galen pointed out in his presentation, about how we can protect the resources using proper wellbore construction.

11:27:42AM And, finally, one of the big issues, third big issue was water quality. So we made an attempt to address this here today, or are going to make an attempt. I asked EPA to put together a presentation, and up until last night they were going to come and

11:28:02AM present this. So bear with me. I'm not a water quality expert. Like I said, I'm a petroleum engineer. But I'm going to do my best to present the presentation that EPA put together. And when we get on to the rule later on, my actual talk, hopefully, I'll be a little bit better

11:28:20AM at it.

What is water quality? It's the suitability of water for a particular use based upon the physical, chemical and biological characteristics, such as taste, temperature, dissolved mineral content, purity.

11:28:38AM There are several sources of drinking water. There's surface water, rainwater, desalinized seawater if you live close to the ocean, reclaimed wastewater, and of particular interest when we're talking about drilling wells is groundwater.

:28:56AM How do you measure groundwater quality? What are

we looking at? Or what are they looking at when they measure groundwater quality? It's measured at the source. You look at the temperature. You look at the pH, the acid, whether it's alkaline. Dissolved oxygen. Total dissolved solids, which is going to come up again and again in this presentation. Other things you look at in the laboratory, whether it has organic pesticides or benzene or toluene.

One of the main points we're looking at is this total dissolved solids, which is basically a measure of how water tastes, where it's used, what's available for drinking, for livestock, for agriculture. So TDS, you'll hear that term used. It's total dissolved solids, is the measurement of the total salts and compounds dissolved. So you can't see it in the water. It's dissolved into the water.

It can be any mineral, salts, metals, cations, anions. It can also be inorganic salts. A number of things that, as not a chemist, I'd prefer not to talk about.

And we'll get to the next slide, which is some ranges of total dissolved solids. We think about freshwater. EPA has standards that drinking water has to be less than 500 parts per million -- that's less than 500 grams per liter of water -- for it to be

considered drinking water. For agricultural uses, we're looking at in the -- they look in the range up to 2,000 parts per million. You can see down there, saltwater is 30,000 to 50,000 parts per million.

11:31:04AM I remember as a child going swimming in the ocean, you certainly didn't want to be drinking that. And if you're like me, and like raw oysters, you try not to get too much of that in your system.

So that gives us a -- what I had wanted the EPA 11:31:20AM to present was a basis for us to talk on this. What is freshwater? What is drinkable water? What are waters that our rule is going to look to protect, or should be looking to protect? So I wanted to establish this background with this, where we're looking at the 11:31:36AM drinking water is 500 parts per millions and agricultural uses usually start at 2,000 parts per million.

Next slide, please. We'll get into that a little bit more, but all of this is defined in the Safe 11:31:52AM Drinking Water Act, and they define underground sources of drinking water. And it's codified in -- here's some legalese -- 40 CFR 104(b)(6.3), which is of a section of the Safe Drinking Water Act that was passed in 1974. It defines an underground source of drinking water, the :32:20AM definition: Assures that the potential resources of

drinking water are protected as stringently as those sources currently used for drinking water.

So we're looking at potential sources of drinking water, not just those that are being used today. So they're protected the same. They need to be protected the same.

We heard earlier that we want to protect water for our future generations. So if we're not using that water today, we may be using it ten years, a hundred years from now. So we don't want to contaminate it now so it's unusable in the future.

It talks about, the Safe Drinking Water Act talks about aquifers. Definition of an aquifer is a formation capable of yielding a significant amount of water to a well. Does not mandate that the formation currently be used as a producing source, which is what I said earlier, and does not have to be drinking water well -- does not have to have drinking water wells completed into it. But we're trying to protect potential sources that could be used, or the EPA is, under the Safe Drinking Water Act. The EPA is the one authorized to protect drinking water under the Safe Drinking Water Act. The Department of Interior has no authorities under the Safe Drinking Water Act.

This is a nice drawing. It kind of puts it maybe

in a visual perspective of where drinking water would be the, quote/unquote, usable quality of water, and then this brackish and saltwater that it's highly unlikely it's approaching seawater concentrations. And it very much moves from close in surface the deeper you go.

11:34:04AM

It's important to note that it's not the same around the country. So region to region, this same general dynamic follows, but in some areas we're hitting the only usable water at 600 feet. In other areas it's at 2,000 feet, which is important that when the Bureau, BLM, is reviewing permits to drill, that we're looking at where the usable water is and protecting it. That's why we have regional offices or field offices where we've got geologists and petroleum engineers reviewing this for that area. This isn't regulation -- we're not looking to have regulation from on high in Washington saying this is where it's going to cut off. We need that local input. And when the proponent proposes where they're going to set their casings at and where they're going to cement to, this information is being reviewed by the local office to see that these usable sources of water are being protected.

11:34:26AM

11:34:44AM

11:35:02AM

One of the ways we -- next slide, please. Several of the ways you protect groundwater quality, you can see the one that's highlighted. That's the one

we're going to talk about next. Watershed level controls, environmental controls, source water controls, drinking water system controls, groundwater quality standards, and then the Underground Injection Control Program. That's -- under the Safe Drinking Water Act, EPA regulates or gives primacy to states or tribes to regulate disposal wells.

Next slide. The way that -- what they use to regulate these are set out in the law and any further regulation that EPA did after the law was passed in '74.

What the Safe Drinking Water Act is, it gives EPA the authority to set drinking water standards. Required water systems to be monitored to ensure compliance. They created this Underground Injection Control Program to protect drinking water resources from contamination through underground injection. It defined what underground injection is. Defined endangering drinking water sources. These are all in the law itself.

It recommended -- it has recommended compliance of contaminant levels and recommended maximum contaminant levels as specified in the law. And for -- and it also provides treatment techniques for those chemicals that don't -- that don't have maximum contaminant levels.

Next slide, please. It required the EPA to draft

regulations to protect drinking water, which I said earlier. But these regulations, they can -- through the law, it allows states -- and I'm trying to think. I don't know all my states that well, but I believe
11:37:28AM Oklahoma is one that does have primacy, and some tribes in this room may have primacy of regulating their Underground Injection Control Program. But it's -- EPA sets the standard and then states and tribes can apply to demonstrate that they can meet those standards or
11:37:54AM that their standards are more stringent, and then they have primacy over the program.

But what the program does is it sets a threshold for the amount of total dissolved solids, one of the things that's in there, that can be of waters that need
11:38:14AM to be protected. So it -- maybe we should go back to the slide on page 8.

The standard of the Safe Drinking Water Act is this 10,000 parts per million TDS. Any waters above that need to be protected under the Underground
11:38:36AM Injection Control Program, with one caveat, if they're exempted and the agency with primacy can exempt them. But typically all those waters need to be protected.

Current BLM regulations, our Onshore Order II which deals with drilling uses that same value. It was
:38:58AM specifically, when the regulation was written in 1988,

it was decided that this is good for the Underground Injection Control Program. We're another federal agency. That number is a good number. So that is the number that is currently in Onshore Order II, with a little caveat here, getting into my later talk, that we also have regulation that talks about 5,000 TDS being the number, and that was published prior to Onshore Order II. So Onshore Order II actually is the precedent because it came out after. The lawyers tell me that the law that's passed, or regulation that's passed the latest is the one that takes precedence.

So, in theory, or in actuality, we've been using this 10,000 TDS whenever an Application for Permit to Drill is filed, to protect all those waters, to isolate them. As Galen showed earlier, surface casings run through them, cement is circulated back, covering the entire zone, so those zones are protected.

One of the things that we'll talk about this afternoon in the proposed regulation is to rewrite that section in our regs that say 5,000. I just wanted to point that out, that when we change that, it really hasn't changed anything, but it's more of an administrative act because we've already been using this 10,000. But it's very unclear when you look at the BLM's regulations that this is what it is. So we're

11:39:22AM
11:39:44AM
11:40:02AM
11:40:20AM
:40:38AM

trying to basically use this opportunity to clean up that part of our regulations. And I'll discuss that a little bit more this afternoon.

But that's everything I know about water quality, unless you ask me a question and I know more. Are there any questions?

11:40:56AM

ANDREW YATES: Andrew Yates with the Osage. You know, we've used the 10,000 parts per million as our basic USDW. Did you just say that you were going to try to change that to 5,000 parts per million?

11:41:26AM

MIKE WORDEN: No. I'm saying that our current -- one of our two current rules says 5,000, and that's going to be changed to ten so that it all matches.

ANDREW YATES: Okay.

STEVEN WELLS: In the BLM rules.

MIKE WORDEN: Yeah, in the BLM rules, yes. So EPA has the 10,000 parts per million established, and BLM in actuality has it established, but one of our rules says 5,000 and we're going to change that, or we propose changing that to ten so there's no confusion.

11:41:54AM

Thank you for asking a clarifying question. That was what -- that was something I was trying to make a point, and apparently I, by the looks on everybody's faces, I hadn't made that point.

:42:10AM

From:	Kelly.Suzanne@epamail.epa.gov
To:	Dutta, Subijoy
CC:	Kobelski.Bruce@epamail.epa.gov; Kumar.Chitra@epamail.epa.gov; John Ajak; Jollie.Jeff@epamail.epa.gov; Bergman.Ronald@epamail.epa.gov; Steven Wells
Sent:	1/10/2013 3:19:28 PM
Subject:	Re: Fw: Follow up on Dec 19 meeting at EPA-east

Subijoy et. al:

Thanks again for hosting the meeting on 1/8 at your office. As promised I've attached below my signature line some relevant citations and publically vetted language on our USDW definition and comments to expand vs. restrict as promised.

We would be happy to review and or assist in drafting language that might meet your specific need if you find this information is not exactly what you could use regarding background on the nexus between your term usable water and our USDW definition.

Thanks again.

Sue

Suzanne Kelly
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Drinking Water Protection Division
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A USDW is defined as an aquifer or a portion of an aquifer that:
Supplies any public water system; or 2. Contains sufficient quantity of groundwater to supply a public water system; and i. currently supplies drinking water for human consumption; or ii. contains fewer than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS); and B. Is not an exempted aquifer
*NOTE: Although aquifers with greater than 500 mg/L TDS are rarely used for drinking water supplies without treatment, the Agency believes that protecting waters with less than 10,000 mg/L TDS will ensure an adequate supply for present and future generations.
Some relevant citations in our regulations regarding the USDW regulation:



Key Concepts.docx

Preamble language on USDW definition:
full text of preamble can be found at http://www.gpo.gov/fdsys/pkg/FR-2010-12-10/pdf/2010-29954.pdf.
The relevant page #s so that you don't have to read the whole preamble are pages 77235 and 77252:

- Page 77235: EPA has defined through its UIC regulations that USDWs are underground aquifers with less than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS) and which contain a sufficient quantity of ground water to supply a public water system (40 CFR 144.3).
- Page 77252: Last column contains relevant summary text on range of comments we recieved on our USDW defintition and a high level response on the agency's position at the time of the rulemaking.

Response to comment language regarding USDW classification under the UIC Program

- Instead of having you read 500 pages I've extracted some of the relevant comments here that explain stakeholders request **for** expanding the current 10,000 TDS USDW classification; including our response.
- You'll probably get more of the protect to 3,000 TDS so I thought these responses would be relevant for understanding the "expansion" type comments.

Letter ID: 0206 Comment ID: 22209 Letter Lines: 66 to 84
Comment Code: 1610 1.3.1 Risks to USDWs
Comment Code: 3100 2.1 Proposed Geologic Siting Requirements (40 CFR 146.83)
Comment: - The USDW classification must be reconsidered when siting Class VI wells. The best sources of drinking water are already being used by utilities. Coupled with challenges resulting from climactic changes, population growth and land development, many utilities are turning to more challenging groundwater sources such as those that are very deep or have high salinity concentrations, also because the pumping costs for these deep wells are no longer prohibitive given the lack of sufficient water elsewhere. Some of these new sources could fall outside of the current definition of a USDW, in that the aquifer has a TDS concentration higher than 10,000 ppm. EPA's proposed rule promises protection of USDWs from endangerment yet there are no anti-degradation provisions in the proposed regulation to protect other groundwater supplies, such as those aquifers that are not classified as a USDW but have been, or may be, identified as a future drinking water source. The TDS criterion was written at a time when many advanced water treatment technologies were generally cost prohibitive. In light of the changes in the hydrological and technological landscape, we recommend that EPA reexamine the classification of USDWs based on TDS when considering the siting of Class VI geosequestration wells. The potential need to use saline aquifers for potable supply, particularly in water-stressed areas,
should take precedence over the sequestration of carbon dioxide there.

EPA Response: The Agency acknowledges commenter concerns about water resources and future water resource availability. However, modifying the definition of a USDW is outside the scope of the GS rulemaking. USDWs are defined as aquifers currently being used as sources of drinking water or those capable of supplying a public water system and they have a total dissolved solids (TDS) content of 10,000 milligrams per liter or less (§144.3). The primary goal of the UIC Program under the SDWA is to protect USDWs in order to ensure a reliable supply of drinking water for the American public. The GS rule, as part of the UIC program regulations, continues the program's tradition of ensuring the protection of USDWs. The permitting, siting, construction, operation, monitoring, and post-injection site care requirements in the GS rule built on a long-standing protective regulatory framework, tailored to the unique characteristics of CO2 GS.

Letter ID: 0213 **Comment ID:** 22922 **Letter Lines:** 158 to 168
Comment Code: 1270 1.1.2 Comments on other rules/issues
Comment: Climate change, drought, and the depletion of traditional ground water supplies due to population growth and land development are causing drinking water utility managers to look at new sources of drinking water that have not traditionally been considered as sources of drinking water. Coupled with improvements in desalination and other treatment technologies, drinking water sources of high salinity are being used for water supply. AMWA recommends that EPA reexamine the current classification of a USDW (i.e., an aquifer with a total dissolved solids (TDS) concentration of less than 10,000 mg/L) when siting Class VI geosequestration wells. The potential need to use saline aquifers for potable supply, particularly in water-stressed areas, should take precedence over the sequestration of carbon dioxide there.
Individual Response: EPA clarifies that addressing climate change, drought, and the depletion of traditional ground water supplies are outside the scope of the Class VI GS rulemaking. Rather, the purpose of the Class VI GS rule is to ensure consistency in permitting underground injection of CO2 at GS operations across the United States and provide requirements to prevent endangerment of USDWs in anticipation of the eventual use of GS to reduce CO2 emissions. The Agency acknowledges commenter concerns about water resources and future water resource availability. However, modifying the definition of a USDW is outside the scope of the Class VI GS rulemaking. USDWs are defined as aquifers currently being used as sources of drinking water or those capable of supplying a public water system and have a total dissolved solids (TDS) content of 10,000 milligrams per liter or less (§144.3). The primary goal of the UIC program under the SDWA is to protect USDWs in order to ensure a reliable supply of drinking water for the American public. The Class VI GS rule, as part of the UIC program regulations, continues the program's tradition of ensuring the protection of USDWs. The permitting, siting, construction, operation, monitoring, and post-injection site care requirements in the GS rule build on a long-standing protective regulatory framework, tailored to the unique characteristics of CO2 injected for the purpose of GS.

Letter ID: 0213 **Comment ID:** 22925 **Letter Lines:** 188 to 209
Comment Code: 2126 1.6.1.2 Comments opposing injection into deep saline
Comment: AMWA is also concerned about using saline aquifers for carbon sequestration. In a climate-stressed and ultimately water-stressed world, it is quite possible that these aquifers will be used as drinking water supplies in the near future. For example, EPA states in the rule proposal that deep saline aquifers that have >10,000 TDS will account for 88% of geosequestration sites. Many of these aquifers may actually be targeted for water supply. The experience of drinking water systems in Florida and other areas has
demonstrated that TDS measurements in USDWs are a moving target. The upper Floridan aquifer is currently about 8000 mg/L TDS. However, in pumping this already brackish aquifer, the upwelling of more saline waters from below is occurring. In addition, some utilities are considering pumping from deeper wells with a higher salinity for drinking water supply and using reverse osmosis to
treat for TDS. As the protection of current and future drinking water supplies is paramount, AMWA suggests that when there are competing uses in an aquifer, the needs of the aquifer for drinking water supply should take precedence over other municipal or

industrial uses and the risk of unintended impacts on potable water supplies is unacceptable. AMWA suggests that EPA require a more rigorous scientific evaluation in the final rule about how potential risk to potable aquifers will be avoided in the site characterization for a CO2 geosequestration project.
Individual Response: EPA clarifies that the final rule requires the Director to notify the director of the state public water system supervision program (PWSS) when a draft permit becomes available for public comment. EPA expects that the PWSS director will provide input to the Director regarding competing needs for water resources and whether to grant a permit. The Agency acknowledges commenter concerns about water resources and future water resource availability. However, modifying the definition of a USDW is outside the scope of the GS rulemaking. USDWs are defined as aquifers currently being used as sources of drinking water or those capable of supplying a public water system and they have a total dissolved solids (TDS) content of 10,000 milligrams per liter or less (§144.3). The primary goal of the UIC Program under the SDWA is to protect USDWs in order to ensure a reliable supply of drinking water for the American public. The GS rule, as part of the UIC program regulations, continues the program's statutory mandate of ensuring the protection of USDWs. The permitting, siting, construction, operation, monitoring, and post-injection site care requirements in the GS rule built on a long-standing protective regulatory framework, tailored to the unique characteristics of CO2 GS. EPA clarifies that a state's Class VI primacy program may be more stringent then the federal requirements. For example, a state has the discretion to ban GS projects from taking place in specific formations or other areas where there are water resource issues. EPA believes that state permitting authorities are in the best position to make determinations about the appropriateness of a particular site based on all available information, including drinking water supply needs.

Letter ID: 0172 **Comment ID:** 23451 **Letter Lines:** 62 to 78
Comment Code: 1220 1.1.1.1 Terminology and definitions
Comment Code: 4400 2.4.4.3 Allowing injection above or between USDWs (seeking comment)
Comment: Potential USDW Above 10,000 TDS:
Since states and water utilities in many areas of the U.S. are currently addressing drought and water rights and availability issues, the proposed rule should provide for states to include protections for well sites with potentially viable sources of drinking water, such as saline aquifers and aquifers above 10,000 (mg/L) total dissolved solids (TDS) level that might serve as a viable drinking water source. ASDWA recommends that states be allowed regulatory flexibility to consider these aquifers as potential drinking water sources.
Please note that there is some variance among states with regard to this issue. While some states would like Congress to consider changing the current Safe Drinking Water Act (SDWA) language to preclude these aquifers as potential sequestration sites, other states are actively looking for additional sequestration sites and would prefer that the proposed regulation and the current Safe Drinking Water Act (SDWA) language keep the current 10,000 TDS (mg/L) definition for a USDW. Thus, we recommend state-specific flexibility on this matter.
Individual Response: EPA is not changing the USDW definition; changing the definition of a USDW is outside the scope of the GS rulemaking. The GS rule focuses on ensuring protection of USDWs, as required under the SDWA, by establishing regulations to ensure the safe injection of CO2 for long-term storage. EPA recognizes that there is increasing demand for water resources and that technology improvements may make high TDS aquifers viable drinking water sources. EPA believes these potential resources should be considered when injection depth waivers are sought. Therefore, the final GS rule at §146.95(b) requires the Director to consider these issues in determining whether an injection depth waiver is appropriate. Specifically, the Director must consider whether alternative injection sites are available; community needs, demands, and supply from drinking water resources; planned needs, potential and/or future use of USDWs and non-USDWs in the area; and a plan for securing alternative resources or treating USDW formation waters in the event of contamination related to the Class VI injection activity. For additional information on the waiver approach, please see the final rule and preamble, as well as EPA's responses to comments on the Notice of Data Availability and Request for Comment.

"Dutta, Subijoy" ---01/08/2013 06:49:54 PM---Jeff: It was good to talk with the awe-inspiring group and the discussion was

From: "Dutta, Subijoy" <sdutta@blm.gov>
To: Jeff Jollie/DC/USEPA/US@EPA
Cc: Ronald Bergman/DC/USEPA/US@EPA, Bruce Kobelski/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, John Ajak <jajak@blm.gov>, Steven Wells <s1wells@blm.gov>, Suzanne Kelly/DC/USEPA/US@EPA
Date: 01/08/2013 06:49 PM
Subject: Re: Fw: Follow up on Dec 19 meeting at EPA-east

Jeff:
It was good to talk with the awe-inspiring group and the discussion was surely quite thought-provoking.
As a follow up, attached are:
1. Short discussion points, unedited... if you/anyone present in the meeting want to add to it and send back to everyone, that would be real nice..
2. BLM Onshore Orders #1, #2 , and #7 which are the existing rules that govern Drilling and Production from Oil &

Gas Operations in the BLM leases and they apply to all wells administered by the BLM, including those on Federal, tribal, and individual Indian trust lands.
In general these rules and regs are generally accessible from the link below: http://www.blm.gov/wy/st/en/programs/energy/Oil_and_Gas/Onshore_Operations.html

Hope this helps.
I look forward to receiving the "Usable Water" piece from Suzanne.

Subijoy

On Mon, Jan 7, 2013 at 1:31 PM, <Jollie.Jeff@epamail.epa.gov> wrote:

Subijoy, just a quick follow up to my email from this morning. As it stands now - Chitra Kumar, Bruce Kobelski, Suzanne Kelly, and I will be traveling to your office tomorrow for our coordination meeting. Ron Bergman has a meeting conflict and will likely not be able to attend.

Jeff
****
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----- Forwarded by Jeff Jollie/DC/USEPA/US on 01/07/2013 01:25 PM -----

From: Jeff Jollie/DC/USEPA/US
To: "Dutta, Subijoy" <sdutta@blm.gov>
Cc: Ronald Bergman/DC/USEPA/US@EPA, Bruce Kobelski/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, "John Ajak" <jajak@blm.gov>, Steven Wells <s1wells@blm.gov>, Suzanne Kelly/DC/USEPA/US@EPA
Date: 01/07/2013 08:36 AM

Subject: Re: Follow up on Dec 19 meeting at EPA-east

Subijoy, thanks for sending your presentation from December 19, it was very informative. We'll get back to you today with confirmation on those that will be coming to your office for tomorrow's meeting. -Jeff
****
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"Dutta, Subijoy" ---01/04/2013 03:48:28 PM---Jeff: Chitra called me around Noon today and asked for a copy of my Dec-19

From: "Dutta, Subijoy" <sdutta@blm.gov>
To: Jeff Jollie/DC/USEPA/US@EPA
Cc: Bruce Kobelski/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, "John Ajak" <jajak@blm.gov>, Ronald Bergman/DC/USEPA/US@EPA, Steven Wells <s1wells@blm.gov>, Suzanne Kelly/DC/USEPA/US@EPA
Date: 01/04/2013 03:48 PM
Subject: Re: Follow up on Dec 19 meeting at EPA-east

Jeff:
Chitra called me around Noon today and asked for a copy of my Dec-19 presentation. I somehow forgot to copy that to the USB provided to me. Anyway, it is attached here.
Chitra also discussed about a follow up meeting next Tuesday at 3 PM at our BLM Office, 20 M Street SE to have consistency between the EPA guidance and the Supplemental HF Rule so that when OMB looks at the siblings they find the uniformity.

Chitra was going to check with Bruce and others and let me know how many of you would come and confirm the time/Date. I will be waiting to hear back on that.

I am available and so is John Ajak. I will check with Steve Wells, our Division Chief if can join us as well.
I have reserved/continued our HF-Team Room for the discussion where we have HF-Sketches all around.

Subijoy
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On Thu, Dec 20, 2012 at 12:05 PM, <Jollie.Jeff@epamail.epa.gov> wrote:

> Subijoy,
>
> It was good to meet with you and John yesterday also. Attached below is a fact sheet that provides the highlights of our UIC Class II permitting guidance. Let me know if you have questions, or comments. I checked ORDs website and it doesn't look like they have posted the HF study progress report yet. If I can get some more information on that I'll let you know. Back in May, we made a table of comparisons between your proposed rule and our guidance. I attached that comparison table below in case it helps with any of your internal discussions.
>
> Jeff
>
> http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/upload/hfdieselfuelsfs.pdf
> *(See attached file: Comparison of BLM regs to HF guidance_May30_2012.docx)*

****

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"Dutta, Subijoy" ---12/20/2012 10:36:07 AM---Hello Jeff et al. It was good to meet with all of you yesterday.

From: "Dutta, Subijoy" <sdutta@blm.gov>
To: Jeff Jollie/DC/USEPA/US@EPA
Cc: Suzanne Kelly/DC/USEPA/US@EPA, Chitra Kumar/DC/USEPA/US@EPA, Bruce Kobelski/DC/USEPA/US@EPA, Ronald Bergman/DC/USEPA/US@EPA, John Ajak <jajak@blm.gov>, Steven Wells <s1wells@blm.gov>
Date: 12/20/2012 10:36 AM
Subject: Re: Follow up on Dec 19 meeting at EPA-east

Hello Jeff et al.
It was good to meet with all of you yesterday.
Here is another comment from the Tribe - The Ute Tribal Business Council. Hopefully that will provide you with the drift and some insight on the Tribal issue/s.

It'd be of value to get the highlights of your guidance as Chitra and Sue mentioned about sending it to me yesterday/today. Our package editing/insertion of the supplemental rule is in its final phase and will be done tomorrow.

Subijoy

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www.blm.gov; email: sdutta@blm.gov*(See attached file: RHF-Comment42_Ute_Tribal_Business_Council.pdf)*

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[attachment "SDUTTA-Fracking-Dec19-2012.pdf" deleted by Jeff Jollie/DC/USEPA/US]

Water Management for Hydraulic Fracturing in Unconventional Resources—Part 4

Using Mechanical Vapor Compression as a Desalination Technology

John M. Walsh, Cetco Energy Services

This is the fourth article of a series covering water management in hydraulic fracturing (HF) in unconventional resources. In the first article, published in June, water management and planning were discussed. Fluid properties and characterization were discussed in the second article, published in August. In the third article, published in October, suspended solids removal using coagulation/flocculation and electrocoagulation was discussed. An explanation was given as to why those technologies are justified based on the characteristics of flowback fluids. This article discusses the use of mechanical vapor compression (MVC) as a desalination technology.

The series of articles is intended to identify and explain the technologies used in HF and explore whether they are appropriate and cost effective. When talking with operators, their comments often suggest that there are too many technologies from which to choose and little basis upon which to make the selections. Water management for HF has become a magnet for every water treatment scheme imaginable. Thus, it is helpful to look at a few successful technologies in some detail to understand why they are appropriate.

In general, desalination of recycle flowback water is becoming less important. New formulations of salt-tolerant polymers and fluids are being developed and applied. Some of the HF fluids are more expensive on a per pound basis, but become cost-competitive when overall reduction in water source, treatment, and disposal costs are taken into account. Nevertheless, there is still a need in some regions to desalinate. This is particularly true when specific compounds must be removed, such as boron or scaling components.

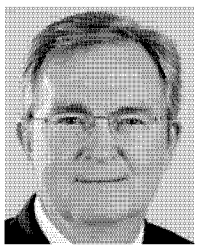
Desalination Technologies

In industrial and municipal water treatment, two technologies used for desalination are thermal processes and membranes. Thermal desalination processes are much older than membrane processes. Despite the rapid advance of membrane processes in the past 2 decades, at least one-third of the installed worldwide desalination capacity is provided by thermal desalination. Other desalination technologies, such as ion exchange, electrodialysis, and softening, are not applicable for the high salinities of HF flowback fluids.

Because of the high fouling tendency of HF flowback fluids and the high salinity in some regions, membrane-based desalination technology is not viable. Spiral wound nanofiltration and reverse osmosis (RO) membranes are the workhorses for onshore applications and offshore desalination of seawater. Neither can be used when the concentration of organic fouling material exceeds a few tens of mg/L. As discussed in Part 2 of this series, the slickwater formulations contain several hundred mg/L of spent polymer. The linear and cross-linked gels (mostly guar-based polymer) contain a few to several thousand mg/L of organic fouling material.

In industrial and municipal water treatment, the main thermal desalination technologies are multistage flash (MSF), multiple-effect distillation (MED), and MVC. The global market shares of these processes are 87%, 12%, and 0.2%, respectively (Global Water Intelligence 2006). A variation of these technologies is a hybrid combination of MED and thermal vapor compression, which has a high energy efficiency compared with the others. MSF process uses multiple evaporation chambers, each having lower pressure and, therefore, lower temperature. The chambers, or stages, are designed for maximum heat recovery.

Thermal desalination processes consume more energy than the RO processes. Depending on the particular technology, the energy required can be as high as 10 to 15 kWh/m^3 of water (1.6 to 2.4 kWh/bbl). This is high compared with 5 kWh/m^3 (0.8 kWh/bbl) for RO in a seawater application, which by itself is considered to have a significant energy requirement for



John M. Walsh *is the director of water treating technology at Cetco Energy Services and co-chairperson of the SPE Water Handling and Management Technical Section. He is a member of the Editorial Board of* Oil and Gas Facilities. *He can be reached at jmwalsh924@gmail.com.*

DOIAR0068337

pumping. However, the reliability, low fouling tendency, and extensive field experience with the thermal desalination technologies keep them in demand, particularly for large facilities where waste heat is available.

The MSF and MED systems are often applied in cogeneration plants, where power and water are produced simultaneously. Both systems require low-pressure heating steam, which can be easily extracted from the power plant at low cost.

Mechanical Vapor Compression

The MVC system is operated solely on electric power, which can be a benefit or a drawback. It offers an advantage because it can be applied where no waste heat is available. However, the high costs of electricity make it less preferable in the industrial and municipal water industries.

MVC is a niche technology with features that make it appropriate for desalination of flowback fluids in HF. Because it does not require waste heat, it is the preferred desalination technology for use in some HF operations.

Fig. 1 illustrates the MVC process, which includes the following steps:

- Incoming (feed) brine is heated in a waste heat recovery heat exchanger (preheater). The hot effluent brine and fresh water is used to heat the incoming brine.
- The brine enters the MVC unit at the top of the tube bundle where it is sprayed onto the outside of the tubes. The brine flows over the tubes as a thin film.
- Vapor is generated from the brine, which is sucked into the vapor compressor. The compressor has a dual function. It lowers the gas pressure, which promotes evaporation, and it compresses the vapor, which heats it (like a heat pump), and pushes the vapor into the side of the tube bundle.

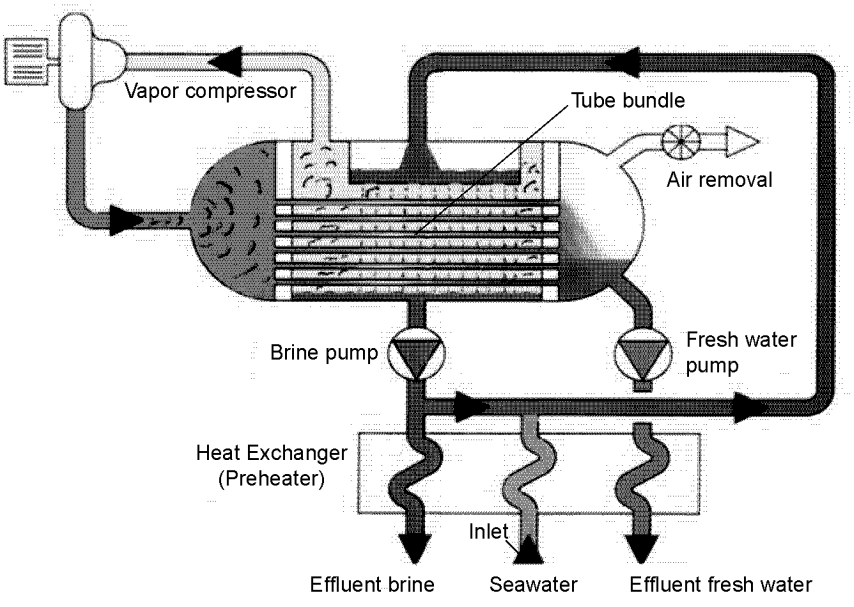


Fig. 1—A process flow diagram for mechanical vapor compression.

- The hot vapor exchanges heat with the cooler brine, thus causing the vapor to condense. The condensed fresh water is discharged.
- A stream of brine is discharged from the bottom of the brine sump and is pumped to the top of the tube bundle, together with incoming brine.
- A fraction of the circulating brine is discharged. Referred to as the drawdown, it is expressed as a fraction of the flow rate of the incoming feed brine. If the drawdown is 10%, then its salinity is 10 times that of the incoming brine. In this case, the recovery is 90%.

In any of the desalination processes, the flow rate of concentrated brine is a critical process parameter. The smaller the flow volume, the greater the concentration of waste brine. Scaling potential is the limiting factor. It is possible to further concentrate the brine into a high-solids sludge, which could be dried into a granular solid, and it is possible to produce salt products. However, the additional process steps add significantly to cost and are generally not practiced. Instead, the concentrated waste brine is disposed, and the economics of desalination must also include the cost of the waste disposal.

An important point that is often overlooked in discussions of MVC is that it does not involve distillation. Distillation requires nucleate boiling, in which vapor is generated on the surface of a heat exchange tube. Since vapor is such a poor conductor of heat, local tube surface temperature can be several degrees above the boiling point of the liquid. If the tube is immersed in the boiling liquid, then there is a hydraulic head that must be overcome to form the vapor, which further increases the temperature of boiling. The presence of vapor on the tube surface and the elevated temperatures create a scaling potential for all but the most pure liquids. Thus, distillation is not appropriate for fluids with high scaling and fouling tendency.

The MVC processes are more precisely referred to as evaporation

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processes. Nucleate boiling is minimized to lower the scaling potential and allow desalination of highly contaminated feed streams. Vapor is generated by heating across a large surface area and with the application of partial vacuum so that the operating temperature is well below the boiling point of the liquid.

MVC has been applied in steamflood (for example, Oxy's Mukhaizna field in Oman) and steam-assisted gravity drainage projects in Alberta, Canada (Heins 2010).

In oilfield application, typical scale-forming components include the carbonates (calcium, magnesium, and iron carbonate) and silica. The carbonates are problematic since their solubility decreases with higher temperature. As carbon dioxide is vaporized out of the brine, the pH of the brine increases, which causes the carbonates to precipitate.

Other techniques used to prevent scale deposits include large surface area (and low thermal driving force), mist mats to prevent liquid carry-over into the vapor, the use of scale inhibitors, softening, ion exchange, pH adjustment, the use of seeded slurry, or the use of ball pigs. Equipment suppliers, such as Sasakura Engineering, provide scale prevention strategies optimized for oilfield brines. Scaling and fouling are also concerns in the auxiliary equipment, such as the heat exchangers. Companies, such as Alfa Laval, have developed large surface area vertical heat exchangers that reduce fouling.

Among various desalination technologies, mechanical vapor recompression (MVR, or alternately MVC) stands out as appropriate for HF application in a semipermanent or modular configuration.

Stages of Field Development Determine Water Treatment Technologies

To understand where and why MVC is appropriate for HF flowback treatment, the unique aspects of the economics of HF flowback water treatment must be considered.

In the June article, the stages of field development were discussed. A brief review emphasizes the reasons why evaporation technologies are being deployed for modular applications and not being deployed from mobile units.

The three stages of shale field development are defined below in terms of the type of water treating equipment deployed. It is important to make a distinction between the stages of field development because they are critical to the selection of water treatment technology.

The stages of field development and the appropriate water treatment technology are:

Stage 1: Remote and isolated well development—mobile water treating systems

Stage 2: Well clusters with some in-field drilling and completions—modular water treating systems

Stage 3: Extensive in-field development with infrastructure to transport water to and from a centralized treatment facility—centralized water treatment plants

Mobile Stage of Development

In the early stage of development of an unconventional field, a number of individual wells are drilled and completed. In the United States, mineral rights are owned by the land leaseholders. The initial wells in a region will typically be drilled in remote and isolated areas. If water recycling is carried out, the water treating equipment must be mobile. Such equipment is compact and placed on a flatbed truck.

The economics of this kind of water treatment are significantly different from those of industrial water treatment. Capital cost is typically a small fraction of the total cost. Most of the cost of water treatment is due to staff time related to transportation to site, setup of the equipment, operation of the equipment, and demobilization and return transportation. If the equipment is complex, additional operators and time are required to mobilize and set up the equipment, adding to the cost. If the capacity is low, additional time is required to process the water volumes. In general, the water treatment rate must be at least 5 to 7 bbl/min of water to justify the cost. Lower capacity will take too long, and the cost of on-site personnel will be too high. Thus, appropriate equipment in this stage of development is compact, simple, and relatively high capacity. Few technologies meet these criteria. Because MVC does not meet the criteria, there are few, if any, mobile MVC units operating successfully in HF flowback applications, to my knowledge.

Modular Stage of Development

As field development progresses, the leases are secured and the drilling campaign becomes more structured. Clusters of wells are drilled and completed. It is then possible for several adjacent wells to be developed in sequence or simultaneously, thus facilitating the use of a modular water treating system.

A daisy chain or hub-and-spoke type of water piping arrangement can be constructed to feed the water treatment unit and convey treated water to the wells that require it. Lay-flat hose, storage tanks, and pond liners are components of the water management tool kit. In this case, a semipermanent/modular water treatment facility is justified. The equipment is transported on a flatbed truck. It requires a few weeks to prepare the site and erect the equipment. When a few or several wells are involved, the construction cost of a modular treating system is justified.

Aquatech and Fountain Quail are among the companies that provide modular treating systems. Aquatech's modularized evaporation system is

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designed for rapid installation. It is transported in modular units and erected with a minimum of field staff. Fountain Quail's system is an MVR evaporator packaged in self-contained skid-mounted units. It is capable of processing 20,000 BWPD and requires three operators. The capacity of the system must be integrated into the storage capacity of spent HF flowback water, the storage capacity of fresh water, the volume of water required for each HF, and the load recovery. The MVR system is being applied in several shale developments, including the Barnett and Marcellus.

Centralized Stage of Development

Later in field life, there may be many wells in relatively close proximity. Over time, the construction of a water conveyance network together with a centralized water treatment facility becomes justified, as is the current trend in the Marcellus Shale. It has also been successfully implemented in the Pinedale Anticline in southwestern Wyoming (Boschee 2012). The capital costs of the water transport system and the water treatment facility are the main cost drivers and contribute significantly to the overall cost. Because of plant automation and the ability to achieve relatively stable steady-state operation, the number of operators is minimized, compared with the previous stages of field development.

In the centralized application of desalination, MVC is not the only thermal desalination that could be applied. If low-grade steam is available, MSF or MED could be used for reduction of energy use. OGF

For Further Reading

2006. 19th IDA Worldwide Desalting Plant Inventory. Global Water Intelligence.

Boschee, P. 2012. **Handling Produced Water from Hydraulic Fracturing.** *Oil and Gas Fac.* **1** (1): 22–26.

Heins, W.F. 2010. **Is a Paradigm Shift in Produced Water Treatment Technology Occurring at SAGD Facilities?** *J. Cdn. Pet. Tech.* **49** (1): 10–15.

DOIAR0068340

U.S. Department of Energy

The Water-Energy Nexus: Challenges and Opportunities

MARCH 2014

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Foreword

Water resource scarcity, variability, and uncertainty are becoming more prominent both domestically and internationally. Because energy and water are interdependent, the availability and predictability of water resources can directly affect energy systems. We cannot assume the future is like the past in terms of climate, technology, and the evolving decision landscape. These issues present an important set of challenges to address.

DOE can play a leadership role by bringing more science, technology, and analytical capability to the water-energy nexus, drawing on expertise in R&D programs and engaging the strengths of the national labs. Importantly, many issues surrounding the energy-water nexus affect assets owned and operated by private sector entities; developing public-private partnerships in this area can help leverage DOE capacity.

This Water-Energy Nexus: Challenges and Opportunities report builds on the Department's previous work in this area and provides a foundation for future action. This report is a next step towards a comprehensive response to the challenges before us. It presents extensive data and analysis to frame the opportunities. We hope it will also encourage others to engage in a dialogue and work together to address the challenges. Systematically and proactively addressing the water-energy nexus will help us all ensure a reliable and sustainable energy system.

Ernest J. Moniz

DOIAR0075711

The highly fragmented federal authority and responsibilities in managing the country's water has contributed to the deterioration of water quality in many parts of the country, according to Gleick and Christian-Smith (2012). States' role in overseeing water rights allocation and permitting is equally important.

4.2.1 Water Rights and Permitting at the State Level

State-level water rights and permitting inform the decision making of any significant water user. Because water issues vary greatly by region, water resource policies—even policy frameworks—can vary greatly from state to state (Kimmell and Veil 2009). With respect to surface water, states generally follow some variation of two governance doctrines—the prior appropriation doctrine and the riparian doctrine. Groundwater governance is slightly more complex.

Table 4.1. Framework for Surface Water Law

Legal Framework in the West	Western States
Pure prior appropriation (9)	Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming
Prior appropriation, formerly riparian (6)	Kansas, North Dakota, South Dakota, Oregon, Texas, and Washington
Mixed riparian-appropriation (3)	California, Nebraska, and Oklahoma
Legal Framework in the East	***Eastern States***
Pure riparian (8)	New Hampshire, Vermont, Rhode Island, West Virginia, Ohio, Tennessee, Missouri, and Louisiana
Regulated riparian (21)	Alabama, Arkansas, Connecticut, Delaware, New York, New Jersey, Maryland, Illinois, Indiana, Iowa, Kentucky, Massachusetts, Pennsylvania, Mississippi, Minnesota, North Carolina, South Carolina, Georgia, Florida, Virginia, and Wisconsin

Source: Gleick and Christian-Smith 2012

Prior Appropriation Doctrine

The vast majority of the states in the arid Western climate follow the prior appropriation doctrine, under which water allocation is made on a first-come, first-serve basis and not linked to land ownership (Getches 2009). Because of relative water scarcity, water rights are linked to a specific basin and many states prohibit transfers between basins. Furthermore, users must prove that their rights are being exercised and put to a beneficial use or the rights can be deemed abandoned and terminated. In times of water shortage, those who last obtained a legal right to use the water must yield to the senior right holders, although if any of the latter's rights have not been exercised and put to a beneficial use, such a right could be deemed forfeited.

Riparian Doctrine

The riparian doctrine, also called the "common law" doctrine, is tied to land ownership and mostly recognized in Eastern states where water is relatively abundant. Owners of land bordering waterways have a right to use water that flows past the land for any reasonable purpose. In addition, all landowners have an equal right to use the water because no one possesses a greater right through prior use. Water rights may not be bought or sold and when water runs short, users have to "share the shortage in proportion to their rights" (Kimmell and Veil 2009). About half of the Eastern states have also adopted what is called regulated riparianism, or water-use permits for non-riparian landowners to acquire water rights for a limited period of "reasonable" use (Gleick and Christian-Smith 2012).

Figure 4.3. Water governance policies in the United States, by state.

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Power plants in riparian areas have had fewer issues finding and using surface water for cooling, mainly due to relative water abundance. As a result, open-loop cooling, which requires higher water withdrawal but also enables greater generation efficiency, is more prevalent in these areas. As shown in Figure 4.4, power plants in riparian states withdraw more water on a per power plant and average basis than plants in prior appropriation states.[23] Power plants in areas generally following prior appropriation rules (Western states) do seem more prone to utilizing non-surface water or alternative sources of water (e.g., brackish water, seawater, reclaimed water, and groundwater) (see Figures 4.5 and 4.6).

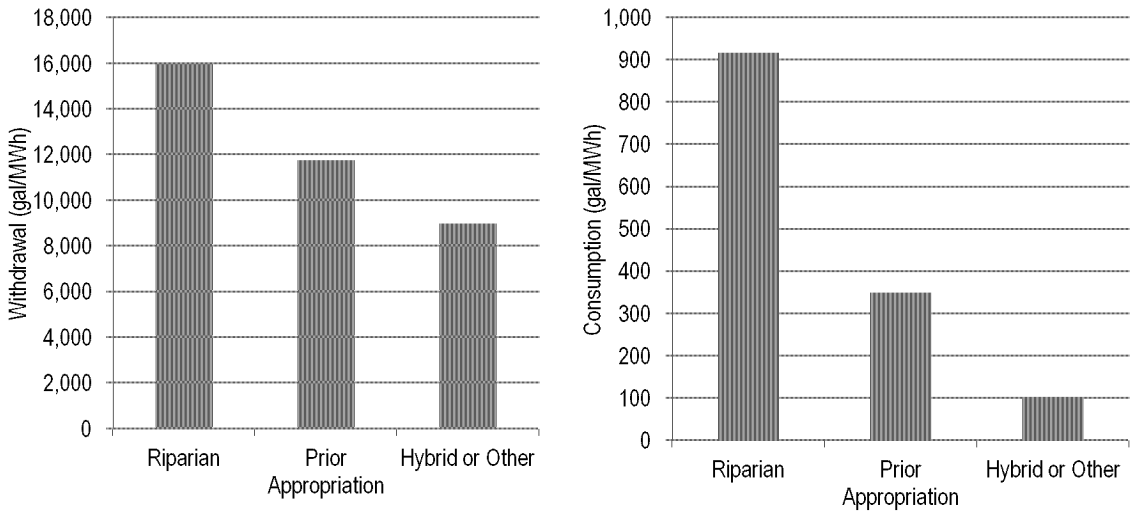

Figure 4.4. Average water withdrawal and consumption per power plant in areas of riparian, prior appropriation, and hybrid or other doctrine.
Data source: EIA Form 860, 923 (EIA 2013a, EIA 2013b)[24]

[23] This is based on both fresh and non-fresh water source use.
[24] The type of water governance information is from Gleick and Christian-Smith (2012). Riparian includes pure riparian and regulated riparian states. Prior Appropriation includes states that have been prior appropriation doctrine implementers all along (pure prior appropriation states) or currently prior appropriation states that are formerly riparian states (prior appropriation, formerly riparian states). Hybrid or Other includes states that implement both prior appropriation and riparian doctrines and states like Hawaii that has a completely different doctrine than other states.

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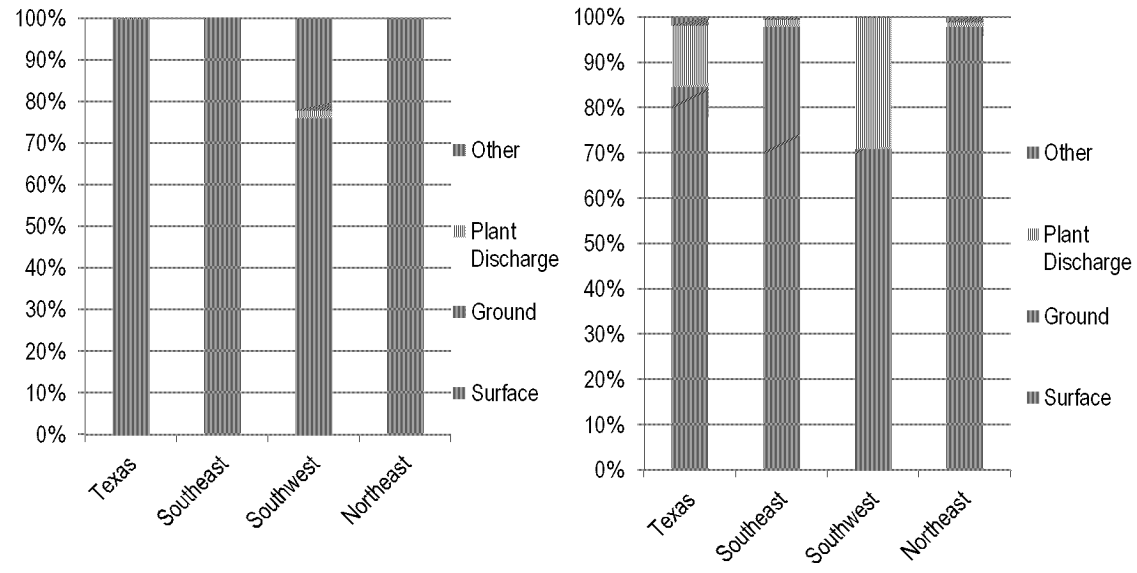

Figure 4.5. Percent of water withdrawn and consumed at thermoelectric power plants by water source in four regions of the United States.
Data source: EIA Form 860, 923 (EIA 2013a, EIA 2013b)[25]

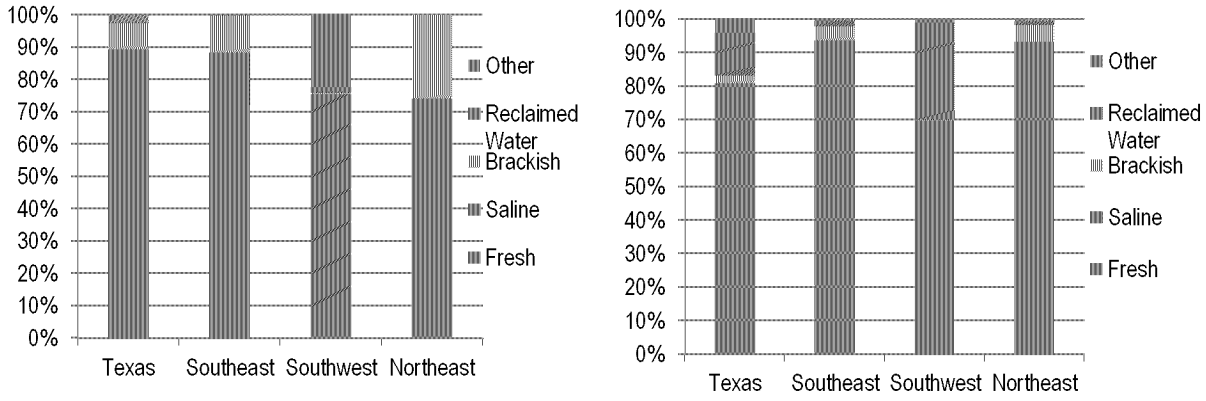

Figure 4.6. Percent of water withdrawn and consumed at thermoelectric power plants by water quality type in four regions of the United States.
Data source: EIA Form 860, 923 (EIA 2013a, EIA 2013b)

Some of the Western states administer a hybrid doctrine. In general, these are states that initially enforced a riparian rights system and continue to recognize riparian uses even though they later adopted a prior appropriations doctrine. Three western states—California, Nebraska, and Oklahoma—that follow a hybrid system allow riparian landowners under some circumstances to assert new uses superior to those with appropriative rights.

[25] Regional breakdowns are as follows: Southwest - California, Arizona, Utah, Nevada, Colorado, New Mexico, Wyoming; Southeast - Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee; Northeast (and Ohio) - Connecticut, Delaware, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Vermont.

DOIAR0075764

From:	Nada Culver
To:	BLM_MT_Butte_FO_Lease_EA@blm.gov
Cc:	Barb Cestero
Subject:	comments on Butte March 2018 Lease Sale
Date:	Monday, October 30, 2017 3:08:27 PM
Attachments:	TWS comments on Butte Mar. 2018 lease sale comments.pdf

---

Attached please find comments from The Wilderness Society on the proposed March 2018 lease sale in the Butte Field Office.

Nada Culver

Senior Counsel and Director, BLM Action Center

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October 30, 2017

Via electronic mail (BLM_MT_Butte_FO_Lease_EA@blm.gov)

Bureau of Land Management
Butte Field Office
Attn: Scott Haight
106 N Parkmont
Butte, MT 59701

Re: Comments on the Draft EA for the Butte Field Office's March 2018 Oil & Gas Lease Sale

Dear Mr. Haight:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the Butte Field Office's March 2018 oil and gas lease sale. The Bureau of Land Management (BLM) is evaluating 9 parcels/4,307 acres for this lease sale, including two parcels (MTM 10895-FT and -FU) that are located in close proximity to the town of Livingston. These parcels are also located less than one-half mile from a stretch of the Yellowstone River that the State of Montana has designated a "blue ribbon fishery" and fall within source water protection regions. Consequently, under the National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act (FLPMA), BLM must evaluate and address the environmental impacts of leasing on these resources and comply fully with the provisions of applicable land use plans. BLM has not fulfilled these duties in the Draft EA.

I. BLM Has Not Complied with the National Environmental Policy Act.

A. The Draft EA lacks a reasonable range of alternatives.

The Draft EA lacks a reasonable range of alternatives. NEPA generally requires the lead agency for a given project to conduct an alternatives analysis for "any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). The regulations further specify that the agency must "rigorously explore and objectively evaluation all reasonable alternatives" including those "reasonable alternatives not within the jurisdiction of the lead agency," so as to "provid[e] a clear basis for choice among the option." 40 C.F.R. § 1502.14.

The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice from the spectrum of reasonable options. By contrast, in evaluating lease sales, including this one, BLM frequently evaluates only two alternatives: a no action alternative, which would exclude all lease parcels from the sale; and a lease everything alternative, which would offer for lease all nominated parcels. An EA offering a choice between leasing every parcel nominated, and leasing nothing at all, does not present a reasonable range of alternatives. *See TWS v. Wisely*,

524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-ground compromise between the absolutism of the outright leasing and no action alternatives"); *Muckleshoot Indian Tribe v. US Forest Serv.*, 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives").

For this lease sale, BLM has not considered any alternatives that fall between the two extremes, and instead just considered the "No Action" and "Proposed Action," under which BLM would lease all nine parcels evaluated in the Draft EA. Draft EA at 9. For example, BLM did not consider deferring parcels MTM 108952-FT and -FU, the development of which could impact a blue ribbon fisheries, source water protection regions and water wells. *See* Draft EA at 32, 40. The failure to consider such an alternative is magnified by the fact that neither of these parcels had high or even moderate development potential. According to the Draft EA, there is a "low" likelihood of development on both of these parcels, which is consistent with historic trends for Park County:

> In Park County, there are currently 33 wells that have been drilled between 1914 and 2008. Six wells have been drilled in recent years. These six wells were drilled in 2007 and 2008. All had minimal production and were plugged and abandoned in subsequent years. All of the thirty-three wells that have been drilled in Park County are plugged and abandoned, or have temporarily abandoned.

Draft EA at 12. Because BLM did not evaluate this or any other "middle-ground" alternatives, it has violated NEPA.

B. BLM has failed to take the necessary "hard look" at impacts of MTM 108952-FT and -FU.

BLM has not taken the required "hard look" at impacts of leasing parcels MTM 10895-FT and -FU. Under NEPA, BLM must evaluate the "reasonably foreseeable" site-specific impacts of oil and gas leasing, prior to making an "irretrievable commitment of resources." *New Mexico ex rel. Richardson*, 565 F.3d at 718; *see also Sierra Club v. Hodel*, 848 F.2d 1068, 1093 (10th Cir. 1988) (agencies are to perform hard look NEPA analysis "before committing themselves irretrievably to a given course of action so that the action can be shaped to account for environmental values").

Here, BLM has failed to evaluate the potential negative consequences of leasing these parcels on the town of Livingston, whose economy is highly dependent on tourism and outdoor recreation, including from fishing on the blue ribbon fishery located on the Yellowstone River. While the Draft EA discloses the marginal economic benefits of leasing these parcels, there is no analogous discussion of how development on these parcels could impact the tourist economy of Livingston and the many outfitters and other businesses that rely on tourism and outdoor recreation. As a consequence, the Draft EA does not comply with NEPA.

II. BLM Is Violating the Federal Land Policy and Management Act.

Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. 43 U.S.C. § 17732 (2012). As the Supreme Court has noted, "[m]ultiple use management is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving]

natural scenic, scientific and historical values." *Norton v. S. Utah Wilderness Alliance*, 542 U.S. at 58 (internal quotations omitted).

In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that under FLPMA's multiple use mandate, development of public lands is not required, but must instead be weighed against other possible uses, including conservation to protect environmental values. *See*, *e.g., New Mexico ex rel. Richardson*, 565 F.3d at 710 ("BLM's obligation to manage for multiple use does not mean that development *must* be allowed. . . . Development is a possible use, which BLM must weigh against other possible uses — including conservation to protect environmental values, which are best assessed through the NEPA process."); *Rocky Mtn. Oil & Gas Ass'n v. Watt*, 696 F.2d 734, 738 n.4 (10th Cir. 1982) ("BLM need not permit all resource uses on a given parcel of land."). And, just as BLM can deny a project outright in order to protect the environmental uses of public lands, it can also condition a project's approval on the commitment to mitigation measures that lessen environmental impacts. *See*, *e.g.*, *Pub. Lands Council v. Babbitt*, 167 F.3d 1287, 1300-01 (10th Cir. 1999) ("FLPMA unambiguously authorizes the Secretary to specify terms and conditions in livestock grazing permits in accordance with land use plans"); *Grynberg Petro*, 152 IBLA 300, 306-07 (2000) (describing how appellants challenging conditions of approval bear the burden of establishing that they are "unreasonable or not supported by the data").

The multiple use framework's emphasis both on environmental resources and on the need to balance between present and future generations are highly relevant to consideration of climate change-related impacts. For example, multiple use includes "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources . . . ; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. . . ." 43 U.S.C. § 1702(c).

Here, the BLM appears to be grounding the analysis and decisions proposed in the Draft EA on recent presidential and executive actions on "American energy independence" or "dominance." *See* Press Release, BLM Opens Public Comment Period on Environmental Assessment for March 2018 Oil and Gas Lease Sale (Sept. 29, 2017) ("The BLM-administered lands proposed for inclusion in this lease sale are in keeping with the Administration's goals of promoting America's energy independence. . . .")[1]; The White House, *Presidential Executive Order on Promoting Energy Independence and Economic Growth* (March 28, 2017)[2],; DOI, Secretary of the Interior, Order No. 3349 – American Energy Independence (March 29, 2017)[3]. Such a decision would clearly violate the multiple-use mandate of FLPMA, which states in no uncertain terms that BLM "shall manage public lands under principles of multiple use and sustained yield" and contains specific provisions and procedures for broadly "excluding" principal uses of the public lands, including outdoor recreation and fish and wildlife development and utilization, none of which have been followed here and more broadly by the Interior Department. 43 U.S.C. §§ 1732(a), 1712(e)(2).

---

[1] Available at: https://www.blm.gov/press-release/blm-opens-public-comment-period-environmental-assessment-march-2018-oil-and-gas-lease

[2] Available at: https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energyindependence-and-economi-1

[3] Available at: https://www.doi.gov/sites/doi.gov/files/uploads/so_3349_-american_energy_independence.pdf

III. Conclusion

Thank you again for the opportunity to comment. We hope to see our comments addressed as part of the next steps in this lease sale process.

Sincerely,

The Wilderness Society

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From:	Nada Culver
To:	BLM_MT_Great_Falls_Lease_EA@blm.gov
Cc:	Barb Cestero; John Todd
Subject:	comments on March 2018 lease sale
Date:	Monday, October 30, 2017 3:13:26 PM
Attachments:	TWS MWA comments on North Central Montana District March 2018 sale.pdf

Attached please find comments from The Wilderness Society and Montana Wilderness Association on the proposed leases for the March 2018 sale in the North Central Montana District.

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MONTANA WILDERNESS ASSOCIATION

October 30, 2017

Via electronic mail (BLM_MT_Great_Falls_Lease_EA@blm.gov)

NCMD Division of Oil and Gas
Attn: Mark Albers
1220 38th Street N
Great Falls, MT 59405

Re: Comments on the Draft EA for the North Central Montana District Office's March 2018 Oil & Gas Lease Sale

Dear Mr. Albers:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the North Central Montana District Office's March 2018 oil and gas lease sale. The Bureau of Land Management (BLM) is evaluating 24 parcels/6,892 acres for this lease sale. Several of these parcels are located in sensitive areas, including within Priority and General Habitat Management Areas (respectively, PHMAs and GHMAs) for Greater-sage grouse and adjacent to Upper Missouri River Breaks National Monument (UMRBNM). Consequently, under the National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act (FLPMA), BLM must evaluate and address the environmental impacts of leasing on these resources and comply fully with the provisions of applicable land use plans. BLM has not fulfilled these duties in the Draft EA.

I. BLM Has Not Complied with the National Environmental Policy Act.

A. The Draft EA lacks an adequate description of the affected environment.

Agencies are required under NEPA to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15. The current affected environment sets the "baseline" for the impacts analysis and comparison of alternatives. As the Ninth Circuit held, "without establishing the baseline conditions . . . there is simply no way to determine what effect the proposed [action] will have on the environment and, consequently, no way to comply with NEPA." Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci, 857 F.2d 505, 510 (9th Cir. 1988).

Here, the Draft EA does not ever reference, let alone describe with the specificity required by NEPA, UMRBNM, even though parcel MTM 108952-BQ directly borders the monument. UMRBNM was established in 2001 in order to protect a landscape that

> has remained largely unchanged in the nearly 200 years since Meriwether Lewis and William Clark traveled through it on their epic journey. . . . The area remains remote and nearly as undeveloped as it was in 1805. . . . The Bullwacker area of the monument contains some of the wildest country on all the Great Plains, as well as important wildlife habitat. During the stress-inducing winter months, mule deer and elk move up to the area from the river, and antelope and sage grouse move down to the area from the benchlands. The heads of the coulees and breaks also contain archeological and historical sites, from teepee rings and remnants of historic trails to abandoned homesteads and lookout sites used by Meriwether Lewis.

Presidential Proclamation 7398 – Establishment of the Upper Missouri River Breaks National Monument (Jan. 17, 2001).[1] Not only does parcel MTM 108952-BQ border UMRBNM, it lies within the Bullwhacker area, which the proclamation describes as "some of the wildest country on all the Great Plains," and which likely explains why the area is managed under BLM's second strongest Visual Resource Management classification (Class II). Draft EA at 65. Because BLM has failed to disclose the existence of UMRBNM, and has thus failed entirely to evaluate the direct, indirect and cumulative impacts of parcel MTM 108952-BQ on UMRBNM, the Draft EA does not comply with NEPA.

B. The Draft EA lacks a reasonable range of alternatives.

The Draft EA also lacks a reasonable range of alternatives. NEPA generally requires the lead agency for a given project to conduct an alternatives analysis for "any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). The regulations further specify that the agency must "rigorously explore and objectively evaluation all reasonable alternatives" including those "reasonable alternatives not within the jurisdiction of the lead agency," so as to "provid[e] a clear basis for choice among the option." 40 C.F.R. § 1502.14.

The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice from the spectrum of reasonable options. By contrast, in evaluating lease sales, including this one, BLM frequently evaluates only two alternatives: a no action alternative, which would exclude all lease parcels from the sale; and a lease everything alternative, which would offer for lease all nominated parcels. An EA offering a choice between leasing every parcel nominated, and leasing nothing at all,

[1] Available at: https://www.gpo.gov/fdsys/pkg/WCPD-2001-01-22/pdf/WCPD-2001-01-22-Pg153.pdf

does not present a reasonable range of alternatives. *See TWS v. Wisely*, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-ground compromise between the absolutism of the outright leasing and no action alternatives"); *Muckleshoot Indian Tribe v. US Forest Serv.*, 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives").

For this lease sale, BLM has not considered any alternatives that fall between the two extremes, and instead just considered the "No Action" and "Proposed Action," under which BLM would lease all twenty-four parcels evaluated in the Draft EA. Draft EA at 10-11. For example, BLM did not consider offering parcel MTM 108952-BQ with a no-surface occupancy stipulation or deferring this lease, given that it borders UMRBNM and "some of the wildest country on all the Great Plains. . . ." Nor did BLM evaluate any additional deferrals for the proposed leases in PHMAs and GHMAs, in spite of a legal obligation to do so under the HiLine Approved Resource Management Plan (ARMP) and associated policy guidance. *See* HiLine District Office Greater Sage-Grouse ARMP 2-5 ("Prioritize the leasing and development of fluid mineral resources outside GRSG habitat."); Record of Decision and Approved RMP Amendments for the Rocky Mountain Region 1-25 ("the ARMPs . . . prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs. . . . This objective is intended to guide development to lower conflict areas and as such protect important habitat. . . ."); BLM Instruction Memorandum (IM) 2016-143 (listing the required procedures for prioritizing oil and gas leasing outside of PHMAs and GHMAs). Because BLM has not evaluated these or any other "middle-ground" alternatives, it has violated NEPA.

C. In particular, BLM has failed to consider the cumulative impacts of leasing in greater sage-grouse habitat.

NEPA requires BLM to evaluate the cumulative impacts of this lease sale "resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.27(b)(7); *Kern v. Bureau of Land Management*, 282 F.3d 1062, 1075-77 (9th Cir. 2002). To satisfy this requirement, BLM's NEPA analysis must consider the cumulative impact of all the recent and currently-planned auctions in which BLM has offered hundreds of leases affecting sage grouse habitat protected under the RMPs. These sales include, but are not limited to:

- December 2017 Montana sale: 187 out of 204 parcels offered;[2]
- December 2017 Wyoming sale: of 45 parcels to be offered, 26 parcels are partly or entirely in PHMA, and 24 parcels are partly or entirely in GHMA;[3]

[2] EA for BLM Montana December 2017 sale at 27-28, DOI-BLM-MT-C020-2017-0051-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/78400/120092/146548/MCFO_EA_December_2017_Sale_Post_with_Sale_List.pdf .
[3] EA for BLM Wyoming December 2017 sale at 52, DOI-BLM-WY-D000-2017-0003-EA, available at: https://eplanning.blm.gov/epl-front-

- March 2018 Wyoming sale: 96 percent of parcels to be offered under the proposed alternative for Wind River/Bighorn Basin District are in sage grouse habitat,[4] and 37 parcels to be offered in the High Plains District are in PHMA or GHMA;[5] and

- June 2018 Wyoming sale: 44 parcels are located wholly in PHMA, 30 parcels contain both GHMA and PHMA, and 89 parcels are located wholly in GHMA.[6]

These are only a few examples--other recent BLM sales have already occurred in Wyoming and Montana during 2016 and 2017 that leased other sage grouse-protected areas. All of these sales suffer from the same flaw as this auction: they fail to consider reasonable alternatives that do not lease PHMAs and GHMAs. Many of these sales also, as discussed in more detail below, violate the prioritization requirements of the 2015 grouse plans.

BLM must analyze and disclose the cumulative impacts of this wave of leasing on the greater sage-grouse and its habitat. BLM (in the Rocky Mountain Region Record of Decision and Montana grouse plan amendments and revisions) and numerous authorities have recognized the importance of addressing sage-grouse conservation on a comprehensive range-wide basis, and accounting for connectivity between state and regional populations and habitats, habitat fragmentation, and other impacts. As stated in the Rocky Mountain ROD, the grouse plans, collectively: "The cumulative effect of these measures is to conserve, enhance, and restore GRSG habitat across the species' remaining range in the Rocky Mountain Region and to provide greater certainty that BLM resource management plan decisions in GRSG habitat in the Rocky Mountain Region can lead to conservation of the GRSG and other sagebrush-steppe-associated species in the region." Rocky Mountain ROD, p. S-2.

BLM cannot lease hundreds of parcels covering many thousands of acres in Montana and Wyoming without considering the cumulative and trans-boundary impacts to the greater sage-grouse.

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office/projects/nepa/65707/115166/140613/20170721.HDD_EA_for_December_2017_Lease_Sale_v.2.mg.pdf

[4] Draft EA for BLM Wind River/Bighorn Basin District First Quarter 2018 Lease Sale at 3-44, DOI-BLM-WY-R000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114136/139365/181Q_WRBBD_EA_ver.1.pdf

[5] Draft EA for BLM High Plains District First Quarter 2018 Lease Sale at 48-49, DOI-BLM-WY-P000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114129/139358/HPD_First_Quarter_2018_OG_Lease_EA.ver1.pdf .

[6] Draft EA for BLM Wyoming June 2018 Lease Sale at 85, DOI-BLM-WY-D000-2018-0001-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/123500/150613/EnvironmentalAssessment_V1_June2018.pdf .

D. BLM has failed to take the necessary "hard look" at impacts on UMRBNM.

BLM has not taken the required "hard look" at impacts on UMRBNM. Under NEPA, BLM must evaluate the "reasonably foreseeable" site-specific impacts of oil and gas leasing, prior to making an "irretrievable commitment of resources." *New Mexico ex rel. Richardson*, 565 F.3d at 718; *see also Sierra Club v. Hodel*, 848 F.2d 1068, 1093 (10th Cir. 1988) (agencies are to perform hard look NEPA analysis "before committing themselves irretrievably to a given course of action so that the action can be shaped to account for environmental values"); *Sierra Club v. Peterson*, 717 F.2d 1409, 1411 ([o]n land leased without a No Surface Occupancy Stipulation the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operations.). Courts have held that BLM makes such a commitment when it issues an oil and gas lease without reserving the right to later prohibit development. *New Mexico ex rel. Richardson*, 565 F.3d at 718.

Here, BLM is in fact making an "irretrievable commitment of resources" by offering this parcel without reserving the right to prevent future development. Further, the impacts on UMRBNM are "reasonably foreseeable" and not "speculative," as claimed by BLM in the Draft EA. Draft EA at 30; *see also id.* at 18 ("Upon receipt of an Application for a Permit to Drill (APD), the BLM would initiative a site-specific NEPA analysis that considers the direct, indirect, and cumulative effects of a specific action."). BLM admits that there is a "high potential" for future development on parcel MTM 108952-BQ, and there are also several leases in the immediate vicinity of this parcel that are held by production. Draft EA at 16; UMRBNM Approved RMP at Map 3 – Side A Oil & Gas Map. Yet, as a consequence of failing to identify and discuss UMRBNM at all in the Draft EA, BLM has failed to evaluate the direct, indirect and cumulative impacts of leasing on the monument.

III. BLM Is Violating the Federal Land Policy and Management Act.

A. The Draft EA is not consistent with the HiLine ARMP, as required by FLPMA.

BLM has not prioritized leasing outside of PHMAs and GHMAs, as required by the Rocky Mountain Region ROD, HiLine Approved RMP and IM 2016-143. Under FLPMA, BLM must manage public lands "in accordance with the [applicable] land use plans . . . ." 43 U.S.C. § 1732(a); S. *Utah Wilderness Alliance v. Norton*, 542 U.S. 55, 59-60 (2004). Here, the Draft EA is not consistent with provisions of the Rocky Mountain ROD and HiLine ARMP, which require the "prioritization" of oil and gas leasing outside of PHMAs and GHMAs.

Under the Rocky Mountain Region ROD, BLM must:

> prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs . . . to further limit future surface disturbance and to encourage new development in areas that would not conflict with GRSG. This objective

> is intended to guide development to lower conflict areas and, as such, protect important habitat and reduce the time and cost associated with oil and gas leasing development. It would do this by avoiding sensitive areas, reducing the complexity of environmental review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation.

Rocky Mountain Region ROD at 1-25. The HiLine ARMP echoes this directive and includes the following objective: "Prioritize the leasing and development of fluid mineral resources outside GRSG habitat." HiLine ARMP at 2-5.

Further, in IM 2016-143, BLM has issued guidance elaborating on the way agency staff are to comply with the requirement to prioritize leasing and development outside of sage-grouse habitat: "Lands within GHMAs: BLM state offices will consider EOIs for lands within GHMAs, after considering lands outside of both GHMAs and PHMAs. When considering the GHMA lands for leasing, the BLM State Office will ensure that a decision to lease those lands would conform to the conservation objectives and provision in the GRSG Plans (e.g., Stipulations)."

Importantly, the IM also sets out "factors to consider" (i.e., parcel-specific factors) after applying this prioritization sequence:

- Parcels immediately adjacent or proximate to existing oil and gas leases and development operations or other land use development should be more appropriate for consideration before parcels that are not near existing operations. This is the most important factor to consider, as the objective is to minimize disturbance footprints and preserve the integrity of habitat for conservation.
- Parcels that are within existing Federal oil and gas units should be more appropriate for consideration than parcels not within existing Federal oil and gas units.
- Parcels in areas with higher potential for development (for example, considering the oil and gas potential maps developed by the BLM for the GRSG Plans) are more appropriate for consideration than parcels with lower potential for development. The Authorized Officer may conclude that an area has "higher potential" based on all pertinent information, and is not limited to the Reasonable Foreseeable Development (RFD) potential maps from Plans analysis.
- Parcels in areas of lower-value sage-grouse habitat or further away from important life-history habitat features (for example, distance from any active sage-grouse leks) are more appropriate for consideration than parcels in higher-value habitat or closer to important life-history habitat features (i.e. lek, nesting, winter range areas). At the time the leasing priority is determined, when leasing within GHMA or PHMA is considered, BLM should consider, first, areas determined to be non-sage-grouse habitat and then consider areas of lower value habitat.
- Parcels within areas having completed field-development Environmental Impact Statements or Master Leasing Plans that allow for adequate site-specific mitigation and are in conformance with the objectives and provisions in the GRSG Plans may be more appropriate for consideration than parcels that have not been evaluated by the BLM in this manner.

- Parcels within areas where law or regulation indicates that offering the lands for leasing is in the government's interest (such as in instances where there is drainage of Federal minerals, 43 CFR § 3162.2-2, or trespass drilling on unleased lands) will generally be considered more appropriate for leasing, but lease terms will include all appropriate conservation objectives and provisions from the GRSG Plans.
- As appropriate, use the BLM's Surface Disturbance Analysis and Reclamation Tracking Tool (SDARTT) to check EOI parcels in PHMA, to ensure that existing surface disturbance does not exceed the disturbance and density caps and that development of valid existing rights (Solid Minerals, ROW) for approved-but-not-yet-constructed surface disturbing activities would not exceed the caps.

Yet, the Draft EA fails to cite the "prioritization" requirement altogether. There is no discussion of the prioritization sequence or parcel-specific factors set forth in IM 2016-143 or of the broader requirement to "prioritize" established in the Rocky Mountain Region ROD and HiLine ARMP. As a consequence, BLM is now proposing to lease ten parcels within GHMAs and two parcels within PHMAs, without making any effort to prioritize leasing in other, less sensitive areas. Draft EA at 45-46. This appears to include one parcel (MTM 79010-HQ) that "is in important winter range for GRSG. The area just north of the parcel consistently has one of the highest concentrations of wintering GRSG in the project area. As many as 200 individuals have been documented in a relatively small area approximately 300 m north of the proposed lease parcel."[7] Draft EA at 46.

In other recent lease sale EAs, BLM has applied the parcel specific factors and described how the factors informed its proposed action. For example, in the Draft EA for Wyoming BLM's August 2017 Lease Sale, BLM applied the parcel-specific factors to justify a deferral decision:

> After careful review of the parcels, the BLM has determined that it was appropriate to defer certain parcels nominated for inclusion in the August 2017 oil and gas lease sale…These deferrals were made consistent with the BLM's sage-grouse conservation plans and strategy, which direct the BLM to prioritize oil and gas leasing and development in a manner that minimizes resource conflicts in order to protect important habitat and reduce development time and costs. Parcels deferred are generally located in sage-grouse important life-history habitat features such as active or occupied leks, and/or are not proximate to existing development, and are in areas of low oil and gas development potential.

Draft EA at 1-2, 1-3. In that same sale, BLM also applied the parcel-specific factors to justify a decision to carry forward parcels for leasing:

> Parcels WY-1708-153 and WY-1708-154 are proximate or adjacent to federal oil and gas leases with active development and production (within 2 miles of

[7] This parcel also happens to be located largely or entirely "within the channel of the Milk River." Draft EA at 48.

> leases currently held by production), and have no known sage-grouse leks within the boundaries. The area is also proximate to bentonite mining claims, disturbance, and activity.

Draft EA at 3-8. Thus, in the Wyoming sale, BLM proposed deferring parcels on lands with high-quality sage-grouse habitat, low potential for oil and gas development, and minimal nearby development, and it proposed carrying forward parcels on lands with lower-quality habitat near existing development. BLM clearly applied and weighed the factors to reach a reasoned leasing decision.

As another, more recent example, in the Draft EA for Utah's December 2017 Oil and Gas Lease Sale in the Vernal Field Office, BLM applied each of the parcel specific factors to each of the proposed parcels in or near sage-grouse habitat. For each individual parcel, BLM determined whether it was adjacent to an existing lease, within an existing unit, within an area with a field development EIS, or within an area with high development potential. *See* Draft EA at 35 – 45. BLM also evaluated the quality of the sage-grouse habitat within each of the parcels, including the amount and percentage of winter and brood-rearing habitat and the distance of each parcel to nearby leks. Id. BLM clearly and carefully applied each of the relevant parcel specific factors to each of the parcels. It also directly addressed the "most important factor" – the proximity of the leases to existing leases and development.

These examples underscore the inadequacy of the Draft EA for NCMD's March 2018 lease sale and confirm that when parcels are proposed in or near PHMA and GHMA, BLM must apply the prioritization sequence and weigh the parcel-specific factors in reaching a leasing decision. It must also comply with the requirement in the Rocky Mountain Region ROD and HiLine ARMP to prioritize development outside of GHMA and PHMA, guiding development to lower conflict areas so as to thereby protect important habitat areas and reduce the time and cost associated with oil and gas development. In the final EA, BLM must actually prioritize leasing outside of greater sage-grouse habitat and carefully consider the parcel-specific factors described in IM 2016-143.

B. BLM is not complying with FLPMA's multiple-use mandate.

Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. 43 U.S.C. § 17732 (2012). As the Supreme Court has noted, "[m]ultiple use management is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values." *Norton v. S. Utah Wilderness Alliance*, 542 U.S. at 58 (internal quotations omitted).

In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that under FLPMA's multiple use mandate, development of public lands is not required, but must instead be weighed against other possible uses, including conservation to protect environmental values. *See*, *e.g., New Mexico ex rel. Richardson*, 565 F.3d at 710 ("BLM's obligation to manage for multiple use does not mean that development

must be allowed. . . . Development is a possible use, which BLM must weigh against other possible uses — including conservation to protect environmental values, which are best assessed through the NEPA process."); *Rocky Mtn. Oil & Gas Ass'n v. Watt*, 696 F.2d 734, 738 n.4 (10th Cir. 1982) ("BLM need not permit all resource uses on a given parcel of land."). And, just as BLM can deny a project outright in order to protect the environmental uses of public lands, it can also condition a project's approval on the commitment to mitigation measures that lessen environmental impacts. *See, e.g., Pub. Lands Council v. Babbitt*, 167 F.3d 1287, 1300-01 (10th Cir. 1999) ("FLPMA unambiguously authorizes the Secretary to specify terms and conditions in livestock grazing permits in accordance with land use plans"); *Grynberg Petro*, 152 IBLA 300, 306-07 (2000) (describing how appellants challenging conditions of approval bear the burden of establishing that they are "unreasonable or not supported by the data").

The multiple use framework's emphasis both on environmental resources and on the need to balance between present and future generations are highly relevant to consideration of climate change-related impacts. For example, multiple use includes "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources . . . ; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. . . ." 43 U.S.C. § 1702(c).

Here, the BLM appears to be grounding the analysis and decisions proposed in the Draft EA on recent presidential and executive actions on "American energy independence" or "dominance." *See* Press Release, BLM Opens Public Comment Period on Environmental Assessment for March 2018 Oil and Gas Lease Sale (Sept. 29, 2017) ("The BLM-administered lands proposed for inclusion in this lease sale are in keeping with the Administration's goals of promoting America's energy independence. . . .")[8]; The White House, *Presidential Executive Order on Promoting Energy Independence and Economic Growth* (March 28, 2017)[9],; DOI, Secretary of the Interior, Order No. 3349 – American Energy Independence (March 29, 2017)[10]. Such a decision would clearly violate the multiple-use mandate of FLPMA, which states in no uncertain terms that BLM "shall manage public lands under principles of multiple use and sustained yield" and contains specific provisions and procedures for broadly "excluding" principal uses of the public lands, including outdoor recreation and fish and wildlife development and utilization, none of which have been followed here and more broadly by the Interior Department. 43 U.S.C. §§ 1732(a), 1712(e)(2).

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[8] Available at: https://www.blm.gov/press-release/blm-opens-public-comment-period-environmental-assessment-march-2018-oil-and-gas-lease

[9] Available at: https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energyindependence-and-economi-1

[10] Available at: https://www.doi.gov/sites/doi.gov/files/uploads/so_3349_-american_energy_independence.pdf

III. Conclusion

Thank you again for the opportunity to comment. We hope to see our comments addressed as part of the next steps in this lease sale process.

Sincerely,

The Wilderness Society

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From: Nada Culver
To: blm_mt_north_dakotafo_lease_ea@blm.gov
Subject: comments on March 2018 lease sale
Date: Monday, October 30, 2017 3:14:46 PM
Attachments: TWS Comments - ND Mar. 2018 lease sale comments.pdf
TRNP comments - BLM Lease Sale March 2018.pdf

Attached are comments from The Wilderness Society on the proposed March 2018 North Dakota lease sale, along with the referenced attachment, comments from the National Park Service.

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October 30, 2017

Via electronic mail (blm_mt_north_dakotafo_lease_ea@blm.gov)

North Dakota Field Office
Attn: Paul Kelley
99 23rd Ave. West, Suite A
Dickinson, ND 58601

Re: Comments on the Draft EA for North Dakota's March 2018 Oil & Gas Lease Sale

Dear Mr. Kelley:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for North Dakota's March 2018 oil and gas lease sale. The Bureau of Land Management (BLM) is evaluating just a single parcel for this sale. However, this parcel is located in an extremely sensitive location, as it borders the North Unit of Theodore Roosevelt National Park (TRNP), most of which is designated wilderness. Moreover, there are popular recreation resources within the park, including a hiking trail and scenic drive, that lie just on the other side of the parcel. Consequently, under the National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act (FLPMA), BLM must evaluate and address the environmental impacts of leasing on these resources. BLM has not fulfilled these duties in the Draft EA.

I. BLM Has Not Complied with the National Environmental Policy Act.

A. The Draft EA lacks a reasonable range of alternatives.

The Draft EA lacks a reasonable range of alternatives. NEPA generally requires the lead agency for a given project to conduct an alternatives analysis for "any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). The regulations further specify that the agency must "rigorously explore and objectively evaluation all reasonable alternatives" including those "reasonable alternatives not within the jurisdiction of the lead agency," so as to "provid[e] a clear basis for choice among the option." 40 C.F.R. § 1502.14.

The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice from the spectrum of reasonable options. By contrast, in evaluating lease sales, including this one, BLM frequently evaluates only two alternatives: a no action alternative, which would exclude all lease parcels from the sale; and a lease everything alternative, which would offer for lease all nominated parcels. An EA offering a choice between leasing every parcel nominated, and leasing nothing at all, does not present a reasonable range of alternatives. *See TWS v. Wisely*, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-ground compromise between the absolutism of the outright leasing and no action alternatives"); *Muckleshoot Indian Tribe v. US Forest Serv.*, 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed

to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives").

For this lease sale, BLM has not considered any alternatives that fall between the two extremes. For example, BLM did not consider offering the parcel with a no-surface occupancy stipulation. Nor did BLM explore alternate parcel configurations, such as increasing the size of the parcel, which could expand the range of options for siting future development in such a way that avoids altogether or better minimizes impacts on TRNP. Because BLM has not evaluated any "middle-ground" alternatives, it has violated NEPA.

B. BLM has failed to take the necessary "hard look" at impacts on TRNP.

BLM has not taken the required "hard look" at impacts on TRNP. Under NEPA, BLM must evaluate the "reasonably foreseeable" site-specific impacts of oil and gas leasing, prior to making an "irretrievable commitment of resources." *New Mexico ex rel. Richardson*, 565 F.3d at 718; see also *Sierra Club v. Hodel*, 848 F.2d 1068, 1093 (10th Cir. 1988) (agencies are to perform hard look NEPA analysis "before committing themselves irretrievably to a given course of action so that the action can be shaped to account for environmental values"); *Sierra Club v. Peterson*, 717 F.2d 1409, 1411 ([o]n land leased without a No Surface Occupancy Stipulation the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operations.). Courts have held that BLM makes such a commitment when it issues an oil and gas lease without reserving the right to later prohibit development. *New Mexico ex rel. Richardson*, 565 F.3d at 718.

Here, BLM is in fact making an "irretrievable commitment of resources" by offering this parcel without reserving the right to prevent future development.[1] Further, the impacts on TRNP are "reasonable foreseeable" and not "speculative," as claimed by BLM in the Draft EA. Draft EA at 54. BLM admits that development of this parcel is probably, if not a virtual certainty:

> Currently, there are 1,782 federal oil and gas leases covering approximately 847,877 acres in the State of North Dakota. Existing production activity holds approximately 70 percent of this lease acreage (1,335 leases; total of 596,119 acres). Approximately 75 percent of this federal oil and gas lease acreage is within the boundaries of the USFS Little Missouri National Grasslands (991 leases; 638,832 acres).

Draft EA at 33. There are also 22 wells (and another being drilled) within the township where the lease is located. *Id*. at 35. Thus, under the "reasonable foreseeable development" scenario for the North Dakota Field Office, this township has a "very high potential" for further development. *Id*. at 44.

[1] We are cognizant of Lease Stipulation 16-3, which applies to this parcel and purports to authorize BLM to "exclude" surface occupancy from certain "special areas." Draft EA at App. B. We are not convinced, however, that BLM could enforce this stipulation to prohibit surface occupancy on the entire parcel, which may be necessary to avoid significant impacts on TRNP. First and foremost, by its terms, the stipulation only applies to "special areas" "*within this lease*. . . ." *Id*. (emphasis added). Thus, it is foreseeable that BLM could not enforce this stipulation as a means of addressing impacts on "special areas," such as TRNP, located outside of the lease. Second, national parks and other special designations are not expressly identified in the list of "special areas" enumerated in the stipulation.

Yet, BLM has failed to evaluate the direct, indirect and cumulative impacts of leasing on TRNP. While the Draft EA notes the proximity of the parcel to TRNP, there is no discussion of how future development will impact the park and its scenic and recreation values. BLM did not conduct a visual or auditory impact analysis from key observation points within the park, including from the Buckhorn Trail, which is located about one-half mile from the lease, and from various viewpoints along the park's scenic drive, which appear to have clear line-of-sight to the proposed lease, and in spite of a specific recommendation that BLM conduct such an analysis from the National Park Service.[2] See Letter from Wendy Hart Ross, Superintendent, TRNP, to North Dakota Field Office (Aug. 28, 2017) (attached to and submitted as part of these comments). Based on information provided by NPS, these impacts could be dramatic:

> The park's exceptional dark night skies, scenic beauty, natural sound, and abundant wildlife offer visitors similar experiences to Theodore Roosevelt's adventures in the Little Missouri River badlands during the 1880s. Surface developments and activity in this area have the potential to diminish the visitor experience and affect wildlife habitat in this special area. Noise disrupts wildlife and the natural quiet that visitors expect to find during their visit. The North Unit Scenic Byway offers some of the most scenic views in North Dakota. Surface development and activity outside the park boundary can be highly visible from the scenic drive depending on its planned location.

Id. Further, BLM has not disclosed the cumulative impacts of selling the lease, in conjunction with past, present and future oil and gas development around TRNP. *See* 40 C.F.R § 1508.7 (defining a cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."). According to BLM, there are twenty-two active wells within the proposed lease's township and another one is being drilled. Draft EA at 35. Additionally, over 75 percent of federal (and an unknown percentage of non-federal) mineral estate in this township is currently leased. *Id*. at 34. BLM does not discuss whether these existing wells are already harming the scenic and recreation resources within TRNP. Nor does BLM evaluate whether future development on already leased lands, as well as lands that could be leased in the future, could exacerbate these harms. Consequently, BLM has not complied with NEPA.

III. BLM Is Violating the Federal Land Policy and Management Act.

Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. 43 U.S.C. § 17732 (2012). As the Supreme Court has noted, "[m]ultiple use management is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values." *Norton v. S. Utah Wilderness Alliance*, 542 U.S. 55, 58 (2004) (internal quotations omitted).

In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that under FLPMA's multiple use mandate, development of public lands is not required, but must instead be weighed against other possible uses, including conservation to

[2] *See* https://www.nps.gov/thro/planyourvisit/maps.htm.

protect environmental values. *See*, *e.g., New Mexico ex rel. Richardson*, 565 F.3d at 710 ("BLM's obligation to manage for multiple use does not mean that development *must* be allowed. . . . Development is a possible use, which BLM must weigh against other possible uses — including conservation to protect environmental values, which are best assessed through the NEPA process."); *Rocky Mtn. Oil & Gas Ass'n v. Watt*, 696 F.2d 734, 738 n.4 (10th Cir. 1982) ("BLM need not permit all resource uses on a given parcel of land."). And, just as BLM can deny a project outright in order to protect the environmental uses of public lands, it can also condition a project's approval on the commitment to mitigation measures that lessen environmental impacts. *See, e.g., Pub. Lands Council v. Babbitt*, 167 F.3d 1287, 1300-01 (10th Cir. 1999) ("FLPMA unambiguously authorizes the Secretary to specify terms and conditions in livestock grazing permits in accordance with land use plans"); *Grynberg Petro*, 152 IBLA 300, 306-07 (2000) (describing how appellants challenging conditions of approval bear the burden of establishing that they are "unreasonable or not supported by the data").

The multiple use framework's emphasis both on environmental resources and on the need to balance between present and future generations are highly relevant to consideration of climate change-related impacts. For example, multiple use includes "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources . . . ; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. . . ." 43 U.S.C. § 1702(c).

Here, the North Dakota Field Office has already leased a significant amount of its mineral estate surrounding TRNP for oil and gas development, and there is widespread development throughout the area, as evidenced by the thousands of wells in-production and thousands of miles of access roads and pipelines. Draft EA at 33-34. Given the need to balance development with "nonrenewable resources" under the multiple-use mandate, and the sensitivity and significance of TRNP, BLM's decision to offer this parcel violates that mandate.

Further, to the extent BLM is grounding its decision on recent presidential and executive actions on "American energy independence" or "dominance", as suggested in press materials for this lease sale, such a decision would clearly violate various controlling legal mandates under NEPA, FLPMA and other statutes and regulations. *See* Press Release, BLM Opens Public Comment Period on Environmental Assessment for March 2018 Oil and Gas Lease Sale (Sept. 29, 2017) ("The BLM-administered lands proposed for inclusion in this lease sale are in keeping with the Administration's goals of promoting America's energy independence. . . .")[3]; The White House, *Presidential Executive Order on Promoting Energy Independence and Economic Growth* (March 28, 2017)[4],; DOI, Secretary of the Interior, Order No. 3349 – American Energy Independence (March 29, 2017)[5]. As required by FLPMA, BLM "shall manage public lands under principles of multiple use and sustained yield. . . ." 43 U.S.C. § 1732(a). Managing the public lands only to promote energy development is not consistent with FLPMA's mandate.

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[3] Available at: https://www.blm.gov/press-release/blm-opens-public-comment-period-environmental-assessment-march-2018-oil-and-gas-lease

[4] Available at: https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energyindependence-and-economi-1

[5] Available at: https://www.doi.gov/sites/doi.gov/files/uploads/so_3349_-american_energy_independence.pdf

III. Conclusion

Thank you again for the opportunity to comment. We hope to see this lease sale parcel deferred from the upcoming sale.

Sincerely,

Nada Culver
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(303) 225-4635

United States Department of the Interior

National Park Service
Theodore Roosevelt National Park
Post Office Box 7
Medora, North Dakota 58645

L2427

August 28, 2017

Bureau of Land Management
North Dakota Field Office
99 23rd Avenue West – Suite A
Dickinson, ND 58601-2619

Dear Mr. Wickstrom:

Thank you for the opportunity to comment on the March 13, 2018 competitive oil and gas lease sale of one parcel of federal minerals (T148N R99W Section 18 SE ¼) in McKenzie County, North Dakota. We understand that the surface ownership of this property is with the North Dakota Department of Trust Lands and is directly adjacent to Theodore Roosevelt National Park's North Unit.

The National Park Service is concerned about activity in the identified lease sale area as it has the potential to impact resources and visitor values in the North Unit. The park's exceptional dark night skies, scenic beauty, natural sound, and abundant wildlife offer visitors similar experiences to Theodore Roosevelt's adventures in the Little Missouri River badlands during the 1880s. Surface developments and activity in this area have the potential to diminish the visitor experience and affect wildlife habitat in this special area. Noise disrupts wildlife and the natural quiet that visitors expect to find during their visit. The North Unit Scenic Byway offers some of the most scenic views in North Dakota. Surface development and activity outside the park boundary can be highly visible from the scenic drive depending on its planned location. Additionally, the lease sale parcel is within an Area of Interest as identified by the North Dakota Industrial Commission, and is subject to the Area of Interest comment and permit policy (NDIC-PP 2.01).

Theodore Roosevelt National Park routinely conducts a visual impact analysis and requests mitigation actions when proposed infrastructure might impact park resources or visitor experience. We request inter-agency coordination during the planning phase to locate surface developments in areas that aren't visually intrusive and to incorporate actions that will limit the impact on park resources. Theodore Roosevelt National Park has an excellent track record of working with other agencies and energy companies to protect park values and maintain an exceptional visitor experience while allowing energy production to occur.

We appreciate your cooperation and assistance in protecting Theodore Roosevelt National Park.

Sincerely,

Wendy Hart Ross
Superintendent
Theodore Roosevelt National Park

From:	Nada Culver
To:	BLM_MT_BillingsFO_Lease_EA@blm.gov
Subject:	comments on March 2018 lease sale
Date:	Monday, October 30, 2017 3:17:51 PM
Attachments:	TWS comments on Billings Mar. 2018 lease sale.pdf

Attached please find comments from The Wilderness Society on the proposed March 2018 lease sale for the Billings Field Office.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org

October 30, 2017

Via electronic mail (BLM_MT_BillingsFO_Lease_EA@blm.gov)

Bureau of Land Management
Billings Field Office
Attn: Jim Sparks 5001
Southgate Dr.
Billings, MT 59101

Re: Comments on the Draft EA for the Billings Field Office's March 2018 Oil & Gas Lease Sale

Dear Mr. Sparks:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the Billings Field Office's March 2018 oil and gas lease sale. The Bureau of Land Management (BLM) is evaluating 76 parcels/52,297 acres for this lease sale. Several of these parcels are located in sensitive areas, including within Priority and General Habitat Management Areas (respectively, PHMAs and GHMAs) for Greater-sage grouse and within important stretches of the Yellowstone River. Consequently, under the National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act (FLPMA), BLM must evaluate and address the environmental impacts of leasing on these resources and comply fully with the provisions of applicable land use plans. BLM has not fulfilled these duties in the Draft EA.

I. BLM Has Not Complied with the National Environmental Policy Act.

A. The Draft EA lacks a reasonable range of alternatives.

The Draft EA also lacks a reasonable range of alternatives. NEPA generally requires the lead agency for a given project to conduct an alternatives analysis for "any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). The regulations further specify that the agency must "rigorously explore and objectively evaluation all reasonable alternatives" including those "reasonable alternatives not within the jurisdiction of the lead agency," so as to "provid[e] a clear basis for choice among the option." 40 C.F.R. § 1502.14.

The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice from the spectrum of reasonable options. By contrast, in evaluating lease sales, including this one, BLM frequently evaluates only two alternatives: a no action alternative, which would exclude all lease parcels from the sale; and a lease everything alternative, which would offer for lease all nominated parcels. An EA offering a choice between leasing every parcel nominated, and leasing nothing at all, does not present a reasonable range of alternatives. *See TWS v. Wisely*, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-

ground compromise between the absolutism of the outright leasing and no action alternatives"); *Muckleshoot Indian Tribe v. US Forest Serv.*, 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives").

For this lease sale, BLM has not considered any alternatives that fall between the two extremes, and instead just considered the "No Action" and "Proposed Action," under which BLM would lease all seventy-six parcels evaluated in the Draft EA. Draft EA at 10. For example, BLM did not consider an alternative that deferred parcels in areas that have low oil and gas potential the development of which could impact important fish, wildlife and other multiple use values. *See* Draft EA at 16-18 (listing numerous parcels in Sweetgrass County that have "low" development potential). This includes numerous parcels in Sweetgrass County near the Yellowstone River, some of which are located along a stretch of the Yellowstone River designated by the State of Montana as a "blue ribbon fishery" and others that are adjacent to tributaries of the Yellowstone "that contain Montana Core or Conservation populations of Yellowstone Cutthroat trout (YCT)." Draft EA at 55, 60.

Nor did BLM evaluate any additional deferrals for the proposed leases in PHMAs and GHMAs, in spite of a legal obligation to do so under the Billings Approved Resource Management Plan (ARMP) and associated policy guidance. *See* Billings Field Office Greater Sage-Grouse ARMP 2-6 ("Prioritize the leasing and development of fluid mineral resources outside GRSG habitat."); Record of Decision and Approved RMP Amendments for the Rocky Mountain Region 1-25 ("the ARMPs . . . prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs. . . . This objective is intended to guide development to lower conflict areas and as such protect important habitat. . . ."); BLM Instruction Memorandum (IM) 2016-143 (listing the required procedures for prioritizing oil and gas leasing outside of PHMAs and GHMAs). Because BLM has not evaluated these or any other "middle-ground" alternatives, it has violated NEPA.

B. BLM has failed to take the necessary "hard look" at potential environmental impacts.

BLM has not taken the required "hard look" at potential environmental impacts. Under NEPA, BLM must evaluate the "reasonably foreseeable" site-specific impacts of oil and gas leasing, prior to making an "irretrievable commitment of resources." *New Mexico ex rel. Richardson*, 565 F.3d at 718; *see also Sierra Club v. Hodel*, 848 F.2d 1068, 1093 (10th Cir. 1988) (agencies are to perform hard look NEPA analysis "before committing themselves irretrievably to a given course of action so that the action can be shaped to account for environmental values"); *Sierra Club v. Peterson*, 717 F.2d 1409, 1411 ([o]n land leased without a No Surface Occupancy Stipulation the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operations.). Courts have held that BLM makes such a commitment when it issues an oil and gas lease without reserving the right to later prohibit development. *New Mexico ex rel. Richardson*, 565 F.3d at 718.

Here, BLM is in fact making an "irretrievable commitment of resources" by offering leases without reserving the right to prevent future development. Further, the site-specific impacts are "reasonably foreseeable" and may not wait until "a leaseholder submits an application for permit to drill (APD)", as claimed by BLM in the Draft EA. Draft EA at 7. Yet, BLM expressly defers a site-specific analysis on key resource values, including YCT and the "blue ribbon fishery" on the Yellowstone River. Draft EA at 56, 60. This approach violates NEPA, and BLM must take the site-specific impacts of leasing into account at this stage.

C. In particular, BLM has failed to consider the cumulative impacts of leasing in greater sage-grouse habitat.

NEPA requires BLM to evaluate the cumulative impacts of this lease sale "resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.27(b)(7); *Kern v. Bureau of Land Management*, 282 F.3d 1062, 1075-77 (9th Cir. 2002). To satisfy this requirement, BLM's NEPA analysis must consider the cumulative impact of all the recent and currently-planned auctions in which BLM has offered hundreds of leases affecting sage grouse habitat protected under the RMPs. These sales include, but are not limited to:

- December 2017 Montana sale: 187 out of 204 parcels offered;[1]
- December 2017 Wyoming sale: of 45 parcels to be offered, 26 parcels are partly or entirely in PHMA, and 24 parcels are partly or entirely in GHMA;[2]
- March 2018 Wyoming sale: 96 percent of parcels to be offered under the proposed alternative for Wind River/Bighorn Basin District are in sage grouse habitat,[3] and 37 parcels to be offered in the High Plains District are in PHMA or GHMA;[4] and
- June 2018 Wyoming sale: 44 parcels are located wholly in PHMA, 30 parcels contain both GHMA and PHMA, and 89 parcels are located wholly in GHMA.[5]

These are only a few examples--other recent BLM sales have already occurred in Wyoming and Montana during 2016 and 2017 that leased other sage grouse-protected areas. All of these sales suffer from the same flaw as this auction: they fail to consider reasonable alternatives that do not lease PHMAs and GHMAs. Many of these sales also, as discussed in more detail below, violate the prioritization requirements of the 2015 grouse plans.

BLM must analyze and disclose the cumulative impacts of this wave of leasing on the greater sage-grouse and its habitat. BLM (in the Rocky Mountain Region Record of Decision and Montana grouse plan amendments and revisions) and numerous authorities have recognized the importance of addressing sage-grouse conservation on a comprehensive range-wide basis, and accounting for connectivity between state and regional populations and habitats, habitat fragmentation, and other

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[1] EA for BLM Montana December 2017 sale at 27-28, DOI-BLM-MT-C020-2017-0051-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/78400/120092/146548/MCFO_EA_December_2017_Sale_Post_with_Sale_List.pdf .

[2] EA for BLM Wyoming December 2017 sale at 52, DOI-BLM-WY-D000-2017-0003-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/115166/140613/20170721.HDD_EA_for_December_2017_Lease_Sale_v.2.mg.pdf

[3] Draft EA for BLM Wind River/Bighorn Basin District First Quarter 2018 Lease Sale at 3-44, DOI-BLM-WY-R000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114136/139365/181Q_WRBBD_EA_ver.1.pdf

[4] Draft EA for BLM High Plains District First Quarter 2018 Lease Sale at 48-49, DOI-BLM-WY-P000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114129/139358/HPD_First_Quarter_2018_OG_Lease_EA.ver1.pdf .

[5] Draft EA for BLM Wyoming June 2018 Lease Sale at 85, DOI-BLM-WY-D000-2018-0001-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/123500/150613/EnvironmentalAssessment_V1_June2018.pdf .

impacts. As stated in the Rocky Mountain ROD, the grouse plans, collectively: "The cumulative effect of these measures is to conserve, enhance, and restore GRSG habitat across the species' remaining range in the Rocky Mountain Region and to provide greater certainty that BLM resource management plan decisions in GRSG habitat in the Rocky Mountain Region can lead to conservation of the GRSG and other sagebrush-steppe-associated species in the region." Rocky Mountain ROD, p. S-2.

BLM cannot lease hundreds of parcels covering many thousands of acres in Montana and Wyoming without considering the cumulative and trans-boundary impacts to the greater sage-grouse.

II. BLM Is Violating the Federal Land Policy and Management Act.

A. The Draft EA is not consistent with the Billings ARMP, as required by FLPMA.

BLM has not prioritized leasing outside of PHMAs and GHMAs, as required by the Rocky Mountain Region ROD, Billings Approved RMP and IM 2016-143. Under FLPMA, BLM must manage public lands "in accordance with the [applicable] land use plans . . . ." 43 U.S.C. § 1732(a); *S. Utah Wilderness Alliance v. Norton,* 542 U.S. 55, 59-60 (2004). Here, the Draft EA is not consistent with provisions of the Rocky Mountain ROD and Billings ARMP, which require the "prioritization" of oil and gas leasing outside of PHMAs and GHMAs.

Under the Rocky Mountain Region ROD, BLM must:

> prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs . . . to further limit future surface disturbance and to encourage new development in areas that would not conflict with GRSG. This objective is intended to guide development to lower conflict areas and, as such, protect important habitat and reduce the time and cost associated with oil and gas leasing development. It would do this by avoiding sensitive areas, reducing the complexity of environmental review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation.

Rocky Mountain Region ROD at 1-25. The Billings ARMP echoes this directive and includes the following objective: "Prioritize the leasing and development of fluid mineral resources outside GRSG habitat." Billings ARMP at 2-6.

Further, in IM 2016-143, BLM has issued guidance elaborating on the way agency staff are to comply with the requirement to prioritize leasing and development outside of sage-grouse habitat: "Lands within GHMAs: BLM state offices will consider EOIs for lands within GHMAs, after considering lands outside of both GHMAs and PHMAs. When considering the GHMA lands for leasing, the BLM State Office will ensure that a decision to lease those lands would conform to the conservation objectives and provision in the GRSG Plans (e.g., Stipulations)."

Importantly, the IM also sets out "factors to consider" (i.e., parcel-specific factors) after applying this prioritization sequence:

- Parcels immediately adjacent or proximate to existing oil and gas leases and development operations or other land use development should be more appropriate for consideration before parcels that are not near existing operations. This is the most important factor to

consider, as the objective is to minimize disturbance footprints and preserve the integrity of habitat for conservation.

- Parcels that are within existing Federal oil and gas units should be more appropriate for consideration than parcels not within existing Federal oil and gas units.
- Parcels in areas with higher potential for development (for example, considering the oil and gas potential maps developed by the BLM for the GRSG Plans) are more appropriate for consideration than parcels with lower potential for development. The Authorized Officer may conclude that an area has "higher potential" based on all pertinent information, and is not limited to the Reasonable Foreseeable Development (RFD) potential maps from Plans analysis.
- Parcels in areas of lower-value sage-grouse habitat or further away from important life-history habitat features (for example, distance from any active sage-grouse leks) are more appropriate for consideration than parcels in higher-value habitat or closer to important life-history habitat features (i.e. lek, nesting, winter range areas). At the time the leasing priority is determined, when leasing within GHMA or PHMA is considered, BLM should consider, first, areas determined to be non-sage-grouse habitat and then consider areas of lower value habitat.
- Parcels within areas having completed field-development Environmental Impact Statements or Master Leasing Plans that allow for adequate site-specific mitigation and are in conformance with the objectives and provisions in the GRSG Plans may be more appropriate for consideration than parcels that have not been evaluated by the BLM in this manner.
- Parcels within areas where law or regulation indicates that offering the lands for leasing is in the government's interest (such as in instances where there is drainage of Federal minerals, 43 CFR § 3162.2-2, or trespass drilling on unleased lands) will generally be considered more appropriate for leasing, but lease terms will include all appropriate conservation objectives and provisions from the GRSG Plans.
- As appropriate, use the BLM's Surface Disturbance Analysis and Reclamation Tracking Tool (SDARTT) to check EOI parcels in PHMA, to ensure that existing surface disturbance does not exceed the disturbance and density caps and that development of valid existing rights (Solid Minerals, ROW) for approved-but-not-yet-constructed surface disturbing activities would not exceed the caps.

Yet, the Draft EA fails to cite the "prioritization" requirement altogether. There is no discussion of the prioritization sequence or parcel-specific factors set forth in IM 2016-143 or of the broader requirement to "prioritize" established in the Rocky Mountain Region ROD and Billings ARMP. As a consequence, BLM is now proposing to lease twenty-nine parcels within GHMAs and seventeen parcels within PHMAs, without making any effort to prioritize leasing in other, less sensitive areas. Draft EA at 53.

In other recent lease sale EAs, BLM has applied the parcel specific factors and described how the factors informed its proposed action. For example, in the Draft EA for Wyoming BLM's August 2017 Lease Sale, BLM applied the parcel-specific factors to justify a deferral decision:

> After careful review of the parcels, the BLM has determined that it was appropriate to defer certain parcels nominated for inclusion in the August 2017 oil and gas lease sale…These deferrals were made consistent with the BLM's sage-grouse conservation plans and strategy, which direct the BLM to prioritize oil and gas leasing and development in a manner that minimizes resource conflicts in order to protect important habitat and reduce development time and costs. Parcels deferred

> are generally located in sage-grouse important life-history habitat features such as active or occupied leks, and/or are not proximate to existing development, and are in areas of low oil and gas development potential.

Draft EA at 1-2, 1-3. In that same sale, BLM also applied the parcel-specific factors to justify a decision to carry forward parcels for leasing:

> Parcels WY-1708-153 and WY-1708-154 are proximate or adjacent to federal oil and gas leases with active development and production (within 2 miles of leases currently held by production), and have no known sage-grouse leks within the boundaries. The area is also proximate to bentonite mining claims, disturbance, and activity.

Draft EA at 3-8. Thus, in the Wyoming sale, BLM proposed deferring parcels on lands with high-quality sage-grouse habitat, low potential for oil and gas development, and minimal nearby development, and it proposed carrying forward parcels on lands with lower-quality habitat near existing development. BLM clearly applied and weighed the factors to reach a reasoned leasing decision.

As another, more recent example, in the Draft EA for Utah's December 2017 Oil and Gas Lease Sale in the Vernal Field Office, BLM applied each of the parcel specific factors to each of the proposed parcels in or near sage-grouse habitat. For each individual parcel, BLM determined whether it was adjacent to an existing lease, within an existing unit, within an area with a field development EIS, or within an area with high development potential. *See* Draft EA at 35 – 45. BLM also evaluated the quality of the sage-grouse habitat within each of the parcels, including the amount and percentage of winter and brood-rearing habitat and the distance of each parcel to nearby leks. Id. BLM clearly and carefully applied each of the relevant parcel specific factors to each of the parcels. It also directly addressed the "most important factor" – the proximity of the leases to existing leases and development.

These examples underscore the inadequacy of the Draft EA for the Billings Field Office's March 2018 lease sale and confirm that when parcels are proposed in or near PHMA and GHMA, BLM must apply the prioritization sequence and weigh the parcel-specific factors in reaching a leasing decision. It must also comply with the requirement in the Rocky Mountain Region ROD and Billings ARMP to prioritize development outside of GHMA and PHMA, guiding development to lower conflict areas so as to thereby protect important habitat areas and reduce the time and cost associated with oil and gas development. In the final EA, BLM must actually prioritize leasing outside of greater sage-grouse habitat and carefully consider the parcel-specific factors described in IM 2016-143.

B. BLM is not complying with FLPMA's multiple-use mandate.

Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. 43 U.S.C. § 17732 (2012). As the Supreme Court has noted, "[m]ultiple use management is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values." *Norton v. S. Utah Wilderness Alliance*, 542 U.S. at 58 (internal quotations omitted).

In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that under FLPMA's multiple use mandate, development of public lands is not required, but must instead be weighed against other possible uses, including conservation to protect environmental values. *See*, *e.g., New Mexico ex rel. Richardson*, 565 F.3d at 710 ("BLM's obligation to manage for multiple use does not mean that development *must* be allowed. . . . Development is a possible use, which BLM must weigh against other possible uses — including conservation to protect environmental values, which are best assessed through the NEPA process."); *Rocky Mtn. Oil & Gas Ass'n v. Watt*, 696 F.2d 734, 738 n.4 (10th Cir. 1982) ("BLM need not permit all resource uses on a given parcel of land."). And, just as BLM can deny a project outright in order to protect the environmental uses of public lands, it can also condition a project's approval on the commitment to mitigation measures that lessen environmental impacts. *See*, *e.g*., *Pub. Lands Council v. Babbitt*, 167 F.3d 1287, 1300-01 (10th Cir. 1999) ("FLPMA unambiguously authorizes the Secretary to specify terms and conditions in livestock grazing permits in accordance with land use plans"); *Grynberg Petro*, 152 IBLA 300, 306-07 (2000) (describing how appellants challenging conditions of approval bear the burden of establishing that they are "unreasonable or not supported by the data").

The multiple use framework's emphasis both on environmental resources and on the need to balance between present and future generations are highly relevant to consideration of climate change-related impacts. For example, multiple use includes "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources . . . ; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. . . ." 43 U.S.C. § 1702(c).

Here, the BLM appears to be grounding the analysis and decisions proposed in the Draft EA on recent presidential and executive actions on "American energy independence" or "dominance." *See* Press Release, BLM Opens Public Comment Period on Environmental Assessment for March 2018 Oil and Gas Lease Sale (Sept. 29, 2017) ("The BLM-administered lands proposed for inclusion in this lease sale are in keeping with the Administration's goals of promoting America's energy independence. . . .")[6]; The White House, *Presidential Executive Order on Promoting Energy Independence and Economic Growth* (March 28, 2017)[7],; DOI, Secretary of the Interior, Order No. 3349 – American Energy Independence (March 29, 2017)[8]. Such a decision would clearly violate the multiple-use mandate of FLPMA, which states in no uncertain terms that BLM "shall manage public lands under principles of multiple use and sustained yield" and contains specific provisions and procedures for broadly "excluding" principal uses of the public lands, including outdoor recreation and fish and wildlife development and utilization, none of which have been followed here and more broadly by the Interior Department. 43 U.S.C. §§ 1732(a), 1712(e)(2).

[6] Available at: https://www.blm.gov/press-release/blm-opens-public-comment-period-environmental-assessment-march-2018-oil-and-gas-lease
[7] Available at: https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energyindependence-and-economi-1
[8] Available at: https://www.doi.gov/sites/doi.gov/files/uploads/so_3349_-american_energy_independence.pdf

III. Conclusion

Thank you again for the opportunity to comment. We hope to see our comments addressed as part of the next steps in this lease sale process.

Sincerely,

Nada Culver
Senior Counsel and Director, BLM Action Center
The Wilderness Society
1660 Wynkoop Street, #850
Denver, CO 80202
nada_culver@tws.org
(303) 225-4635

From: Kenczka, Gerald
To: Jeremy Patterson
Subject: letter sent to the Business Committee on delay of rules for HV and venting/flaring rules
Date: Monday, October 30, 2017 3:46:23 PM

Jeremy, I have been asked to follow up with a letter sent from our Washington Office to the Business Committee on BLM's hydraulic fracturing rule and what is known as the "venting and flaring" or "waste prevention" rule. The letter was dated October 16, 2017. The request in the letter asks for the Tribe's views and information into BLM's consideration of the proposals.

I have been thinking about how best to seek some feed back or coordination since I know that getting a meeting with the Business Committee directly may take some time. Our (meaning Vernal BLM) next meeting with them is scheduled for December 6th. But I believe that our Washington Office is seeking more timely feed back.

Do you have any suggestions on how best to proceed? I called Bruce Pargeets and found out that he is out of town until next week. Your thoughts on this are appreciated. Thanks.

- do I need to forward you the letter sent to the Business Committee?

Jerry Kenczka
AFM for Lands & Minerals
BLM Vernal Field Office
435-781-4440 (desk)
435-776-6705 (cell)

From:	Nada Culver
To:	BLM_MT_Great_Falls_Lease_EA@blm.gov
Cc:	Barb Cestero; John Todd
Subject:	PLEASE USE THIS ONE comments on March 2018 lease sale
Date:	Monday, October 30, 2017 4:00:45 PM
Attachments:	TWS MWA comments on North Central Montana District March 2018 sale-final.pdf

Apologies but there was an error in the previous document.

Attached please find comments from The Wilderness Society and Montana Wilderness Association on the proposed leases for the March 2018 sale in the North Central Montana District.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org





MONTANA WILDERNESS ASSOCIATION

October 30, 2017

Via electronic mail (BLM_MT_Great_Falls_Lease_EA@blm.gov)

NCMD Division of Oil and Gas
Attn: Mark Albers
1220 38th Street N
Great Falls, MT 59405

Re: Comments on the Draft EA for the North Central Montana District Office's March 2018 Oil & Gas Lease Sale

Dear Mr. Albers:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the North Central Montana District Office's March 2018 oil and gas lease sale. The Bureau of Land Management (BLM) is evaluating 24 parcels/6,892 acres for this lease sale. Several of these parcels are located in sensitive areas, including within Priority and General Habitat Management Areas (respectively, PHMAs and GHMAs) for Greater-sage grouse and adjacent to Upper Missouri River Breaks National Monument (UMRBNM). Consequently, under the National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act (FLPMA), BLM must evaluate and address the environmental impacts of leasing on these resources and comply fully with the provisions of applicable land use plans. BLM has not fulfilled these duties in the Draft EA.

I. BLM Has Not Complied with the National Environmental Policy Act.

A. The Draft EA lacks an adequate description of the affected environment.

Agencies are required under NEPA to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15. The current affected environment sets the "baseline" for the impacts analysis and comparison of alternatives. As the Ninth Circuit held, "without establishing the baseline conditions . . . there is simply no way to determine what effect the proposed [action] will have on the environment and, consequently, no way to comply with NEPA." Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci, 857 F.2d 505, 510 (9th Cir. 1988).

Here, the Draft EA does not ever reference, let alone describe with the specificity required by NEPA, UMRBNM, even though parcel MTM 108952-BQ directly borders the monument. UMRBNM was established in 2001 in order to protect a landscape that

> has remained largely unchanged in the nearly 200 years since Meriwether Lewis and William Clark traveled through it on their epic journey. . . . The area remains remote and nearly as undeveloped as it was in 1805. . . . The Bullwacker area of the monument contains some of the wildest country on all the Great Plains, as well as important wildlife habitat. During the stress-inducing winter months, mule deer and elk move up to the area from the river, and antelope and sage grouse move down to the area from the benchlands. The heads of the coulees and breaks also contain archeological and historical sites, from teepee rings and remnants of historic trails to abandoned homesteads and lookout sites used by Meriwether Lewis.

Presidential Proclamation 7398 – Establishment of the Upper Missouri River Breaks National Monument (Jan. 17, 2001).[1] Not only does parcel MTM 108952-BQ border UMRBNM, it lies within the Bullwhacker area, which the proclamation describes as "some of the wildest country on all the Great Plains," and which likely explains why the area is managed under BLM's second strongest Visual Resource Management classification (Class II). Draft EA at 65. Because BLM has failed to disclose the existence of UMRBNM, and has thus failed entirely to evaluate the direct, indirect and cumulative impacts of parcel MTM 108952-BQ on UMRBNM, the Draft EA does not comply with NEPA.

B. The Draft EA lacks a reasonable range of alternatives.

The Draft EA also lacks a reasonable range of alternatives. NEPA generally requires the lead agency for a given project to conduct an alternatives analysis for "any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). The regulations further specify that the agency must "rigorously explore and objectively evaluation all reasonable alternatives" including those "reasonable alternatives not within the jurisdiction of the lead agency," so as to "provid[e] a clear basis for choice among the option." 40 C.F.R. § 1502.14.

The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice from the spectrum of reasonable options. By contrast, in evaluating lease sales, including this one, BLM frequently evaluates only two alternatives: a no action alternative, which would exclude all lease parcels from the sale; and a lease everything alternative, which would offer for lease all nominated parcels. An EA offering a choice between leasing every parcel nominated, and leasing nothing at all,

[1] Available at: https://www.gpo.gov/fdsys/pkg/WCPD-2001-01-22/pdf/WCPD-2001-01-22-Pg153.pdf

does not present a reasonable range of alternatives. *See TWS v. Wisely*, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider "middle-ground compromise between the absolutism of the outright leasing and no action alternatives"); *Muckleshoot Indian Tribe v. US Forest Serv.*, 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it "considered only a no action alternative along with two virtually identical alternatives").

For this lease sale, BLM has not considered any alternatives that fall between the two extremes, and instead just considered the "No Action" and "Proposed Action," under which BLM would lease all twenty-four parcels evaluated in the Draft EA. Draft EA at 10-11. For example, BLM did not consider offering parcel MTM 108952-BQ with a no-surface occupancy stipulation or deferring this lease, given that it borders UMRBNM and "some of the wildest country on all the Great Plains. . . ." Nor did BLM evaluate any additional deferrals for the proposed leases in PHMAs and GHMAs, in spite of a legal obligation to do so under the HiLine Approved Resource Management Plan (ARMP) and associated policy guidance. *See* HiLine District Office Greater Sage-Grouse ARMP 2-5 ("Prioritize the leasing and development of fluid mineral resources outside GRSG habitat."); Record of Decision and Approved RMP Amendments for the Rocky Mountain Region 1-25 ("the ARMPs . . . prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs. . . . This objective is intended to guide development to lower conflict areas and as such protect important habitat. . . ."); BLM Instruction Memorandum (IM) 2016-143 (listing the required procedures for prioritizing oil and gas leasing outside of PHMAs and GHMAs). Because BLM has not evaluated these or any other "middle-ground" alternatives, it has violated NEPA.

C. In particular, BLM has failed to consider the cumulative impacts of leasing in greater sage-grouse habitat.

NEPA requires BLM to evaluate the cumulative impacts of this lease sale "resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.27(b)(7); *Kern v. Bureau of Land Management*, 282 F.3d 1062, 1075-77 (9th Cir. 2002). To satisfy this requirement, BLM's NEPA analysis must consider the cumulative impact of all the recent and currently-planned auctions in which BLM has offered hundreds of leases affecting sage grouse habitat protected under the RMPs. These sales include, but are not limited to:

- December 2017 Montana sale: 187 out of 204 parcels offered;[2]
- December 2017 Wyoming sale: of 45 parcels to be offered, 26 parcels are partly or entirely in PHMA, and 24 parcels are partly or entirely in GHMA;[3]

[2] EA for BLM Montana December 2017 sale at 27-28, DOI-BLM-MT-C020-2017-0051-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/78400/120092/146548/MCFO_EA_December_2017_Sale_Post_with_Sale_List.pdf .
[3] EA for BLM Wyoming December 2017 sale at 52, DOI-BLM-WY-D000-2017-0003-EA, available at: https://eplanning.blm.gov/epl-front-

- March 2018 Wyoming sale: 96 percent of parcels to be offered under the proposed alternative for Wind River/Bighorn Basin District are in sage grouse habitat,[4] and 37 parcels to be offered in the High Plains District are in PHMA or GHMA;[5] and

- June 2018 Wyoming sale: 44 parcels are located wholly in PHMA, 30 parcels contain both GHMA and PHMA, and 89 parcels are located wholly in GHMA.[6]

These are only a few examples--other recent BLM sales have already occurred in Wyoming and Montana during 2016 and 2017 that leased other sage grouse-protected areas. All of these sales suffer from the same flaw as this auction: they fail to consider reasonable alternatives that do not lease PHMAs and GHMAs. Many of these sales also, as discussed in more detail below, violate the prioritization requirements of the 2015 grouse plans.

BLM must analyze and disclose the cumulative impacts of this wave of leasing on the greater sage-grouse and its habitat. BLM (in the Rocky Mountain Region Record of Decision and Montana grouse plan amendments and revisions) and numerous authorities have recognized the importance of addressing sage-grouse conservation on a comprehensive range-wide basis, and accounting for connectivity between state and regional populations and habitats, habitat fragmentation, and other impacts. As stated in the Rocky Mountain ROD, the grouse plans, collectively: "The cumulative effect of these measures is to conserve, enhance, and restore GRSG habitat across the species' remaining range in the Rocky Mountain Region and to provide greater certainty that BLM resource management plan decisions in GRSG habitat in the Rocky Mountain Region can lead to conservation of the GRSG and other sagebrush-steppe-associated species in the region." Rocky Mountain ROD, p. S-2.

BLM cannot lease hundreds of parcels covering many thousands of acres in Montana and Wyoming without considering the cumulative and trans-boundary impacts to the greater sage-grouse.

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office/projects/nepa/65707/115166/140613/20170721.HDD_EA_for_December_2017_Lease_Sale_v.2.mg.pdf

[4] Draft EA for BLM Wind River/Bighorn Basin District First Quarter 2018 Lease Sale at 3-44, DOI-BLM-WY-R000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114136/139365/181Q_WRBBD_EA_ver.1.pdf

[5] Draft EA for BLM High Plains District First Quarter 2018 Lease Sale at 48-49, DOI-BLM-WY-P000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114129/139358/HPD_First_Quarter_2018_OG_Lease_EA.ver1.pdf .

[6] Draft EA for BLM Wyoming June 2018 Lease Sale at 85, DOI-BLM-WY-D000-2018-0001-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/123500/150613/EnvironmentalAssessment_V1_June2018.pdf .

D. BLM has failed to take the necessary "hard look" at impacts on UMRBNM.

BLM has not taken the required "hard look" at impacts on UMRBNM. Under NEPA, BLM must evaluate the "reasonably foreseeable" site-specific impacts of oil and gas leasing, prior to making an "irretrievable commitment of resources." *New Mexico ex rel. Richardson*, 565 F.3d at 718; *see also Sierra Club v. Hodel*, 848 F.2d 1068, 1093 (10th Cir. 1988) (agencies are to perform hard look NEPA analysis "before committing themselves irretrievably to a given course of action so that the action can be shaped to account for environmental values"); *Sierra Club v. Peterson*, 717 F.2d 1409, 1411 ([o]n land leased without a No Surface Occupancy Stipulation the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operations.). Courts have held that BLM makes such a commitment when it issues an oil and gas lease without reserving the right to later prohibit development. *New Mexico ex rel. Richardson*, 565 F.3d at 718.

Here, BLM is in fact making an "irretrievable commitment of resources" by offering this parcel without reserving the right to prevent future development. Further, the impacts on UMRBNM are "reasonably foreseeable" and not "speculative," as claimed by BLM in the Draft EA. Draft EA at 30; *see also id.* at 18 ("Upon receipt of an Application for a Permit to Drill (APD), the BLM would initiative a site-specific NEPA analysis that considers the direct, indirect, and cumulative effects of a specific action."). BLM admits that there is a "high potential" for future development on parcel MTM 108952-BQ, and there are also several leases in the immediate vicinity of this parcel that are held by production. Draft EA at 16; UMRBNM Approved RMP at Map 3 – Side A Oil & Gas Map. Yet, as a consequence of failing to identify and discuss UMRBNM at all in the Draft EA, BLM has failed to evaluate the direct, indirect and cumulative impacts of leasing on the monument.

III. BLM Is Violating the Federal Land Policy and Management Act.

A. The Draft EA is not consistent with the HiLine ARMP, as required by FLPMA.

BLM has not prioritized leasing outside of PHMAs and GHMAs, as required by the Rocky Mountain Region ROD, HiLine Approved RMP and IM 2016-143. Under FLPMA, BLM must manage public lands "in accordance with the [applicable] land use plans . . . ." 43 U.S.C. § 1732(a); S. *Utah Wilderness Alliance v. Norton*, 542 U.S. 55, 59-60 (2004). Here, the Draft EA is not consistent with provisions of the Rocky Mountain ROD and HiLine ARMP, which require the "prioritization" of oil and gas leasing outside of PHMAs and GHMAs.

Under the Rocky Mountain Region ROD, BLM must:

> prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs . . . to further limit future surface disturbance and to encourage new development in areas that would not conflict with GRSG. This objective

> is intended to guide development to lower conflict areas and, as such, protect important habitat and reduce the time and cost associated with oil and gas leasing development. It would do this by avoiding sensitive areas, reducing the complexity of environmental review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation.

Rocky Mountain Region ROD at 1-25. The HiLine ARMP echoes this directive and includes the following objective: "Prioritize the leasing and development of fluid mineral resources outside GRSG habitat." HiLine ARMP at 2-5.

Further, in IM 2016-143, BLM has issued guidance elaborating on the way agency staff are to comply with the requirement to prioritize leasing and development outside of sage-grouse habitat: "Lands within GHMAs: BLM state offices will consider EOIs for lands within GHMAs, after considering lands outside of both GHMAs and PHMAs. When considering the GHMA lands for leasing, the BLM State Office will ensure that a decision to lease those lands would conform to the conservation objectives and provision in the GRSG Plans (e.g., Stipulations)."

Importantly, the IM also sets out "factors to consider" (i.e., parcel-specific factors) after applying this prioritization sequence:

- Parcels immediately adjacent or proximate to existing oil and gas leases and development operations or other land use development should be more appropriate for consideration before parcels that are not near existing operations. This is the most important factor to consider, as the objective is to minimize disturbance footprints and preserve the integrity of habitat for conservation.
- Parcels that are within existing Federal oil and gas units should be more appropriate for consideration than parcels not within existing Federal oil and gas units.
- Parcels in areas with higher potential for development (for example, considering the oil and gas potential maps developed by the BLM for the GRSG Plans) are more appropriate for consideration than parcels with lower potential for development. The Authorized Officer may conclude that an area has "higher potential" based on all pertinent information, and is not limited to the Reasonable Foreseeable Development (RFD) potential maps from Plans analysis.
- Parcels in areas of lower-value sage-grouse habitat or further away from important life-history habitat features (for example, distance from any active sage-grouse leks) are more appropriate for consideration than parcels in higher-value habitat or closer to important life-history habitat features (i.e. lek, nesting, winter range areas). At the time the leasing priority is determined, when leasing within GHMA or PHMA is considered, BLM should consider, first, areas determined to be non-sage-grouse habitat and then consider areas of lower value habitat.
- Parcels within areas having completed field-development Environmental Impact Statements or Master Leasing Plans that allow for adequate site-specific mitigation and are in conformance with the objectives and provisions in the GRSG Plans may be more appropriate for consideration than parcels that have not been evaluated by the BLM in this manner.

- Parcels within areas where law or regulation indicates that offering the lands for leasing is in the government's interest (such as in instances where there is drainage of Federal minerals, 43 CFR § 3162.2-2, or trespass drilling on unleased lands) will generally be considered more appropriate for leasing, but lease terms will include all appropriate conservation objectives and provisions from the GRSG Plans.
- As appropriate, use the BLM's Surface Disturbance Analysis and Reclamation Tracking Tool (SDARTT) to check EOI parcels in PHMA, to ensure that existing surface disturbance does not exceed the disturbance and density caps and that development of valid existing rights (Solid Minerals, ROW) for approved-but-not-yet-constructed surface disturbing activities would not exceed the caps.

Yet, the Draft EA fails to cite the "prioritization" requirement altogether. There is no discussion of the prioritization sequence or parcel-specific factors set forth in IM 2016-143 or of the broader requirement to "prioritize" established in the Rocky Mountain Region ROD and HiLine ARMP. As a consequence, BLM is now proposing to lease ten parcels within GHMAs and two parcels within PHMAs, without making any effort to prioritize leasing in other, less sensitive areas. Draft EA at 45-46. This appears to include one parcel (MTM 79010-HQ) that "is in important winter range for GRSG. The area just north of the parcel consistently has one of the highest concentrations of wintering GRSG in the project area. As many as 200 individuals have been documented in a relatively small area approximately 300 m north of the proposed lease parcel."[7] Draft EA at 46.

In other recent lease sale EAs, BLM has applied the parcel specific factors and described how the factors informed its proposed action. For example, in the Draft EA for Wyoming BLM's August 2017 Lease Sale, BLM applied the parcel-specific factors to justify a deferral decision:

> After careful review of the parcels, the BLM has determined that it was appropriate to defer certain parcels nominated for inclusion in the August 2017 oil and gas lease sale…These deferrals were made consistent with the BLM's sage-grouse conservation plans and strategy, which direct the BLM to prioritize oil and gas leasing and development in a manner that minimizes resource conflicts in order to protect important habitat and reduce development time and costs. Parcels deferred are generally located in sage-grouse important life-history habitat features such as active or occupied leks, and/or are not proximate to existing development, and are in areas of low oil and gas development potential.

Draft EA at 1-2, 1-3. In that same sale, BLM also applied the parcel-specific factors to justify a decision to carry forward parcels for leasing:

> Parcels WY-1708-153 and WY-1708-154 are proximate or adjacent to federal oil and gas leases with active development and production (within 2 miles of

[7] This parcel also happens to be located largely or entirely "within the channel of the Milk River." Draft EA at 48.

> leases currently held by production), and have no known sage-grouse leks within the boundaries. The area is also proximate to bentonite mining claims, disturbance, and activity.

Draft EA at 3-8. Thus, in the Wyoming sale, BLM proposed deferring parcels on lands with high-quality sage-grouse habitat, low potential for oil and gas development, and minimal nearby development, and it proposed carrying forward parcels on lands with lower-quality habitat near existing development. BLM clearly applied and weighed the factors to reach a reasoned leasing decision.

As another, more recent example, in the Draft EA for Utah's December 2017 Oil and Gas Lease Sale in the Vernal Field Office, BLM applied each of the parcel specific factors to each of the proposed parcels in or near sage-grouse habitat. For each individual parcel, BLM determined whether it was adjacent to an existing lease, within an existing unit, within an area with a field development EIS, or within an area with high development potential. *See* Draft EA at 35 – 45. BLM also evaluated the quality of the sage-grouse habitat within each of the parcels, including the amount and percentage of winter and brood-rearing habitat and the distance of each parcel to nearby leks. Id. BLM clearly and carefully applied each of the relevant parcel specific factors to each of the parcels. It also directly addressed the "most important factor" – the proximity of the leases to existing leases and development.

These examples underscore the inadequacy of the Draft EA for NCMD's March 2018 lease sale and confirm that when parcels are proposed in or near PHMA and GHMA, BLM must apply the prioritization sequence and weigh the parcel-specific factors in reaching a leasing decision. It must also comply with the requirement in the Rocky Mountain Region ROD and HiLine ARMP to prioritize development outside of GHMA and PHMA, guiding development to lower conflict areas so as to thereby protect important habitat areas and reduce the time and cost associated with oil and gas development. In the final EA, BLM must actually prioritize leasing outside of greater sage-grouse habitat and carefully consider the parcel-specific factors described in IM 2016-143.

B. BLM is not complying with FLPMA's multiple-use mandate.

Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. 43 U.S.C. § 17732 (2012). As the Supreme Court has noted, "[m]ultiple use management is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values." *Norton v. S. Utah Wilderness Alliance*, 542 U.S. at 58 (internal quotations omitted).

In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that under FLPMA's multiple use mandate, development of public lands is not required, but must instead be weighed against other possible uses, including conservation to protect environmental values. *See*, *e.g., New Mexico ex rel. Richardson*, 565 F.3d at 710 ("BLM's obligation to manage for multiple use does not mean that development

must be allowed. . . . Development is a possible use, which BLM must weigh against other possible uses — including conservation to protect environmental values, which are best assessed through the NEPA process."); *Rocky Mtn. Oil & Gas Ass'n v. Watt*, 696 F.2d 734, 738 n.4 (10th Cir. 1982) ("BLM need not permit all resource uses on a given parcel of land."). And, just as BLM can deny a project outright in order to protect the environmental uses of public lands, it can also condition a project's approval on the commitment to mitigation measures that lessen environmental impacts. *See, e.g., Pub. Lands Council v. Babbitt*, 167 F.3d 1287, 1300-01 (10th Cir. 1999) ("FLPMA unambiguously authorizes the Secretary to specify terms and conditions in livestock grazing permits in accordance with land use plans"); *Grynberg Petro*, 152 IBLA 300, 306-07 (2000) (describing how appellants challenging conditions of approval bear the burden of establishing that they are "unreasonable or not supported by the data").

The multiple use framework's emphasis both on environmental resources and on the need to balance between present and future generations are highly relevant to consideration of climate change-related impacts. For example, multiple use includes "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources . . . ; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. . . ." 43 U.S.C. § 1702(c).

Here, the BLM appears to be grounding the analysis and decisions proposed in the Draft EA on recent presidential and executive actions on "American energy independence" or "dominance." *See* Press Release, BLM Opens Public Comment Period on Environmental Assessment for March 2018 Oil and Gas Lease Sale (Sept. 29, 2017) ("The BLM-administered lands proposed for inclusion in this lease sale are in keeping with the Administration's goals of promoting America's energy independence. . . .")[8]; The White House, *Presidential Executive Order on Promoting Energy Independence and Economic Growth* (March 28, 2017)[9],; DOI, Secretary of the Interior, Order No. 3349 – American Energy Independence (March 29, 2017)[10]. Such a decision would clearly violate the multiple-use mandate of FLPMA, which states in no uncertain terms that BLM "shall manage public lands under principles of multiple use and sustained yield" and contains specific provisions and procedures for broadly "excluding" principal uses of the public lands, including outdoor recreation and fish and wildlife development and utilization, none of which have been followed here and more broadly by the Interior Department. 43 U.S.C. §§ 1732(a), 1712(e)(2).

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[8] Available at: https://www.blm.gov/press-release/blm-opens-public-comment-period-environmental-assessment-march-2018-oil-and-gas-lease

[9] Available at: https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energyindependence-and-economi-1

[10] Available at: https://www.doi.gov/sites/doi.gov/files/uploads/so_3349_-american_energy_independence.pdf

III. Conclusion

Thank you again for the opportunity to comment. We hope to see our comments addressed as part of the next steps in this lease sale process.

Sincerely,

The Wilderness Society

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Senior Counsel and Director, BLM Action Center
1660 Wynkoop Street, #850
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Barb Cestero, Montana Senior Representative
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(406) 586-1600, ext 118

Montana Wilderness Association
John Todd
Conservation Director
105 W Main, Ste 2B Bozeman, MT 59715
jtodd@wildmontana.org
(406) 544-3397

From: Jeremy Patterson
To: Kenczka, Gerald
Subject: Re: letter sent to the Business Committee on delay of rules for HV and venting/flaring rules
Date: Monday, October 30, 2017 4:28:16 PM

Jerry

I wasn't aware of the letter, if you can forward me a copy I will raise this in my meeting with the Business Committee tomorrow to see how they wish to proceed.

Thanks

Jeremy

From: Kenczka, Gerald <jkenczka@blm.gov>
Sent: Monday, October 30, 2017 1:46 PM
To: Jeremy Patterson
Subject: letter sent to the Business Committee on delay of rules for HV and venting/flaring rules

Jeremy, I have been asked to follow up with a letter sent from our Washington Office to the Business Committee on BLM's hydraulic fracturing rule and what is known as the "venting and flaring" or "waste prevention" rule. The letter was dated October 16, 2017. The request in the letter asks for the Tribe's views and information into BLM's consideration of the proposals.

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Do you have any suggestions on how best to proceed? I called Bruce Pargeets and found out that he is out of town until next week. Your thoughts on this are appreciated. Thanks.

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Jerry Kenczka
AFM for Lands & Minerals
BLM Vernal Field Office
435-781-4440 (desk)
435-776-6705 (cell)

From: Kenczka, Gerald
To: Jeremy Patterson
Subject: Re: letter sent to the Business Committee on delay of rules for HV and venting/flaring rules
Date: Monday, October 30, 2017 4:50:00 PM
Attachments: HF_VF Letter to Ute Tribe.pdf

Jeremy, that would be appreciated. Attached is the letter sent to the Business Committee that was shared and we (meaning the field office) was asked to follow up on. Please let me know what their thoughts are to proceed with any feed back. Again, thanks for looking into this.

Jerry Kenczka
AFM for Lands & Minerals
BLM Vernal Field Office
435-781-4440 (desk)
435-776-6705 (cell)

On Mon, Oct 30, 2017 at 2:28 PM, Jeremy Patterson <JPatterson@ndnlaw.com> wrote:

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, DC 20240
http://www.blm.gov

October 16, 2017

LETTER WAS ALSO SENT TO Luke Duncan (current chairman)

Shaun Chapoose
Chairman, Business Committee, Ute Indian Tribe
P.O. Box 191
Ft. Duchesne, Utah 84027

Dear Chairman Chapoose:

I hope this letter finds you well. On behalf of the Bureau of Land Management (BLM), I would like to welcome you to hold Government-to-Government consultations concerning two of our proposed rules that affect oil and gas operations on trust and restricted lands. One proposal would rescind the regulations known as the "hydraulic fracturing rule." The other proposal would postpone certain compliance deadlines in the regulations commonly known as the "venting and flaring" or "waste prevention" rule.

By way of background about these initiatives, on March 28, 2017, the President issued Executive Order 13783, entitled "Promoting Energy Independence and Economic Growth," which directs federal agencies to "review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law."

Executive Order 13783 also specifically called for a review and action, as appropriate, for BLM's final rules entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," which were published in the Federal Register on March 26, 2015 (80 Fed. Reg. 16128) (hereafter "the 2015 Hydraulic Fracturing Rule" or "the 2015 Rule"), and "Waste Prevention, Production Subject to Royalties, and Resource Conservation," which was published in the Federal Register on November 18, 2016 (81 Fed. Reg. 83008) (hereafter "the 2016 Waste Prevention Rule" or "the 2016 Rule").

In accordance with Executive Order 13783 and Secretarial Order No. 3349, [7] the BLM has reviewed the 2015 Hydraulic Fracturing Rule and has proposed a rule that would rescind it. 82 Fed. Reg. 34464 (July 25, 2017). A summary of that notice is provided for convenience in Enclosure 1. The public comment period has closed in that rulemaking, but not the opportunity for consultation.

[7] Secretarial Order No. 3349, entitled "American Energy Independence," was issued by Secretary of the Interior on March 29, 2017, in order to implement Executive Order 13783.

The BLM has reviewed the 2016 Waste Prevention Rule and has proposed a rule that would suspend or delay its implementation until January 17, 2019. 82 Fed. Reg. 46458 (October 5, 2017). A summary of that notice is provided for convenience in Enclosure 2. The public comment period will remain open until November 6, 2017, but the opportunity for consultation will remain open.

Your tribe's views and information are important to BLM's consideration of the proposals, and to our final actions in the rulemakings. If you would like to submit written comments either in addition to, or instead of in-person consultation, we invite you to provide them.

To help us complete the rulemakings promptly, and assure that your views receive the fullest consideration, we ask that you schedule consultations or submit any written comments within 30 days of receipt of this letter. Please contact the BLM State Director, Ed Roberson, at 801-539-4010 or your local BLM Tribal Liaison to schedule the consultation.

Sincerely,

Timothy R. Spisak
Acting Assistant Director
Energy, Minerals, and Realty Management

Enclosures

cc: Director, Utah State Office

ENCLOSURE 1 – Proposed Rescinding of the 2015 Hydraulic Fracturing Rule

After it was finalized, a lawsuit challenging the 2015 Hydraulic Fracturing Rule was filed in the U.S. District Court for the District of Wyoming. On June 21, 2016, the District Court set aside the 2015 Rule. *Wyoming v. Jewell*, No. 15-cv-41 (D. Wyo. June 21, 2016). The Department of the Interior then appealed the District Court's decision to the 10th Circuit Court of Appeals. On September 21, 2017, the Appeals Courts dismissed the case on the basis that it was prudentially unripe. The Appeals Court also vacated the District Court's decision to set aside the 2015 Rule. *Wyoming v. Zinke*, No. 16-8068 (10th Cir. Sept. 21, 2017). The 2015 Hydraulic Fracturing Rule did not automatically become effective as a result of the Appeals Court's ruling on September 21, 2017. In order for the 2015 Rule to become effective, the Appeals Court must first issue a mandate directing the District Court to dismiss the underlying lawsuit. In cases involving the United States Government, courts have 51 days from their ruling to issue such a mandate. In sum, the 2015 Hydraulic Fracturing Rule has never gone into effect and it cannot go into effect until the Appeals Court issues a mandate and the District Court dismisses the original lawsuit.

The BLM is now proposing a rule that would rescind the 2015 Hydraulic Fracturing Rule, in its entirety, and restore the affected regulations in 43 CFR part 3160 to exactly as they were before the 2015 Rule, except for any changes to those regulations that were made by other rules published between March 26, 2015 (the date of publication for the 2015 Rule) and now. A notice for a proposed rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule," was published in the Federal Register on July 25, 2017 (82 Fed. Reg. 34464). The proposed rule has also been posted to and can be accessed on the regulations.gov website at: https://www.regulations.gov/document?D=BLM-2017-0001-0001.

The public comment period for the proposed rule closed on September 25, 2017. However, the BLM is inviting ongoing consultation with Tribes.

The BLM's proposal would remove the following requirements placed on operators by the 2015 Hydraulic Fracturing Rule and which would be required if that rule were to go into effect:

- Obtain the BLM's approval before conducting hydraulic fracturing operations by submitting an application with information and a plan for the fracturing (43 CFR 3162.3-3(d)(4)).
- Include a hydraulic fracturing application in applications for permits to drill (APDs), or in a subsequent "sundry notice" (43 CFR 3162.3-3(c)).
- Include information about the proposed source of water in each hydraulic fracturing application (43 CFR 3162.3-3(d)(3)).
- Include available information about the location of nearby wells to help prevent "frack hits" (i.e., unplanned surges of pressurized fluids into other wells that can damage the wells and equipment and cause surface spills) (43 CFR 3162.3-3(d)(4)(iii)(C)).
- Verify that the well casing is surrounded by adequate cement, and test the well to make sure it can withstand the pressures of hydraulic fracturing (43 CFR 3162.3-3(e)(1) and (2) and (f)).
- Isolate and protect usable water, while redefining "usable water" to expressly defer to classifications of groundwater by states and tribes, and the Environmental Protection Agency (43 CFR 3160.0-7); and require demonstrations of at least 200 feet of adequate

cementing between the fractured formation and the bottom of the closest usable water aquifer, or cementing to the surface (43 CFR 3162.3-3(e)(2)(i) and (ii)).

- Monitor and record the annulus pressure during hydraulic fracturing operations, and report significant increases of pressure (43 CFR 3162.3-3(g)).
- File post-fracturing reports containing information about how the hydraulic fracturing operation actually occurred (43 CFR 3162.3-3(i)).
- Submit lists of the chemicals used (non-trade-secrets) to the BLM, to FracFocus (a public website operated by the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission), or to another BLM-designated database (43 CFR 3162.3-3(i)(1)).
- Withhold trade secret chemical identities only if the operator or the owner of the trade secret submits an affidavit verifying that the information qualifies for trade secret protection (43 CFR 3162.3-3(j)).
- Obtain and provide withheld information to the BLM, if the BLM requests the withheld information (43 CFR 3162.3-3(j)(3)).
- Store recovered fluids in above-ground rigid tanks of no more than 500-barrel capacity, with few exceptions, until the operator has an approved plan for permanent disposal of produced water (as required by Onshore Oil and Gas Order No. 7) (43 CFR 3162.3-3(h)).
- The 2015 Rule authorized BLM to approve two types of variances from the requirements the Rule:
    - Individual operation variances to account for local conditions or new or different technology (43 CFR 3162.3-3(k)(1)); and
    - State or tribal variances to account for regional conditions or to align the BLM requirements with state or tribal regulations (43 CFR 3162.3-3(k)(2)).

The BLM is proposing to rescind the 2015 Hydraulic Fracturing Rule because we believe it imposes unnecessary, burdensome costs and requirements on the oil and gas industry.

The BLM also believes that rescinding the 2015 Hydraulic Fracturing Rule will assist in preventing Indian and public lands from being viewed by oil and gas operators as less attractive than other lands due to burdensome and unnecessary compliance costs, which in turn will assist in preventing economic harm to Indian tribes and allottees and the American public that could result from the implementation of the 2015 Rule.

The BLM has several pre-existing regulations, some of which are set out at 43 CFR subpart 3162 and in Onshore Oil and Gas Orders 1, 2, and 7, that it will continue to implement if the 2015 Hydraulic Fracturing Rule were rescinded.

Although the states with significant federal oil and gas resources have regulatory programs governing hydraulic fracturing operations, oil and gas producing Indian tribes have not as uniformly promulgated regulatory provisions expressly addressing hydraulic fracturing. In light of this, the BLM is inviting you to discuss or provide any comments you may have regarding the potential effects of the proposed rescission of the 2015 Rule on your tribe. In particular, the BLM is seeking your views about existing or proposed tribal regulation of hydraulic fracturing operations, and the potential economic and environmental impacts of the proposed rescission of the 2015 Rule to Indian lands, and whether all or any parts of the 2015 Rule should continue to apply on Indian lands.

ENCLOSURE 2 – Proposed Suspending or Delaying the 2016 Waste Prevention Rule

After the BLM finalized the 2016 Waste Prevention Rule, it was immediately challenged in court. The court, however, neither set aside nor stayed the 2016 Rule and it has gone into effect while the litigation over its ultimate fate continues.

On June 15, 2017, the Department of the Interior issued a Federal Register notice, pursuant to 5 U.S.C. 705, postponing requirements of the 2016 Rule with compliance dates that have not yet arrived, pending judicial review (82 Fed. Reg. 27430). That notice is the subject of a separate court challenge.

The BLM has reviewed the 2016 Waste Prevention Rule and wants to avoid imposing compliance costs on operators for requirements that may be rescinded or significantly revised in the near future.

Therefore, the BLM has proposed a rule that would suspend or delay certain requirements in the 2016 Rule until January 17, 2019, a date by which the BLM believes that it may review the rule and promulgate a new rule to replace it. A notice for the proposed rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements," was published in the Federal Register on October 5, 2017 (82 Fed. Reg. 46458). The proposed rule has also been posted to and can be accessed on the regulations.gov website at: https://www.regulations.gov/docket?D=BLM-2017-0002.

The public comment period for the proposed rule will close on November 6, 2017. However, the BLM is inviting ongoing consultation with Tribes. This proposed rule potentially affects oil and gas operations on tribal lands as well as tribal royalties.

The following table summarizes the proposed changes to compliance dates:

Citation to 43 C.F.R.	Summary	Existing Compliance Date	New Compliance Date
3162.3-1(j)	Operators must submit a waste minimization plan with their an Application for Permit to Drill	January 17, 2017	January 17, 2019
3179.7	Requires operators to capture a certain percentage of the gas they produce	January 17, 2018	January 17, 2019
3179.9	Measurement requirements for flared gas	January 17, 2018	January 17, 2019
3179.10	Regarding existing approvals to flare royalty free	January 17, 2018	January 17, 2019
3179.101, 3179.102	Limits on, and requirements for disposal of, gas lost during well drilling, well completion and related operations	January 17, 2017	January 17, 2019
3179.201, 3179.202	Operators must upgrade to lower-emission pneumatic equipment	January 17, 2018	January 17, 2019

Citation to 43 C.F.R.	Summary	Existing Compliance Date	New Compliance Date
3179.203	Operators must route tank vapors from covered storage vessels to sales line or to flare	January 17, 2018	January 17, 2019
3179.204	Requirements for minimizing gas losses from downhole well maintenance and liquids unloading	January 17, 2017	January 17, 2019
3179.301 – 3179.305	Leak detection and repair requirements	Various but primarily on January 17, 2018	January 17, 2019

From:	Rachel Granneman
To:	blm_mt_north_dakotafo_lease_ea@blm.gov
Cc:	Scott Strand; Mindi Schmitz; Howard Learner
Subject:	Comments on DOI-BLM-MT-C030-2017-0133-EA
Date:	Monday, October 30, 2017 5:02:57 PM
Attachments:	Comments on BLM Lease EA 10.30.17.pdf

Please see the attached comments on the Environmental Assessment for DOI-BLM-MT-C030-2017-0133-EA (March 13, 2018 Oil and Gas Lease Sale).

Thank you,

Rachel Granneman

Staff Attorney

Environmental Law & Policy Center

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ENVIRONMENTAL LAW & POLICY CENTER
Protecting the Midwest's Environment and Natural Heritage

October 30, 2017

Paul Kelley
North Dakota Field Office
99 23rd Avenue West, Suite A
Dickinson, ND 58601

RE: Comments on EA for March 13, 2108 Lease in McKenzie County
(DOI-BLM-MT-C030-2017-0133-EA)

Dear Mr. Kelley,

Thank you for the opportunity to provide comments on the Environmental Assessment ("EA") and Finding of No Significant Impact ("FONSI") for the proposed March 13, 2018 lease of 120 acres of federal mineral rights in McKenzie County. Unfortunately, the EA is legally inadequate, inconsistent with the North Dakota Resource Management Plan ("RMP"), fails to fully and fairly disclose important environmental impacts, and incorrectly determines that there will not be any significant impacts from the proposed action.

I. The EA and FONSI Suffer from Procedural Failings

The procedure followed by the Bureau of Land Management ("BLM") in their release of the EA failed to comply with the purpose and spirit of the National Environmental Policy Act ("NEPA"). First, BLM drafted and released an "unsigned" FONSI at the same time that it released the EA, revealing that BLM had predetermined the result of the EA before it had even provided interested stakeholders and the public an opportunity to comment. "[I]t is clear that an agency may violate NEPA . . . when it predetermines the result of its environmental analysis." *Forest Guardians v. United States Fish & Wildlife Serv.*, 611 F.3d 692, 714 (10th Cir. 2010). In fact, pre-commitment to a FONSI was found improper by a federal court in *Davis v. Mineta*, 302 F.3d 1104, 1112 (10th Cir. 2002). Although the FONSI is "unsigned," it is clear that BLM has already made a determination that it will find that there are no significant impacts from the proposed lease. This predetermination of the issue robs stakeholders and the public of the opportunity to meaningfully comment on the substance and analysis contained within the EA.

II. The EA Improperly Fails to Consider Reasonable Alternatives

The EA discusses only two alternatives: the proposed action and a no-action alternative. This is insufficient to meet the requirements and purpose of NEPA. Just as the choice of what alternatives to include in an EIS "and the ensuing analysis, forms 'the heart of the environmental impact statement,'" *Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997) (quoting 40 C.F.R. § 1502.14), an EA must also include a discussion on appropriate

alternatives and their impacts. 40 C.F.R. § 1508.9(b); 42 U.S.C. § 4332(2)(E). The EA should have considered other alternatives, such as a no surface occupancy ("NSO") stipulation or restrictions on certain surface uses for the entire parcel or for certain portions, or alternatives that committed to various mitigation measures or timing restrictions. BLM's failure to consider reasonable alternatives renders the EA inadequate.

III. The EA Is Inconsistent with the North Dakota RMP

The EA is inconsistent with the requirements of the North Dakota Resource Management Plan (RMP). The North Dakota RMP was finalized in 1988, almost 30 years ago, before the fossil fuel boom in the Bakken area. This region is therefore improperly being developed without the benefit of an RMP that analyzes the alternative approaches to managing leases in the context of such intense oil and gas development. Yet even the 1988 RMP acknowledges that impacts to National Parks should be subject to deeper scrutiny. The RMP provides:

> Visual resources will continue to be evaluated as a part of activity planning and environmental analysis. The protection of the high visual qualities of the National Park Service units (Theodore Roosevelt National Park, Fort Union Historic Site, Knife River Indian Villages) will be considered, in cooperation with Park Service officials, when a specific mineral lease or development action potentially affecting the existing visual qualities is proposed.

North Dakota RMP at 13. As discussed in detail below, the EA fails to adequately consider the impacts of the proposed lease on the Theodore Roosevelt National Park, including the significant negative impacts on the visual resources and visitor experience. The leasing of the proposed parcel, which directly borders on the North Unit of the Theodore Roosevelt National Park, would destroy the viewshed of the park with oil rigs, trucks, and industrial equipment in the middle of some of the most scenic views in the country. Oil and gas development would lead to increased haze in the National Park and surrounding area, limiting visibility, and would interrupt the peaceful, dark night sky with flaring and industrial lighting.

IV. A Full Analysis of the Environmental Impacts for Oil and Gas Development is Required Before Leasing and the EA and FONSI Improperly Frame the Environmental Impacts of the Proposed Lease

The EA and FONSI frame the environmental impacts from the proposed lease in an improper and misleading way. BLM emphasizes throughout the EA that the actual leasing of the parcel in and of itself will not have impacts on many of the environmental resources discussed. The FONSI states, "The selected alternative does not authorize any lease exploration or development activities. . . An EA will be conducted for proposed exploration and development projects." FONSI, at 2. The EA includes statements like, "There are no impacts from offering the parcel for lease to the Theodore Roosevelt National Park visitors" (EA, p.70) and "Leasing the subject parcel would have no direct impacts on air quality." EA, p.51. While it may be technically true that the leasing of the land itself has limited impacts, this is a misleading and disingenuous way of framing the issues. It is virtually certain that if the proposed parcel is leased, oil and/or gas development will take place on the land. Indeed, that is the purpose for leasing the parcel.

Under NEPA and the Council on Environmental Quality's ("CEQ") implementing regulations, BLM is required to assess environmental impacts as soon as those impacts are "reasonably foreseeable" and before an "irretrievable commitment of resources" occurs. *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 716 (10th Cir. 2009) (quoting 40 C.F.R. § 1502.22 and 42 U.S.C. § 4332(2)(C)(v)). Issuing a federal oil and gas lease that does not have a no surface occupancy stipulation constitutes an irretrievable commitment of resources. *Richardson*, 565 F.3d at 718. Further, environmental impacts are reasonably foreseeable at the leasing stage.

First, BLM received an Expression of Interest from a private party requesting that BLM offer the parcel for lease. This indicates serious interest in the parcel from the industry. Further, it is already known that the parcel, located in the Williston Basin, is in an area with oil and gas resources. The EA notes that the township in which the parcel is located already has "5 federal oil wells and 17 private and state wells." EA, p.41. The EA also reveals that oil and gas leases in McKenzie County are in high demand, and often command significant bonus bids. EA, p.42. In addition, the relatively small size of the proposed lease means that site-specific environmental impacts are reasonably foreseeable.

Although further NEPA analyses may be required in later stages of development (e.g., permitting), it is not appropriate to break down the process into small steps and then claim that each individual step does not technically directly cause the environmental impacts. Once a private company has a legal property interest in the minerals, the ball is already rolling. Although BLM may impose some restrictions and mitigation measures, the lease purchaser has a right to use the surface of the leased parcel and the BLM cannot prevent such use. 43 C.F.R. § 3101.1-2; *Richardson*, 565 F.3d at 718. The EA also should have considered the environmental impacts from a greater level of development than the one estimate provided (7 oil wells). The EA explains that BLM cannot predict with certainty the number of wells that will be developed or the details of how development activity would be carried out. Under these circumstances, BLM should include a "worst case" scenario showing the impacts from a more intense development forecast.

V. The EA and FONSI Do Not Adequately Disclose Environmental Impacts

The EA and FONSI do not fully and fairly disclose the significant environmental impacts of the proposed lease.

A. Theodore Roosevelt National Park

1. Background on Theodore Roosevelt National Park

The EA's brief and sterile description of the Theodore Roosevelt National Park fails to capture or acknowledge its great cultural and ecological significance. The National Park Service perhaps says it best: "On a visit to Theodore Roosevelt National Park, you enter more than a landscape of unique scenery and abundant wildlife – you enter an ancient home filled with legends, lore, and sacred places." *Cultural History*, National Park Service, https://www.nps.gov/thro/learn/historyculture/cultural-history.htm.

When Theodore Roosevelt came to the badlands for the first time in 1883, he was amazed by the rugged and beautiful landscape. This area played a "key role . . . in fostering his conservation ethics." *People*, National Park Service, https://www.nps.gov/thro/learn/historyculture/people.htm. Inspired by the wild west that he had explored, and deeply concerned about how wild and natural places were being destroyed, and bison, elk, bighorn sheep, and other animals killed off, as president, Theodore Roosevelt created the National Park Service and placed approximately 230 million acres of land under federal protection. *Theodore Roosevelt and Conservation*, National Park Service, https://www.nps.gov/thro/learn/historyculture/theodore-roosevelt-and-conservation.htm.

Importantly, the cultural history of the land included in the Theodore Roosevelt National Park "extends back thousands of years" and many native peoples lived in and used the badlands, including the Mandan, Hidatsa, and Crow. *People*, National Park Service, https://www.nps.gov/thro/learn/historyculture/people.htm "Today, Theodore Roosevelt National Park remains a significant place for many Native Americans whose association with the land is rooted deeply in the past." *Cultural History*, National Park Service, https://www.nps.gov/thro/learn/historyculture/cultural-history.htm

The Theodore Roosevelt National Park also has great environmental and ecological value. For example:

> A wide diversity of animals make their home in Theodore Roosevelt National Park. An abundance of native grasses provide sustenance for grazing animals both large and small while the tapestry of different habitats attracts a great number of birds. The terrain of the badlands creates microclimates of warm, dry slopes, relatively cool and wet juniper woodlands, and riverbottoms.

Animals, National Park Service, https://www.nps.gov/thro/learn/nature/animals.htm.

Visitors come from across the country to see the majestic and rugged landscapes and diverse wildlife of the Theodore Roosevelt National Park. Members of the public enjoy camping, bicycling, canoeing and kayaking, cross-country skiing and snowshoeing, fishing, hiking, horseback riding, wildlife viewing, and star-gazing. It should be noted that the EA understates visitor levels for the National Park. Although the EA states that the Theodore Roosevelt National Park "receives nearly 600,000 visitors each year," (EA, p.42), it in fact received 753,880 visitors in 2016. *Theodore Roosevelt National Park Statistics*, National Park Service, https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20(1904%20-%20Last%20Calendar%20Year)?Park=THRO.

About 42% of the total area of the Theodore Roosevelt National Park, including the majority of the North Unit, has been designated as wilderness. TRNP General Management Plan, at 2, 35 (1986). The Theodore Roosevelt National Park General Management Plan states that "[e]nergy development outside the park, in its several aspects, constitutes the greatest single concern for the park." *Id.* at 18. The National Park Service is not the only agency that has expressed concerns about the impacts of oil and gas development on the National Park. During the scoping period, the State Historical Society of North Dakota submitted a letter to BLM recommending that

"surface development be kept at least two miles from Theodore Roosevelt National Park." State Historical Society of North Dakota, Scoping Comments (Aug. 15, 2017). The entire proposed lease is within the suggested exclusion zone.

2. Impacts on Theodore Roosevelt National Park

The EA includes only a limited discussion of the impacts of the proposed lease on the Theodore Roosevelt National Park. First, in keeping with the improper framing of the environmental impacts, discussed above, the EA states that "[t]here are no impacts from offering the parcel for lease to the Theodore Roosevelt National Park visitors." EA, p.70. The EA then states that future oil and gas development "may potentially impact" the National Park and its visitors. EA, p.70. "Impacts could include reduction of current viewsheds, dark night skies, and soundscape." EA, p.70. The section on visual resources echoes this limited analysis, stating that "potential impacts . . . could include reduction or alteration of current viewsheds and dark night skies." EA, p.65. In the section on social conditions and economic justice, the EA states that "development of the lease parcel would likely impact visitors and recreation enthusiasts using the area or visiting Theodore Roosevelt National Park by affecting solitude, scenic beauty, and potentially increase [sic] recreation related conflicts." EA, p.69. The EA states that "[t]hese impacts are discussed in Sections 4.3.14 and 4.3.15." EA, p.69. The section in which that statement is made, however, is section 4.3.14, and the following section, 4.3.15, is on economics. It is unclear which sections BLM intended to reference there.

These very brief statements listing possible impacts, with no explanation of degree or context, do not fairly and fully disclose the environmental impacts. First, the EA downplays the likelihood of visual and aesthetic impacts to the Theodore Roosevelt National Park and its visitors. The proposed lease includes surface occupancy of the entire parcel, which lies directly adjacent to the National Park. The only NSO stipulation incorporated in the proposed action restricts surface occupancy within a half mile of golden eagle nests that have been used in the past seven years. Allowing surface occupancy on the proposed lease virtually guarantees significant impacts to the National Park.

Further, the EA states that "dark night skies" could be impacted, but fails not only to describe how it will be impacted (Flaring? Constant or intermittent? How many flares? Around-the-clock industrial lighting?), but also exactly what the impacts are. Light pollution is an aesthetic nuisance, disrupting the encompassing darkness of remote wilderness and limiting opportunities for star-gazing. The EA does not mention that there were 35,000 overnight stays in Theodore Roosevelt National Park in 2016 alone. Overnight Stays by Category and Year for Theodore Roosevelt NP: 1979 to 2016, National Park Service, (https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Overnight%20Stays%20(1979%20-%20Last%20Calendar%20Year)?Park=THRO). Light pollution can also impact wildlife: "Light pollution may affect the ability for nocturnal animals, such as some owls, to function normally. Artificial light 'tricks' plants into thinking the days are longer than they are, which may affect their growth and reproductive cycles." *Lightscape / Night Sky*, National Park Service, https://www.nps.gov/thro/learn/nature/lightscape.htm.

The EA notes in passing that the "soundscape" of the National Park could be impacted. EA, p.70. Yet it doesn't explain that equipment and machinery used for oil and gas development can be extremely loud. The EA gives no data on the level of noise that could be expected at or near wells on the parcel.

The EA and FONSI largely ignore the air quality impacts that would likely affect the Theodore Roosevelt National Park. Although the haze chart shows that the visibility at the Theodore Roosevelt National Park, a Class I area, is already significantly degraded, (EA, p.13) the EA fails to describe what role current oil and gas production in the area has had in that degradation. The EA also fails to acknowledge that additional oil and gas development directly on the border of the National Park, by itself and in conjunction with existing development, may increase haze at the National Park. The "visual" impacts at Theodore Roosevelt National Park briefly discussed later in the EA seem to discuss only the disruption of scenic vistas from industrial development in the viewshed, rather than the likely increased haze and decreased visibility.

In addition, the EA discusses that total wet and dry nitrogen deposition at Theodore Roosevelt National Park has increased over the period from 2000 to 2015 (although the title of the accompanying chart states that it is for "Glacier national Park"—just another indication that the EA was drafted with a less-than-adequate degree of care). EA, p.14. However, the EA does not discuss the extent to which this increasing nitrogen deposition is due to oil and gas development in the area, nor does it discuss whether additional new development adjacent to the park would worsen the problem. Moreover, the discussion of the impacts of nitrogen and sulfur deposition is inadequate. The EA makes vague and neutral statements such as, "Atmospheric nitrogen and sulfur deposition may affect water chemistry, resulting in impacts to aquatic vegetation, invertebrate communities, amphibians, and fish." EA, p.14. What kind of impacts? The EA does not even disclose that these impacts are harmful, let alone the degree to which they harm wildlife and the ecosystem.

The EA also references a 2016 study, explaining that the "area has shown evidence of being impacted by regional oil and gas development." EA, p.52. This, however, is an understatement. The study not only reveals that federal lands in the Bakken area, including the North Unit of the Theodore Roosevelt National Park, are already being impacted, but that "larger effects [are] observed in those areas near the most extensive oil and gas development" and "continued development is expected to exacerbate these problems, particularly during periods when lower wind speeds allow pollutants to accumulate and react in the atmosphere, forming secondary pollutants. Stagnant air conditions have also been associated with health impacts in regions with unconventional natural gas development." A. J. Prenni, *Oil and Gas Impacts on Air Quality in Federal Lands in the Bakken Region*, Atmospheric Chemistry and Physics, at 1413, https://www.atmos-chem-phys.net/16/1401/2016/acp-16-1401-2016.pdf (2016). "Chemicals used in oil and gas extraction are associated with a wide range of human health hazards, and potential health impacts have been identified for communities near well pads." *Id.* at 1402 (citation omitted). The study notes that "[i]n 2011, McKenzie County . . . accounted for the highest emissions of NOx, VOCs, PM, CO, and SO2 from oil and gas in the Williston Basin, making [the North Unit of Theodore Roosevelt National Park] highly vulnerable to impacts from air pollutants related to oil and gas development." *Id.* Increased oil and gas development leads to increases in indirect emissions, also. The study states that from 2008 to 2014, truck traffic more

than tripled on Highway 85 in McKenzie County next to the North Unit of Theodore Roosevelt National Park. *Id.*

There are also other types of impacts that increased oil and gas development near the park would cause. The oil and gas boom in the surrounding area has already led to increased crime and destruction in and around the Theodore Roosevelt National Park, including drug use, toppling of pedestal rocks, and even an instance of a bomb placed in a pickup truck. Sierra Crane-Murdoch, *A Defender of North Dakota's Badlands Wonders if it's Time to Leave*, High Country News, http://www.hcn.org/issues/47.7/as-oil-drilling-approaches-north-dakotas-badlands-their-most-ardent-defender-wonders-if-its-time-to-leave (Apr. 27, 2015). BLM's failure to discuss these significant impacts to the Theodore Roosevelt National Park is a serious inadequacy of the EA.

B. Little Missouri National Grasslands

The EA states that the proposed lease tract would abut the Little Missouri National Grasslands. Yet, the EA does not give any information about the characteristics or importance of the Little Missouri National Grasslands, nor give any information on the impacts that oil and gas development on the proposed lease would have on the National Grasslands.

The Little Missouri National Grasslands is the largest grassland in the country and features "colorful and beautiful badlands and rugged terrain extensively eroded by wind and water" and a "mixed grass prairie." *Little Missouri National Grasslands*, U.S. Forest Service, https://www.fs.usda.gov/recarea/dpg/recarea/?recid=79469. Visitors enjoy bicycling, camping, fishing, hiking, horseback riding, hunting, and picnicking. *Id.* The EA does not provide any analysis of how the ecological resources or recreational opportunities at the National Grasslands would be impacted by oil and gas development. This failure to consider impacts to the Little Missouri National Grasslands is a significant gap in the EA.

C. Air Quality

BLM's analysis of air quality impacts is also insufficient. To begin, the EA discusses existing air quality in the region, yet states that it is not providing data for CO or lead, "which are typically not pollutants of concern associated with oil and gas leasing." EA, p.11. Yet not only is CO a pollutant associated with flaring in North Dakota, CO emissions in McKenzie County are especially high (A. J. Prenni, *Oil and Gas Impacts on Air Quality in Federal Lands in the Bakken Region*, Atmospheric Chemistry and Physics, at 1402-03, https://www.atmos-chem-phys.net/16/1401/2016/acp-16-1401-2016.pdf (2016)), and the EA itself predicts more tons of CO per year will be emitted by oil and gas development on the proposed lease than PM2.5, PM10, and SOx put together. EA, p.52. It is unclear why BLM would decide not to provide baseline data for CO emissions in the area, but this data clearly should have been included.

BLM then characterizes the estimated emissions of criteria pollutants, VOCs, and HAPs from oil and gas development on the proposed lease parcel as "minor" and states that the emissions are "unlikely to result in direct impacts to air quality associated with oil and gas development such as ozone formation or visibility degradation." EA, p.52. Only in combination with other sources does the EA admit that air quality impacts could even be "measurable." EA, p.52. This

description does not come close to adequately disclosing the air quality impacts. For example, it is unreasonable to assert that 12 tons/year of NOx and 113 tons/year of VOCs are "unlikely to result in . . . ozone formation." In addition, the cumulative air impacts of the new lease in combination with existing oil and gas development will be much more than "measurable." Air monitoring shows that ozone levels in the North Unit of Theodore Roosevelt National Park are already 82% of the NAAQS, *without* any oil and gas development right on its border. Ozone levels in the park will likely increase as a result of the proposed lease.

D. Greenhouse Gases and Climate Change

The EA also inadequately discusses greenhouse gas emissions and climate change. Although the EA acknowledges in the "Affected Environment" section that fossil fuel development generally can contribute to greenhouse gas emissions, (EA, p.16) it fails to discuss this in the Environmental Impacts section. Instead, the EA limits its discussion of the impacts of oil and gas development to a discussion of the "downstream" greenhouse gas emissions. EA, p.52-53. The EA should have discussed how the greenhouse gas emissions from both the production and development—estimated to be 4805 tons/year of CO2 equivalent—and downstream emissions will contribute to climate change.

In addition, the EA states that while "BLM is disclosing the likelihood and potential magnitude of downstream GHG emissions," it "is not able to disclose potential impacts to climate change" from those emissions. EA, p.54. While of course BLM is not expected to predict with certainty the exact climate change impacts that will occur due to the increase in greenhouse gas emissions from this specific lease, the EA fails to even acknowledge that greater greenhouse gas emissions will lead to more severe climate change impacts. This failure to include any analysis of the climate change impacts from the proposed action is unacceptable. Recent federal court decisions have made it clear that NEPA requires a full and fair analysis of climate change impacts from greenhouse gas emissions directly and indirectly caused by the leasing of mineral rights. *See, e.g.*, *WildEarth Guardians v. BLM*, No. 15-8109 (10th Cir. Sept. 15, 2017).

E. Water Resources

The discussion of impacts to water resources is also deficient. EA, p.56. First, the EA lists possible impacts, such as erosion, increased water temperature, increased sedimentation, turbidity, etc., without explaining what effects those various impacts have on aquatic ecosystems. The list has little meaning because it is given no context and the bigger picture is not described. In fact, the EA actually unequivocally states that no fish would be impacted, without even disclosing whether any fish are present on or near the lease parcel. EA, p.61. Certainly if fish are present in rivers, streams, ponds, or lakes on the parcel or in the area, they could be impacted by things like runoff, increased sedimentation and turbidity, and potential spills and water contamination. As explained by the court in *WildEarth Guardians v. BLM*, No. 15-8109, at 23-24 (10th Cir. Sept. 15, 2017), unsupported assumptions about impacts make an alternatives analysis arbitrary and capricious.

The EA also notes potential impacts to groundwater resources, but again without giving sufficient information to be useful. EA, p.57. Although acknowledging the risk of surface or

groundwater contamination, the EA provides no information about the prevalence of spills, leaks, or loss of drilling fluid. Notably, a recent study found over 6,600 fracking spills in 4 states over 10 years. Brook Hays, *Study Finds 6,600 Fracking Spills in Four States Over 10 Years*, United Press International, https://www.upi.com/Science_News/2017/02/21/Study-finds-6600-fracking-spills-in-four-states-over-10-years/5611487691909/ (Feb. 21, 2017). The EA then states, "If contamination of aquifers from any source occurs, changes in groundwater quality could impact springs and residential wells that are sourced from the affected aquifers," (EA, p.57) but does not mention that this "impact" could mean serious negative health effects on people and animals. The EA does not provide any information about the massive volume of water used for fracking, or the huge amounts of "produced" waste water that then must be disposed of, which can contain dangerous contaminants, including heavy metals and radioactive material. The reinjection of produced water has been known to cause earthquakes, yet this possible impact also was not discussed. Richard D. Andrews, Oklahoma Geological Survey, *Summary Statement on Oklahoma Seismicity*, http://earthquakes.ok.gov/wp-content/uploads/2015/04/OGS_Summary_Statement_2015_04_20.pdf (Apr. 21, 2015).

The EA also tries to downplay the dangerous nature of fracking fluid, describing it as being "typically more than 99 percent water and sand, with small amounts of readily available chemical additives." EA, p.67. A recent analysis by researchers at the Yale School of Public Health looked at available information on 1,021 chemicals used in and produced by fracking. "While they lacked definitive information on the toxicity of the majority of the chemicals, the team members analyzed 240 substances and concluded that 157 of them — chemicals such as arsenic, benzene, cadmium, lead, formaldehyde, chlorine, and mercury — were associated with either developmental or reproductive toxicity. Of these, 67 chemicals were of particular concern because they had an existing federal health-based standard or guideline, said the scientists, adding that data on whether levels of chemicals exceeded the guidelines were too limited to assess." Michael Greenwood, *Toxins Found in Fracking Fluids and Wastewater, Study Shows*, Yale News, https://news.yale.edu/2016/01/06/toxins-found-fracking-fluids-and-wastewater-study-shows (Jan. 6, 2016).

The EA states that "[t]o ensure that [hydraulic fracturing] is conducted in a safe and environmentally sound manner, the BLM approves and regulates all drilling and completion operations, and related surface disturbance on Federal public lands." EA, p.67-68. Yet the proposed lease parcel is not *on* Federal public lands—it is on State lands, with subsurface federal mineral rights. It is not clear that the protections explained in the EA are even applicable to the proposed lease tract.

The EA claims that "[k]nown water bearing zones in the lease area are protected by drilling requirements and, with proper practices, contamination of ground water resources is highly unlikely." EA, p.57. Yet BLM cannot simply claim that because there are regulations in place to prevent contamination, this means that it will not occur. *Richardson*, 565 F.3d at 715. A 2014 report analyzing oil and gas well integrity found that of unconventional shale gas wells, 6.2% of the wells drilled between 2000 and 2012 showed a loss of structural integrity. Robert B. Jackson, *The Integrity of Oil and Gas Wells*, Proceedings of the Nat'l Academy of Sciences of the U.S.A., https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4121783/ (July 9, 2014). The BLM understates and downplays potential impacts to water resources.

F. Special Status Species

1. State Conservation Priority Species

In the Affected Environment section, the EA provides a listing of state conservation priority species that could be impacted by the proposed lease. Although many of the species, including several Level I species, could occur on the lease parcel, for most of these species, the EA provided either no statement describing impacts, or a very limited statement along the lines of, "individuals could be displaced."

For example, for the plains spadefoot, a Level I species, the EA states, "This species could occur on the proposed lease tract and is susceptible to land disturbance while it is aestivating. If the species occurs on land and the landscape is altered individuals would be displaced." EA, p.23. Similar statements with no meaningful analysis are listed for the monarch butterfly (Level I), Baird's sparrow (Level I), chestnut-collared longspur (Level I), and loggerhead shrike (Level II). Simply stating that individuals may be displaced is an inadequate description of the impacts.

For at least two species, the EA acknowledges that the species could occur on or use the proposed lease tract, but provides zero information on impacts. For example, for the Golden Eagle (which is also protected under the Bald and Golden Eagle Protection Act) (Level II), the EA notes that there is "both primary and secondary range for this species" in McKenzie County and that there is foraging habitat on the proposed lease land. EA, p.24. Yet no information on potential impacts is provided. Similarly, the EA reveals that the long-billed curlew (Level 1) "could occur on the proposed lease tract" and the Sprague's pipit (Level I) "may utilize [the tract] during their migration." EA, p.25. Yet the EA does not state what the potential impacts to these priority conservation species would be from the proposed action.

2. Federally-Listed Species

The EA's analysis of potential impacts to federally-listed species is also inadequate. BLM acknowledges that oil and gas development could impact whooping cranes, but simply states that if BLM determines down the road that the species will be affected, BLM would "work with" the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act, "if warranted" and other best management practices would be developed. EA, p.59-60. Similar statements are made for the Dakota skipper butterfly and the long eared bat. As explained in Section III of this comment letter, environmental impacts should be addressed as soon as possible. And even if BLM complies with requirements of the Endangered Species Act, this does not mean that zero impacts to the species would occur.

G. Noise Pollution

The EA includes no meaningful analysis of noise pollution impacts from oil and gas development on the proposed lease parcel. The EA mentions in passing that noise from oil and gas development might impact animals or visitors at the Theodore Roosevelt National Park. Yet the EA does not contain any information about the expected sound levels from the various equipment and processes used during oil and gas development. It does not disclose decibel levels

expected at the wells, or at the border of the Theodore Roosevelt National Park or other sensitive areas. Notably, 91% of people in a survey of park visitors "considered enjoyment of natural quiet and the sounds of nature as compelling reasons for visiting national parks." Scott D McFarland, National Park Service, *Theodore Roosevelt National Park: Acoustic Monitoring Report*, at 1, http://soundandlightecologyteam.colostate.edu/pdf/theodoreroosevelt.pdf (2016).

The only impact to wildlife from noise that the EA discloses is that individuals of a species may be driven away by noise. It fails to note that noise can be disruptive and harmful to wildlife in other ways. For example, it can cause stress and behavioral changes in some species, as well as mask communications between species, as well as other noises. The EA therefore does not adequately discuss the potential impacts to wildlife from noise.

H. Cumulative Impacts

The EA's cumulative impacts analysis is wholly inadequate. The Cumulative Impacts section of the EA avoids the issue almost entirely by claiming that "[t]he ability to assess the potential cumulative impacts at the leasing stage for this project is limited for many resources due to the lack of site-specific information for potential future activities. Upon receipt of an APD for any of the lease parcels addressed in this document, more site-specific planning would be conducted in which the ability to assess contributions to cumulative impacts in a more detailed manner would be greater due to the availability of more refined site-specific information about proposed activities." EA, p.49.

According to federal regulations, "'Cumulative impact' is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. Although the EA notes that other mineral exploration and development could potentially lead to cumulative effects, it does not describe the level of development that has occurred in the area or that is expected in coming years. Nor does it explain what cumulative impacts might be expected, such as increased air pollution, habitat fragmentation, etc., or the degree to which cumulative impacts might affect surrounding resources. The cumulative impacts discussion is entirely inadequate.

I. Mitigation

BLM's discussions of mitigation throughout the EA are insufficient and do not render the impacts insignificant. Importantly, many of the mitigation discussions are *just* discussions of what mitigation measures *could* be taken, and do not include any binding commitments. For example, the Mitigation section states that BLM "*encourages* industry to incorporate and implement BMPs to reduce impacts to air quality by reducing emissions, surface disturbances, and dust from field production and operations." EA, p.54 (emphasis added). The EA then lists measures that "*could* be imposed at the development/APD stage if additional analysis showed the potential for significant impacts to air quality." EA, p.54 (emphasis added). The EA does not

even say that even of the measures *would* be required if BLM determined that there would be significant impacts to air quality (which ELPC believes there will be).

Similar language is included throughout the EA. For example, in the Soil Resources section, the EA states that "[m]easures would be taken to reduce, avoid, or minimize potential impacts to soil resources from exploration and development activities," but it does not commit to any specific mitigation measures. EA, p.55. Similarly, in the section on Water Resources, the EA states that steps "would be taken to reduce, avoid, or minimize potential impacts to water resources," but the EA only lists possible mitigation measures, without committing to any specific mitigation action. EA, p.56. Again, the Visual Resources section notes that oil and gas development "may cause potential impacts" and claims that BMPs would be implemented, yet fails to commit to any of the possible BMPs listed. EA, p.65-66.

The EA should not only list specific possible mitigation measures, but should also explain how BLM would choose which ones to require, how BLM would ensure that they would be implemented, how the effectiveness of the mitigation would be monitored, and how the agency would respond if mitigation measures prove to be ineffective. The approach to mitigation included in the EA is ineffective and does not make the impacts of the proposed lease insignificant.

VI. The Environmental Impacts of the Proposed Lease are Significant and an Environmental Impact Statement Is Required

The EA and FONSI incorrectly determine that the impacts of the proposed lease are not significant. In fact, the environmental impacts are significant, and an Environmental Impact Statement should be prepared. Under the Council on Environmental Quality's regulations, a determination on significant of environmental impacts "requires considerations of both context and intensity." 40 C.F.R. § 1508.27.

The context consideration "means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant." 40 C.F.R. § 1508.27(a). The context of the proposed lease is important because the tract is directly next to the Theodore Roosevelt National Park, a special protected area of ecological, historical, cultural, and recreation importance; it is a national treasure. The proposed lease tract would also abut the Little Missouri National Grasslands, the largest grassland in the country.

Federal regulations also provide several points for consideration in determining intensity, or "the severity of impact." 40 C.F.R. § 1508.27(b). Many of these considerations also weigh in favor of a "significant impact" finding. For example, point 2 is "[t]he degree to which the proposed action affects public health or safety." 40 C.F.R. § 1508.27(b)(2). Oil and gas development causes emissions of harmful air pollutants, and growing evidence links health impacts in local communities to nearby fossil fuel development. In the case of water contamination due to spills, leaks, well failures, etc., there could be significant harm to public

health and safety. There is also the fact that the oil and gas boom has already lead to increased crime at the Theodore Roosevelt National Park.

The third consideration is the "[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas." 40 C.F.R. § 1508.27(b)(3). As mentioned above, the proposed lease parcel is on the border both of the Theodore Roosevelt National Park and the Little Missouri National Grasslands. This factor weighs strongly in favor of finding significant impacts.

The fourth and fifth factors consider the degree to which the impacts are "likely to be highly controversial" and "are highly uncertain or involve unique or unknown risks." 40 C.F.R. § 1508.27(b)(4)-(5). The extent of the hazards associated with fracking are far from clear. Health problems likely due to air emissions and water contamination are linked to unconventional drilling, and reinjection of produced water likely has caused earthquakes in some regions. However the risks are not well quantified and likely include risks that are not yet well understood.

The sixth consideration is "[t]he degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration." 40 C.F.R. § 1508.27(b)(6). Leasing a parcel for oil and gas development directly on the border of the remote North Unit of the Theodore Roosevelt National Park, especially with only an EA, would establish a negative precedent of allowing fossil fuel development that negatively affects National Parks without sufficient consideration of the environmental impacts.

The seventh point is "[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment." 40 C.F.R. § 1508.27(b)(7). As discussed above, the EA inadequately discusses the cumulative significant impacts from the significant oil and gas development in the area, which are already significantly affecting air quality and other environmental values in the region.

The eighth factor requires consideration of "[t]he degree to which the action . . . may cause loss or destruction of significant scientific, cultural, or historical resources." 40 C.F.R. § 1508.27(b)(8). The Theodore Roosevelt National Park is important not only due to its ecological and recreational value, but also because of its cultural and historical significance. It is for this reason that the State Historical Society of North Dakota recommended that "surface development be kept at least two miles from Theodore Roosevelt National Park." State Historical Society of North Dakota, Scoping Comments (Aug. 15, 2017).

The ninth consideration is "[t]he degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973." The EA acknowledges that the proposed lease may negatively impact endangered or threatened species, yet puts off detailed consideration and required consultation until later in the process. At this point, then, it must be assumed that there could be significant impacts to endangered or threatened species or habitat.

VII. Conclusion

The EA and FONSI are inadequate and do not fully and fairly disclose the environmental impacts of the proposed lease. The lease and subsequent development of the parcel will cause significant impacts, and BLM is required to prepare an Environmental Impact Statement for the action.

Sincerely,



Rachel Granneman
Staff Attorney
Environmental Law & Policy Center

From: Jeremy Patterson
To: Kenczka, Gerald
Subject: Re: letter sent to the Business Committee on delay of rules for HV and venting/flaring rules
Date: Monday, October 30, 2017 5:38:22 PM

Ok will do.

Thanks

Jeremy

-------- Original message --------
From: "Kenczka, Gerald" <jkenczka@blm.gov>
Date: 10/30/17 2:50 PM (GMT-07:00)
To: Jeremy Patterson <JPatterson@ndnlaw.com>
Subject: Re: letter sent to the Business Committee on delay of rules for HV and venting/flaring rules

Jeremy, that would be appreciated. Attached is the letter sent to the Business Committee that was shared and we (meaning the field office) was asked to follow up on. Please let me know what their thoughts are to proceed with any feed back. Again, thanks for looking into this.

Jerry Kenczka
AFM for Lands & Minerals
BLM Vernal Field Office
435-781-4440 (desk)
435-776-6705 (cell)

On Mon, Oct 30, 2017 at 2:28 PM, Jeremy Patterson <JPatterson@ndnlaw.com> wrote:

> Jerry
>
> I wasn't aware of the letter, if you can forward me a copy I will raise this in my meeting with the Business Committee tomorrow to see how they wish to proceed.
>
> Thanks
>
> Jeremy
>
> ---
>
> From: Kenczka, Gerald <jkenczka@blm.gov>
> Sent: Monday, October 30, 2017 1:46 PM
> To: Jeremy Patterson
> Subject: letter sent to the Business Committee on delay of rules for HV and venting/flaring rules

Jeremy, I have been asked to follow up with a letter sent from our Washington Office to the Business Committee on BLM's hydraulic fracturing rule and what is known as the "venting and flaring" or "waste prevention" rule. The letter was dated October 16, 2017. The request in the letter asks for the Tribe's views and information into BLM's consideration of the proposals.

I have been thinking about how best to seek some feed back or coordination since I know that getting a meeting with the Business Committee directly may take some time. Our (meaning Vernal BLM) next meeting with them is scheduled for December 6th. But I believe that our Washington Office is seeking more timely feed back.

Do you have any suggestions on how best to proceed? I called Bruce Pargeets and found out that he is out of town until next week. Your thoughts on this are appreciated. Thanks.

- do I need to forward you the letter sent to the Business Committee?

Jerry Kenczka
AFM for Lands & Minerals
BLM Vernal Field Office
435-781-4440 (desk)
435-776-6705 (cell)

From:	Michael Saul
To:	BLM_MT_Billingsfo_Lease_EA@blm.gov; BLM_MT_Butte_FO_Lease_EA@blm.gov; BLM_MT_Great_Falls_Lease_EA@blm.gov; BLM_MT_North_DakotaFO_Lease_EA@blm.gov
Subject:	comments of the Center for Biological Diversity on March 2018 oil and gas leasing Environmental Assessments
Date:	Monday, October 30, 2017 6:11:53 PM
Attachments:	CBD comments on MT ND 3-18 leasing EAs.pdf

Please find attached the comments of the Center for Biological Diversity on Environmental Assessments DOI-BLM-MT-L002-2017-0002-EA, DOI-BLM-MT-L002-2017-0003-EA, DOI-BLM-MT-L002-2017-0004-EA, and DOI-BLM-MT-C030-2017-0133-EA.

Michael Saul

Center for Biological Diversity

October 30, 2017

Via electronic mail to:

BLM_MT_Billingsfo_Lease_EA@blm.gov
BLM_MT_Butte_FO_Lease_EA@blm.gov
BLM_MT_Great_Falls_Lease_EA@blm.gov
BLM_MT_North_DakotaFO_Lease_EA@blm.gov

Re: Comments on BLM's Proposed March 2018 Montana/Dakotas Oil and Gas Lease Sale Environmental Assessments (Billings Field Office, Butte Field Office, North Central Montana District, and North Dakota Field Office)

The Center for Biological Diversity (Center), together with WildEarth Guardians, writes to submit the following comments on BLM's four Environmental Assessments for the March 2018 Montana/Dakotas oil and gas lease sale, including proposed parcels in the Billings Field Office, Butte Field Office, North Central Montana District, and North Dakota Field Office.

The Center for Biological Diversity is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has over 1.3 million members and on-line activists, including those living in Montana who have visited public lands within the affected planning areas for recreational, scientific, educational, and other pursuits and intend to continue to do so in the future, and are particularly interested in protecting the native, imperiled, and sensitive species and their habitats that may be affected by the proposed oil and gas leasing.

WildEarth Guardians is a nonprofit environmental advocacy organization dedicated to protecting the wildlife, wild places, wild rivers, and health of the American West. On behalf of our members, Guardians has an interest in ensuring the BLM fully protects public lands and resources as it conveys the right for the oil and gas industry to develop publicly-owned minerals. More specifically, Guardians has an interest in ensuring the BLM meaningfully and genuinely takes into account the air, water, and climate implications of its oil and gas leasing decisions and objectively and robustly weighs the costs and benefits of authorizing the release of more pollutants known to cause health impacts and greenhouse gas emissions known to contribute to global warming.

I. BLM Must Prepare an Environmental Impact Statement

The proposed leasing of over 63,000 acres, including lands along the Beartooth Front and Clark Fork of the Yellowstone River and over 23,000 acres of greater-sage grouse habitat, has the potential for serious impacts to numerous resources including greater sage-grouse habitat, Canada lynx habitat, Yellowstone cutthroat trout habitat, water quality in the Clark Fork and other waterbodies, air quality, aesthetic and recreational uses, and historical and cultural properties. Because of the scope and intensity of potential impacts, BLM cannot minimize the direct, indirect, and cumulative effects of its action by dividing a single regional leasing program into four separate Environmental Assessments. BLM should not proceed with the proposed leasing action without preparation of a full Environmental Impact Statement ("EIS").

NEPA demands that a federal agency prepare an EIS before taking a "'major [f]ederal action[] *significantly* affecting the quality' of the environment."[1] In order to determine whether a project's impacts may be "significant," an agency may first prepare an Environmental Assessment ("EA").[2] If the EA reveals that "the agency's action may have a significant effect upon the . . . environment, an EIS must be prepared."[3]

The EAs, even taken in isolation, clearly show significant environmental imapcts, which compels the preparation of an EIS. These factors include:

- risks to the survival and recovery of BLM-sensitive greater sage-grouse, including the proposed leasing of over 23,000 acres of designated sage-grouse habitat
- risks to the survival and recovery of the threatened Canada lynx, including six proposed parcels within five miles of less of lynx critical habitat
- risks to water quality in the Clark Fork of the Yellowstone River, including Yellowstone cutthroat trout recovery habitat, from numerous factors associated with oil and gas drilling, including hydraulic fracturing, waste disposal, pipeline and road crossings, and chemical and petroleum spills
- the risk of induced seismicity, including the cumulative risks resulting from development across all 63,749 acres;

An EIS must be prepared if substantial "questions are raised as to whether a project . . . may cause significant degradation of some human environmental factor."[4] It is not necessary to show that significant effects will in fact occur; raising substantial questions about whether a project *may* have a significant effect is enough to trigger BLM's obligation to prepare an EIS.[5]

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[1] *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1067 (9th Cir. 2002) (emphasis added).
[2] 40 C.F.R. §§ 1501.4, 1508.9.
[3] *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 730 (9th Cir. 2001) (internal quotations omitted).
[4] *Ocean Advocates v. United States Army Corps of Eng'rs*, 402 F.3d 846, 864-65 (9th Cir. 2005) (internal quotes omitted).
[5] *Id.*

Because the aforementioned impacts are likely to have a significant effect on the environment, BLM is legally required under NEPA to prepare an EIS. This is especially true in light of the high likelihood that fracking would occur on the leases.

In considering whether the proposed oil and gas leasing would have significant effects on the environment, NEPA's regulations require BLM to evaluate ten factors regarding the "intensity" of the impacts.[6] The existence of any "one of these factors may be sufficient to require preparation of an EIS."[7] Several of these "significance factors" are implicated in this proposed action and clearly warrant the preparation of an EIS:

> The degree to which the effects on the quality of the human environment are likely to be highly controversial.
>
> The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
>
> The degree to which the proposed action affects public health or safety.
>
> The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.[8]

Here, individually and considered as a whole, there is no doubt that significant effects may result from this proposal; thus, NEPA requires that BLM must prepared an EIS for the action.

a. The effects on the human environment will be highly controversial

A proposal is highly controversial when "substantial questions are raised as to whether a project . . . may cause significant degradation" of a resource, *Nw. Envtl. Def. Ctr. v. Bonneville Power Admin.*, 117 F.3d 1520, 1536 (9th Cir. 1997), or when there is a "substantial dispute [about] the size, nature, or effect of the" action. *Blue Mtns. Biodiversity*, 161 F.3d at 1212. A "substantial dispute exists when evidence, raised prior to the preparation of [a] . . . FONSI, casts serious doubt upon the reasonableness of an agency's conclusions." *Nat'l Parks & Conserv. Ass'n*, 241 F.3d at 736. When such a doubt is raised, "NEPA then places the burden on the

[6] 40 C.F.R. § 1508.27(b); *see also Center for Biological Diversity, et al. v. Bureau of Land Management, et al.*, 937 F. Supp. 2d 1140, 1155-59 (holding that oil and gas leases were issued in violation of NEPA where BLM failed to prepare an EIS and failed to properly address the significance factors for context and intensity in 40 C.F.R. § 1508.27).

[7] *Ocean Advocates*, 402 F.3d at 865; *Nat'l Parks & Conservation Ass'n*, 241 F.3d at 731.

[8] 40 C.F.R. § 1508.27(b)(4), (5), (2) & (9); *See Center for Biological Diversity*, 937 F. Supp. 2d at 1158-59 (holding that BLM failed to properly address the significance factors regarding controversy and uncertainty that may have been resolved by further data collection (citing *Native Ecosystems Council v. U.S. Forest Serv*., 428 F.3d 1233, 1240 (9th Cir. 2005)).

agency to come forward with a 'well-reasoned explanation' demonstrating why those responses disputing the EA's conclusions 'do not . . . create a public controversy.'" *Id.* See *CBD*, 937 F. Supp. 2d 1140.

There is abundant evidence that oil and gas operations, particularly hydraulic fracturing ("fracking"), can cause significant impacts to human health, water resources, air quality, imperiled species, and seismicity. The potential for these significant impacts to occur is particularly clear in light of the potential for fracking to result from the lease sale. Fracking is among the top, if not the single most controversial energy issue facing America today. The controversy spans the public arena, scientific discourse, local governments, and the halls of Congress. As the base of scientific knowledge regarding risks from hydraulic fracturing continues to develop, the evidence continues to build that hydraulic fracturing and shale and tight gas development processes pose a wide range of risks to human health and the environment, including air pollution, water contamination, and risks to human health. Based on these risks, jurisdictions throughout the world and the country have imposed bans or moratoria on some or all hydraulic fracturing – including France, Bulgaria, and Scotland, and Germany. Vermont, New York, and local governments in Texas, Colorado, Florida, and California have banned (or attempted to ban) hydraulic fracturing. The most comprehensive review to date of the over 900 available published studies on risks and harms of hydraulic fracturing finds that:

> fracking operations pose severe threats to health, both from water contamination and from air pollution. In the United States, more than two billion gallons of fluid are injected daily under high pressure into the earth with the purpose of enabling oil and gas extraction via fracking or, after the fracking is finished, to flush the extracted wastewater down any of the 187,570 disposal wells across the country that accept oil and gas waste. All of those two billion daily gallons of fluid is toxic, and it all passes through our nation's groundwater aquifers on its way to the deep geological strata below where it demonstrably raises the risk for earthquakes. In the air around drilling and fracking operations and their attendant infrastructure, researchers have measured strikingly high levels of toxic pollutants, including the potent carcinogen benzene and the chemical precursors of ground-level ozone (smog). In some cases, concentrations of fracking-related air pollutants in communities where people live and work exceed federal safety standards. Research shows that air emissions from fracking can drift and pollute the air hundreds of miles downwind.[9]

[9] Concerned Health Professionals of New York & Physicians for Social Responsibility. (2016, November 17). Compendium of scientific, medical, and media finding demonstrating risks and harms of fracking (unconventional gas and oil extraction) 7 (4th ed.)

Substantial new information, also reveals that both hydraulic fracturing itself and the underground disposal of drilling-related wastes prevents substantial risks of induced earthquakes. Scientific research has linked fracking with induced earthquakes ranging up to magnitude 4.6. Induced earthquakes have been linked to fracking in Ohio and Oklahoma, England, British Columbia and Alberta, including larger events of magnitudes 3 and 4. Research also indicates that maximum earthquake size induced by fracking may be controlled by the size of the fault surface in a critical stress state, rather than the net injected fluid volume, meaning that large fracking-induced earthquakes are possible.

A 2016 study cautioned that fracking in the United States may be causing higher-than-recognized induced earthquake activity that is being masked by more abundant wastewater-induced earthquakes. The injection of oil and gas wastewater, often associated with fracking, has been linked to the dangerous proliferation of earthquakes in many parts of the country, including damaging earthquakes. For example, a magnitude 5.8 induced earthquake near Pawnee, Oklahoma, in 2016 caused at least one injury and severe structural damage; a magnitude 5.7 induced earthquake outside Oklahoma City in 2011 injured two people, destroyed 14 homes, and caused millions of dollars' worth of damage to buildings and infrastructure. A magnitude 5.3 induced earthquake near Trinidad, Colorado, in 2011 and magnitude 4.8 near Timpson, Texas, in 2012 also caused significant structural damage. In the central and eastern U.S., a U.S. Geological Survey analysis found that 7 million people live and work in areas vulnerable to damaging injection-induced earthquakes.

The level of controversy associated with fracking, oil and gas waste disposal, and their expansion in Montana and North Dakota in association with the proposed lease sale is sufficient to trigger the need for an EIS. 40 C.F.R. § 1508.27(b)(4)

b. The lease sale presents highly uncertain or unknown risks

An EIS must also be prepared when an action's effects are "highly uncertain or involve unique or unknown risks." 40 C.F.R. § 1508.27(b)(5). Preparation of an EIS is "mandated where uncertainty may be resolved by further collection of data, or where the collection of such data may prevent speculation on potential . . . effects."[10] As one court recently explained regarding oil and gas leasing that may facilitate fracking, "BLM erroneously discounted the uncertainty from fracking that may be resolved by further data collection."[11] There is also great uncertainty, for example, in the contributions of this action to the resulting effects of climate change, which are potentially catastrophic. While it is clear that oil and gas activities can cause great harm, there remains much to be learned about the specific pathways through which harm

[10] *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1240 (9th Cir. 2005) (internal citations omitted).
[11] *Center for Biological Diversity*, 937 F. Supp. 2d at 1159.

may occur and the potential degree of harm that may result. Additional information is needed, for example, about possible rates of natural gas leakage, the potential for fluids to migrate through the ground in and around the parcels, and the potential for drilling to affect local faults. NEPA dictates that the way to address such uncertainties is through the preparation of an EIS

c. The lease sale poses threats to public health and safety

As discussed in detail below, the oil and gas activities that may occur as a result of the lease sale could cause significant impacts to public health and safety. 40 C.F.R. § 1508.27(b)(2). Fracking would pose a grave threat to the region's water resources, harm air quality, pose seismic risks, negatively affect wildlife, and fuel climate change.

As a congressional report noted, oil and gas companies have used fracking products containing at least 29 products that are known as possible carcinogens, regulated for their human health risk, or listed as hazardous air pollutants.[12] The public's exposure to these harmful pollutants alone would plainly constitute a significant impact. Furthermore, and as previously discussed, information continues to emerge on the risk of earthquakes induced by wastewater injected into areas near faults. It is undeniable that these earthquakes pose risks to the residents of the area and points beyond.

The use of fracking fluid, which is likely to occur as a result of the lease sale, poses a major threat to public health and safety and therefore constitutes a significant impact. BLM therefore must evaluate such impacts in an EIS.

d. The action may adversely affect listed and agency sensitive species and their habitat

An EIS may also be required when an action "may adversely affect an endangered or threatened species or its habitat." 40 C.F.R. § 1508.27(b)(9). Although a finding that a project has "some negative effects does not mandate a finding of significant impact," an agency must nonetheless fully and closely evaluate the effects on listed species and issue an EIS if those impacts are significant. *Klamath-Siskiyou Wildlands Ctr. v. U.S. Forest Serv.*, 373 F. Supp. 2d 1069, 1081 (E.D. Cal. 2004) (finding agency's conclusion that action "may affect, is likely to adversely affect" species due to "disturbance and disruption of breeding" and "degradation" of habitat is "[a]t a minimum, . . . an important factor supporting the need for an EIS").

Preliminary review of the proposed parcels indicates that six parcels (MTM 79010-JJ, MTM 79010-8R, MTM 105431-JW, MTM 108952-DU, MTM 108952-FT, and MTM 108952-FU) would allow oil and gas drilling, and associated infrastructure and increased human use,

[12] Waxman, Henry et al., United States House of Representatives, Committee on Energy and Commerce, Minority Staff, Chemicals Used in Hydraulic Fracturing (Apr. 2011) ("Waxman 2011")

within five miles of designated critical habitat for the threatened Canada lynx.[13] Another twenty-six parcels comprising 23972.27 acres, would affect designated habitat for the BLM-sensitive greater sage-grouse. Parcels parcels MTM 79010-8R, MTM 79010-JJ, and MTM 105431-HW also contain potential habitat for the Yellowstone cutthroat trout, a BLM Montana sensitive species.

II. BLM Must Analyze Impacts to Greater Sage-Grouse and Prioritize Leasing Outside Grouse Habitat

BLM must analyze in detail indirect and cumulative impacts from oil and gas leasing and development on the greater sage-grouse and its habitat. *See* 40 C.F.R. § 1508.27(b)(7); Kern v. Bureau of Land Management, 282 F.3d 1062, 1075-77 (9th Cir. 2002) Furthermore, under BLM's own greater sage-grouse RMP amendments and the recent BLM Instruction Memorandum 2016-143, *Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments -Oil & Gas Leasing and Development Sequential Prioritization* (September 1, 2016) ("IM 2016-143"), BLM's amended RMPs require it to prioritize oil and gas leasing outside of greater sage-grouse priority and general habitats. Based on review of the preliminary parcel lists, the following parcels contain sage-grouse habitat:

Priority Habitat Management Areas: MTM 105431-HR, MTM 105431-HT, MTM 105431-KG, MTM 105431-KQ, MTM 105431-WK, MTM 108952-DH, MTM 108952-DM, MTM 108952-DN, MTM 108952-DP, MTM 108952-FD, MTM 108952-FE, MTM 108952-FF, MTM 08952-FG, MTM 108952-FH, MTM 108952-FJ, MTM 108952-FK, MTM 108952-FL (13,649 acres)

General Habitat Management Areas: MTM 105431-KQ, MTM 108952-DL, MTM 108952-DQ, MTM 108952-DR, MTM 108952-E6, MTM 108952-E7, MTM 108952-E8, MTM 108952-E9, MTM 108952-FA, MTM 108952-FB, MTM 108952-FD, MTM 108952-FE, MTM 108952-FF, MTM 108952-FG, MTM 108952-FJ, MTM 108952-FK, MTM 108952-FL, MTM 108952-GH, MTM 108952-GN, MTM 79010-B9, MTM 79010-C1, MTM 79010-HS, MTM 79010-PX (9,803 acres)

[13] *See* Map of Montana March 2018 Parcels and Lynx Critical Habitat, Attachment A.

Other sage-grouse habitat:	MTM 105431-KG, MTM 108952-FE, MTM 108952-FG (520 acres)

The proposed leasing of nearly 24,000 acres of sage-grouse habitat and, in particular, over 13,500 acres of Priority Habitat Management Areas, particularly when taken together with other recent, ongoing, and proposed leasing actions within Management Zone I for greater sage-grouse, violates the ARMPA's requirement to prioritize leasing outside of greater sage-grouse habitat. The EAs further fail to engage in meaningful examination of the cumulative effects of massive and sustained new leasing of previously-unleased GRSG habitats, including large areas of priority habitat in Montana and North Dakota. In addition, BLM must consider potential consequences to sage-grouse seasonal habitats not protected by the PHMA and GHMA designations, including but not limited to winter habitat areas and migration corridors.

The greater sage-grouse is not just a BLM sensitive species, but one that has led to a massive revision of BLM land use plans throughout the west in an effort to stave off its extinction. The U.S. Fish and Wildlife Service ("USFWS") identified in 2010 that the greater sage grouse warranted Endangered Species Act protection, that it faced numerous threats to its continued survival, and that inadequacy of regulatory mechanisms in general (and the inadequacy of protections in federal land-use plans in particular) were contributing to the need to list the species. In September 2015, the Service declined to list the species, citing, in part, BLM's recent sage-grouse RMP amendments. We have contended, and continue to contend, that those plans do not provide the level of protection that the best available science says is necessary to reverse sage-grouse decline and recover the species. However, the 2015 RMP amendments do incorporate a great deal of information and analysis regarding the species and effects of oil and gas development, and adopt significant mitigation requirements for development within various categories (priority, general, and restoration habitat management areas).

A. BLM's Proposed Action Fails to Conform to the Prioritization Requirement of the ARMPAs

FLPMA requires the BLM to "manage the public lands . . . in accordance with the land use plans . . ." 43 U.S.C. § 1732(a). Department of Interior regulations also provide that once BLM has approved an RMP, "all future resource management authorizations and actions . . . shall conform to the approved plan." 43 C.F.R. § 1610.5-3(a). Under this "consistency" requirement, a BLM decision must be set aside if it is not consistent with the operative land use plan, including by not conforming to RMP measures for conservation and protection of sensitive species such as sage-grouse. *See, e.g., Western Watersheds Project v. Bennett*, 392 F.Supp.2d 1217 (D. Idaho 2005) (reversing BLM grazing decisions not consistent with RMP requirements for protecting sage-grouse); *Western Watersheds Project v. Jewell*, 2014 WL 4853121 (D. Idaho Sept. 29, 2014) (same).

BLM's proposed decision to lease the parcels within Priority Habitat Management Areas (PHMAs), General Habitat Management Areas (GHMAs) or Restoration Habitat Management Areas (RHMAs), will not conform to the Amended RMPs and the agency's IM 2016-143 unless the leasing EIS fully evaluates site-specific impacts to Greater Sage-Grouse, and prioritizes leasing outside both PHMAs and GHMAs. IM 2016-143's purpose is to provide consistency across the agency when leasing decisions impact Greater Sage-Grouse habitat. It provides a "prioritization sequence" for BLM state offices to follow when choosing to lease areas near or in Greater Sage-Grouse habitats. The IM prioritization sequence is as follows:

> 1. Lands outside of GHMAs and PHMAs: BLM State Offices will first consider leasing EOIs for lands outside of PHMAs and GHMAs. These lands should be the first priority for leasing in any given lease sale.
>
> 2. Lands within GHMAs: BLM State Offices will consider EOIs for lands within the GHMAs, after considering lands outside of both GHMAs and PHMAs. When considering the GHMA lands for leasing, the BLM State Office will ensure that a decision to lease those lands would conform to the conservation objectives and provisions in the GRSG Plans (e.g., Stipulations).
>
> 3. Lands within PHMAs: BLM state offices will consider EOIs for lands within PHMAs after lands outside of GHMAs and PHMAs have been considered, and EOIs for lands within GHMA have been considered. When considering the PHMA lands for leasing, the BLM State Offices will ensure that a decision to lease those lands would conform to the conservation objectives and provisions in the GRSG Plans (e.g., Stipulations) including special consideration of any identified SFAs.

IM 2016-143 at 4.

According to BLM's preliminary parcel data, at least twenty-six parcels in the proposed lease sale are located within the current range of Greater Sage-Grouse, including seventeen parcels encompassing 13,649 acres within Priority Habitat Management Areas. . All of the parcels in Sage Grouse habitat also fall within four miles of leks, which provide "important life-history habitat features," IM 2016-143 at 10.[14] Under the sage-grouse RMP amendments and prioritization policy, BLM must consider, prior to determining to issue leases, factors including proximity to existing leases, oil and gas potential, and, importantly the proximity of the proposed leases to "important life-history habitat features (for example, distance from any active sage-grouse leks)." IM 2016-143 at 4.

[14] *Id.*

IM 2016-143 further instructs BLM that "[a]t the time the leasing priority is determined, when leasing within GHMA or PHMA is considered, BLM should consider, first, areas determined to be non-sage-grouse habitat and then consider areas of lower value habitat." *Id*. The EIS must contain sufficient detailed, site-specific analysis to provide BLM and the public with sufficient information to permit a reasonable determination of whether the proposed leasing action could be limited to areas of either non-sage-grouse habitat or areas of lower value habitat.

Any proposed leasing must conform to a key management prescription of those plans – the obligation to "prioritize the leasing and development of fluid mineral resources outside GRSG habitat." The BLM is subject to clear direction in the IM 2016-143 and the RMP amendments that its sage-grouse RMP plans and conservation strategy rely not only on stipulations within designated habitats, but also on a larger strategy of prioritizing development outside of all sage-grouse habitats. Leasing over 13,500 acres of PHMA without adequate consideration of impacts on grouse populations and life history requirements, has the potential to violate of IM 2016-143 and the Greater Sage-Grouse RMP amendments.[15] It is simply impossible to understand how offering leases within sage-grouse habitat is consistent with the IM 2016-143 prioritization sequence and the RMP requirement to prioritize leasing outside such habitat.

B. BLM's EAs Fail to Take a Hard Look at the Cumulative Effects of Leasing on Greater Sage-Grouse

It is undisputed that sage-grouse populations in central and eastern Montana are vastly reduced from pre-development levels due to habitat loss, a major source of which is oil and gas development and related disturbance.[16] For Greater Sage-Grouse Management Zone 1, which includes the Billings Field Office and North Central Montana District, BLM has found that "GRSG populations across M[anagement] Z[one] I face pressures from energy development, conversion to agriculture, and such stressors as disease, drought, and fire. These threats are magnified under the stress of habitat fragmentation and the isolation of small populations in the Dakotas, on the eastern edge of the species' range." Miles City Field Office Proposed Resource Management Plan Amendments FEIS 4-176. In its EIS for that Resource Management Plan amendment, the BLM acknowledges that even if the plan is implemented, sage-grouse populations may continue to decline or may persist at a "reduced level." MCFO PRMP FEIS at 4-176. In considering whether or not to make available for leasing additional sage-grouse habitats in the Billings FO and North Central Montana District, BLM must assess the current state of sage-grouse populations in management zone 1, the individual populations and seasonal habitats that may be affected by the proposed leases, and the implications of development for local and regional grouse survival and recovery.

[15] EA at 2.
[16] *See* BLM Miles City Field Office, Proposed RMP FEIS 4-172 to 4-176.

In the spring, during the breeding season, sage grouse males seek out courtship areas, known as "leks" that are open areas of bare soil, short grass steppe, windswept ridges, or exposed knolls in which to gather and perform their ritualized mating displays and breed with females.[17] An important factor affecting lek location appears to be proximity to, as well as configuration and abundance of, nesting habitat.[18] Leks are normally "traditional", and occur in the same location each year. Some leks studied by early investigators have persisted for 28–67 years since first counted. The presence of broken bird-point arrowheads on some leks suggests that sage-grouse had used those sites for at least 85 years. Leks and the number of attending males are regularly used to monitor the long-term status of populations because of their traditional locations.[19]

In a recent study looking at greater sage-grouse across six western states, it was reported that 90% of the active leks were surrounded by areas having greater than 40% sagebrush cover. Further, 99% of the active leks were in landscapes with less than 3% of the area in human development.[20] Successful leks occurred in areas with low road densities – less than 1 km/km² of secondary roads, less than .05km/km² of highways, and less than .01 km/km² of interstate highways. Another pertinent finding was that habitat suitability was highest when power line densities were less than .06 km/km²; leks were absent where power line densities exceeded .2 km/km². With respect to communication/cellular towers, leks were absent when tower densities exceeded .08 km/km².[21] Wisdom et al. reported that areas extirpated of sage grouse had 27 times the human density, 3 times more area in agriculture, were 60% closer to highways, and had 25% higher density of roads than what was found in occupied habitat. Also, it was found that power lines and cellular towers had significant impacts on whether or not a habitat was occupied.[22]

BLM's own experts recommend a 4-mile No Surface Occupancy ("NSO") buffer for all active leks in Priority Habitats, Focal Areas, Connectivity Areas, and General Habitats for existing oil and gas leases and permitted activities that would potentially disturb breeding, nesting, and broodrearing sage grouse, with exceptions available for mineral leases or claims located entirely within this buffer for a wellsite of minimal size and intrusion to be placed at a location most distal from an active lek or leks. We agree and insist that BLM follow these

[17] Manier, et al., Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, http://dx.doi.org/10.3133/ofr20141239 ("Manier 2013")
[18] Connelly, J. W. et al., Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats, Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming (2004) ("Connelly 2004")
[19] *Ibid.*
[20] Knick, Steven T. et al., Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, U.S.A., 3 Ecology and Evolution 6: 1539 (2013) ("Knick 2013")
[21] *Ibid.*
[22] Wisdom et al. 2011. Factors Associated With Extirpation of Sage-Grouse. Pages 451-472 *in* S. T. Knick and J. W. Connelly (eds). Greater Sage-Grouse: ecology and conservation of a landscape species and its habitats. Studies in Avian Biol. Series, vol. 38, Univ. Calif. Press. Berkeley, CA.

recommendations.

BLM, in its GRSG RMP Amendments, and in the proposed stipulations for these lease sales, implements buffer distances in accordance with the United States Geological Survey (USGS) Report as described in Appendix B to the GRSG RMP Amendment. These are set at 3.1 miles for roads and energy infrastructure, 2 miles for tall structures, and 1.2 miles for low structures, and represent the lowest (least protective) end of the protection spectrum described by Manier et al. (2014).[23] These buffer distances are inappropriately small. While they may be adequate to protect breeding grouse on the lek, they will allow these disruptive and damaging features to be located in the midst of prime nesting habitat, which extends 5.3 miles from the lek site (Holloran and Anderson 2005).

Studies published by Braun in 1977 and Connelly in 2000 initially set the standard that leks should be buffered by a 3.2 km or 2 mile radius.[24] However, more recent studies have suggested that the 3.2 km is inadequate for the conditions needed for successful breeding and nesting. Connelly et al. reported in their assessment for the Western Governors' Association that road traffic within 7.6 km had adverse impacts on male grouse attendance at leks.[25] Sage grouse nesting grounds are located typically in a radius of 5.3 miles of the lek (and sometimes farther). Because the nesting period is equally sensitive and equally important to survival of and recruitment to sage grouse populations, larger buffers are necessary. Coates et al. (2013) found that for the Mono Basin sage grouse population, 90% of habitat use occurred within 4.66 miles of a lek.[26] The Coates et al. results are conservative relative to activity patterns found for other sage grouse populations across the West.

The National Technical Team observed, "it should be noted that protecting even 75 to 80% of nesting hens would require a 4 mile radius buffer (Table 1). Even a 4 mile NSO buffer would not be large enough to offset all the impacts reviewed above."[27] Importantly, a 0.6-mile lek buffer covers by area only 2% of the nesting habitat encompassed by a 4-mile lek buffer, which takes in approximately 80% of nesting grouse according to the best available science. BLM's own experts recommended for existing fluid mineral leases that a 4-mile NSO buffer should be applied to leks, with an exception allowed in cases where the entire lease is within 4

[23] Manier 2013.
[24] Connelly, J. W. et al., Guidelines to manage sagegrouse populations and their habitats. Wildl. Soc'y Bull., 28(4): 967-985 (2000).

[25] Connelly 2004.
[26] Coates, P.S. et al., Evaluating greater sage-grouse seasonal space use relative to leks: Implications for surface use designations in sagebrush ecosystems, J. Wildl. Manage. 77: 1598-1609. Doi: 10.1002/jwmg.618 (2013)
[27] Naugle, et al., (NTT) Sage-grouse National Technical Team, A Report on National Greater Sage-grouse Conservation Measures (2011) ("Naugle et al. 2011 NTT Report"), *available at* www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech %20Team%20Report.pdf.

miles of a lek, in which case a single wellsite should be permitted in the part of the lease most distal to the lek.[28] This recommendation is reinforced by a similar recommendation from western state agency biologists, who also recommended a 4-mile NSO buffer.[29]

Numerous other studies support the NTT's recommendations. It was found in one study that a 3 km buffer encompassed only 45% of the nesting females associated with that lek, while a 5 km buffer accommodated 64% of the nests.[30] It was also reported that nests located within 1 km of another nest tended to have lower nesting success likely due to enhanced prey detection by predators.[31] The same study further suggests that to protect and maintain sage grouse populations residing in relatively contiguous sagebrush habitats, managers should minimize or halt actions that reduce the suitability of nesting habitats within 5 km of a lek until detailed site specific monitoring suggested otherwise.[32] It also noted that a substantial number of females nested distances greater than 5 km from a lek and that this additional increment of individual recruitment could be important for population viability.[33]

Indeed, placing a heavy focus on habitat protection around leks is not suitable for ensuring the viability of sage grouse populations. Studies have shown that both nest and brood rearing habitats are on average 6 km from leks, and it is not until 10 km from leks that one reaches the threshold where 90% of the habitat occurs.[34] Johnsgard indicated that there was no obvious relationship between lek location and nest site. In 5 different studies involving more than 300 nests the average distance between lek and Sage-grouse nest where the females was first seen or captured was 3.5 mi (5.6 km).[35] Nesting distances could be much greater than this average. For example, a majority (~90%) of nesting and brood-rearing habitat was within 10 km (6.2 miles) of active leks in Alberta;[36] 97 percent of nests were found within 6.2 miles of leks where females were marked in the Powder River Basin in Montana and Wyoming.[37] Walker et

[28] *Id.*
[29] Apa, T. et al., Using the Best Available Science to Coordinate Conservation Actions that Benefit Greater Sage-grouse Across States Affected by Oil & Gas Development in Management Zones I-II (Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming) (2008). Online at http://www.ourpubliclands.org/files/upload/ti-State_ScienceGroupDocument_FINAL_01-28-08.pdf.
[30] Holloran, Matthew J. and Stanley H. Anderson, Spatial distribution of greater sage-grouse nests in relatively contiguous sagebrush habitats. The Condor 107:742-752 (2005)
[31] Id.
[32] Id.
[33] Id.
[34] Aldridge, Cameron L. and Mark S. Boyce, Linking Occurrence and Fitness to Persistence: Habitat-Based Approach for Endangered Greater Sage-Grouse. Ecological Applications 17(2):508-526 (2007). ("Aldridge and Boyce").
[35] Johnsgard, P.A. Grassland grouse and their conservation. Smithsonian Institution Press, Washington and London (2002).
[36] Aldridge and Boyce. 2007.
[37] Doherty, K. E. et al., Greater Sage-grouse nesting habitat: the importance of managing at multiple scales, J. Wildl. Manage. 74(7): 1544-1553 (2010).

al. found in another study that the impacts from energy development on lek persistence and nesting were still apparent at a distance of 6.4 km from the disturbance.[38]

As previously mentioned, although leks are important focal points for breeding and subsequent nesting in the surrounding region, other seasonal use areas and habitat requirements may be equally limiting to sage grouse populations.[39] Brood occurrence is greater in more heterogeneous sagebrush stands, where patchy cover reduces predator efficiency but still affords necessary forb resources. Sage-grouse are more abundant in patchy habitats containing a mix of mesic, forb-rich foraging areas interspersed within suitable sagebrush escape cover.[40] Broods are typically found in areas near nest sites for the first 2 to 3 weeks after hatching. Such habitat needs to provide adequate cover and areas with sufficient forbs and insects to ensure chick survival in this life stage. [41]

Suitable and diverse winter habitats are critical to the long-term persistence of grouse populations.[42] As summer ends, the diet of sage-grouse shifts from a diet of insects, forbs and sagebrush to one comprised almost entirely of sagebrush.[43] In winter, the grouse depends heavily on sagebrush for cover, habitat selection being driven by snow depth, the availability of sagebrush above the snow, and topographic patterns that favorable mitigate the weather.[44] Abundance of sagebrush at the landscape scale greatly influences the choice of wintering habitat. One study found that the grouse selected for landscapes where sagebrush dominate over 75% of the landscape with little tolerance for other cover types.[45] Because appropriate wintering habitat occurs on a limited basis and because yearly weather conditions influence its availability, impacts to wintering habitat can have large disproportional effects on regional populations. One study in Colorado found that 80% of the wintering use occurred on only 7% of the area of sagebrush available.[46] Additionally, some degree of site fidelity to winter areas is suspected to exist, and wintering areas not utilized in typical years may become critical in severe winters. [47]

Lower elevation sagebrush winter habitat used by sage grouse may also constitute important winter areas for big game and early spring forage areas for domestic livestock. Due to differing vegetative condition requirements, land treatments on lower elevation sagebrush areas

[38] Walker, B.L., et al., Greater sage-grouse population response to energy development and habitat loss, 71 Journal of Wildlife Management 2644 (2007).
[39] Knick et al. 2013.
[40] Manier et al. 2013. Page 21.
[41] Ibid.
[42] Doherty, Kevin E., et al., Greater Sage-Grouse Winter Habitat Selection and Energy Development, 72 Journal of Wildlife Management 1:172, doi: 10.2193/2006-454 (2008) ("Doherty 2008").
[43] Ibid.
[44] Manier et al. 2013. Page 21.
[45] Doherty et al. 2008.
[46] Ibid.
[47] Caudill, Danny, et al., Winter habitat use by juvenile greater sage-grouse on Parker Mountain, Utah: implications for sagebrush management, 7 Human-Wildlife Interactions 2:250 (2013) ("Caudill 2013").

to increase big game or livestock forage at the expense of sagebrush cover and density could have long-term negative consequences for the grouse.[48]

The EIS must also analyze whether any of the lease areas for sale provide winter concentration areas for sage-grouse, and if so, prohibit disturbance within these areas.[49] BLM should not allow new surface occupancy on federal leases within winter concentration areas[50] during any time of the year.

Moreover, the EAs fail to acknowledge the BLM's widespread and ongoing pattern of leasing vast areas of sage-grouse habitat, including priority habitat, since finalization of the ARMPAs, in violation of the ARMPAs' prioritization mandate. Even if BLM's interpretation of the prioritization objective is upheld, the record is strikingly clear that the agency has, for two years, been engaged in a pattern of blanket leasing of general and priority habitats within the Wyoming/Montana area. Review of BLM lease sale and sage-grouse habitat data reveals that, in Wyoming alone, between September 2015 and September 2017, BLM has leased or offered for lease the some 63,115 acres within designated greater sage-grouse PHMA, and 252,174 acres within GHMA for oil and gas development. Currently-proposed sales in Montana and Wyoming are similarly dominated by leasing within PHMA and GHMA:

- December 2017 Montana sale: 187 out of 204 parcels offered;[51]
- December 2017 Wyoming sale: of 45 parcels to be offered, 26 parcels are partly or entirely in PHMA, and 24 parcels are partly or entirely in GHMA;[52]
- March 2018 Wyoming sale: 96 percent of parcels to be offered under the proposed alternative for Wind River/Bighorn Basin District are in sage grouse

[48] Caudill et al. 2013.
[49] Naugle et al. 2011 NTT Report at 23.
[50] Doherty et al. 2008.
[51] EA for BLM Montana December 2017 sale at 27-28, DOI-BLM-MT-C020-2017-0051-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/78400/120092/146548/MCFO_EA_December_2017_Sale_Post_with_Sale_List.pdf .
[52] EA for BLM Wyoming December 2017 sale at 52, DOI-BLM-WY-D000-2017-0003-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/115166/140613/20170721.HDD_EA_for_December_2017_Lease_Sale_v.2.mg.pdf

habitat,[53] and 37 parcels to be offered in the High Plains District are in PHMA or GHMA;[54] and

- June 2018 Wyoming sale: 44 parcels are located wholly in PHMA, 30 parcels contain both GHMA and PHMA, and 89 parcels are located wholly in GHMA.[55]

These are only a few examples--other recent BLM sales have already occurred in Wyoming and Montana during 2016 and 2017 that leased other sage grouse-protected areas. All of these sales suffer from the same flaw as this auction: they violate the prioritization requirements of the 2015 RMPs, and fail to consider reasonable alternatives that do not lease PHMAs and GHMAs.

Such widespread new leasing of fluid minerals in Priority Habitats is a phenomenon that was not contemplated by either the ARMPAs, nor by the Fish and Wildlife Service in its decision that adequate regulatory measures exist so as to make the listing of the species under the Endangered Species Act "not warranted." *See* U.S. Fish and Wildlife Service, 12-Month Finding on a Petition To List Greater Sage-Grouse (Centrocercus urophasianus) as an Endangered or Threatened Species, 80 Fed. Reg. 59,858, 59,891 (Oct. 2, 2015) ("The Federal Plans prioritize the future leasing and development of nonrenewable-energy resources outside of sage-grouse habitats.")

Nor are limited NSO, siting and density limitations sufficient to avoid impacts when the cumulative effects of new grouse habitat leasing encompass hundreds of thousands of acres. No Surface Occupancy stipulations for PHMA or portions thereof do not eliminate surface impacts – they merely displace them. BLM must examine the cumulative effects of this displaced disturbance across the hundreds of thousands of acres of grouse habitat recently or currently under new lease.

Science shows that the impact of a single producing well can extend for 1.9 miles and the disturbance of drilling extends 3 miles[56] or more[57] into surrounding habitats. This would result in

[53] Draft EA for BLM Wind River/Bighorn Basin District First Quarter 2018 Lease Sale at 3-44, DOI-BLM-WY-R000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114136/139365/181Q_WRBBD_EA_ver.1.pdf

[54] Draft EA for BLM High Plains District First Quarter 2018 Lease Sale at 48-49, DOI-BLM-WY-P000-2017-0002-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114129/139358/HPD_First_Quarter_2018_OG_Lease_EA.ver1.pdf .

[55] Draft EA for BLM Wyoming June 2018 Lease Sale at 85, DOI-BLM-WY-D000-2018-0001-EA, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/123500/150613/EnvironmentalAssessment_V1_June2018.pdf .

a significant loss of habitat function inside Priority Habitats on lands located within several miles of the PHMA boundary. BLM must withdraw all parcels within PHMAs from the lease sale.

For example, according to BLM's GRSG RMP Amendments, disturbance caps are subject to exceptions across Montana. This means that these measures have no certainty of implementation. Knick et al. (2013) found that 99% of active leks across the western half of the sage grouse's range were surrounded by lands with 3% or less human development. The vast majority were surrounded by much less disturbance. There is no scientific evidence at all indicating that sage grouse can tolerate a greater percentage of surface disturbances. BLM must take a cautious and prudent approach to the management of development on currently existing mineral leases and claims. The provisions for 3% disturbance cap—including calculating disturbance from valid existing rights— should be applied without exception in the context of leased fluid minerals and valid existing mining claims. At this point, this does not appear to be the case for BLM lands. Any EIS must calculate the base line disturbance to explore whether additional disturbance can be incurred.

Noise limits under the RMP are also inadequate to protect sage grouse. BLM's RMP Amendments specify that noise limits will be measured within 0.25 mile of the lek, instead of at the periphery of occupied seasonal habitat. In the Wyoming Basins Ecoregional Assessment, the authors pointed out, "Any drilling <6.5 km [approximately 4 miles] from a sage-grouse lek could have indirect (noise disturbance) or direct (mortality) negative effects on sage-grouse populations." WBEA at 131. BLM should therefore consider a limit of 10 dBA above a defined ambient noise level of 15 dBA within 4 miles of leks and in identified wintering habitats, to be applied across all occupied sage grouse habitats. This should apply March 1 – June 30 in breeding and nesting habitats and also November 30 – March 1 on wintering habitats to protect sage grouse during this sensitive season.

Under the Federal Lands Policy and Management Act, BLM must also evaluate the proposed lease parcels to determine whether or not they may affect management objectives for Areas of Critical Environmental Concern ("ACECs"), including ACECs designated for the protection of sage-grouse habitat.

C. BLM Must Consider Alternatives That Avoid Leasing in Sage-Grouse Habitat

The EAs further violate NEPA in that they fail to consider reasonable alternatives that do not lease PHMAs and GHMAs. Although the individual leasing EAs purport to be in conformance with the stipulations mandated by the ARMPAs, the fact that leasing is one of the range of actions available under the ARMPAs does not relieve BLM of its obligation under

[56] Holloran, M. J., Greater sage-grouse (Centrocercus urophasianus) population response to natural gas field development in western Wyoming. PhD Dissertation. University of Wyoming. Laramie, Wyoming (2005)
[57] Manier et al. 2013

NEPA to consider all reasonable alternatives. Reasonable alternatives in this instance plainly include consideration of an alternative that does not offer additional PHMA or GHMA for leasing at this time, consistent with the ARMPAs requirement to prioritize leasing outside of those habitats.

III. BLM Must Evaluate Potential Impacts to Water Quality, Including From Hydraulic Fracturing, Waste Disposal, Spills, and Pipeline and Road Construction

NEPA regulations and case law require that BLM evaluate all "reasonably foreseeable" direct and indirect effects of its leasing. 40 C.F.R. § 1508.8; *Davis v. Coleman*, 521 F.2d 661, 676 (9th Cir. 1975)*; Center for Biological Diversity, et al. v. Bureau of Land Management, et al.*, 2013 U.S. Dist. LEXIS 52432; 43 ELR 20076 (N.D. Cal. March 31, 2013) (holding that oil and gas leases were issued in violation of NEPA where BLM failed to prepare an EIS and unreasonably concluded that the leases would have no significant environmental impact because the agency failed to take into account all reasonably foreseeable development under the leases).

BLM must fully disclose and analyze the indirect and cumulative impacts of increased oil and gas leasing and resulting development on water quality, including, in particular, water quality in the Clark Fork of the Yellowstone River. Given the exceptional biological and recreational importance of this waterbody, BLM must give close attention to indirect effects including potential future pipelines that cross the river (the Yellowstone River has already been contaminated downstream from pipeline leaks where pipelines were bored under the river) as well as surface spills potentially affecting the river. On the west side of the Clark Fork, groundwater is very shallow and part of a fluvial aquifer with fast groundwater migration. No leasing should occur without full consideration of potential pathways for contamination of that groundwater, and the health, economic, and other effects on the people and wildlife that rely on ground and surface water in the area.

The proposed leasing action is part of a dramatic recent increase in oil and gas leasing in the areas at issue, and reflects increased industry interest in developing Montana's fossil fuel resources. The entire basis for this surge of interest is the possibility that hydraulic fracturing and other advanced recovery techniques will allow the profitable exploitation of geologic formations previously perceived as insufficiently valuable for development. Hydraulic fracturing brings with it all of the harms to water quality, air quality, the climate, species, and communities associated with traditional oil and gas development, but also brings increased risks in many areas. An adequate analysis of the consequences of this practice, prior to irrevocable consequences, is therefore required at the leasing stage.

Over the last few years, Montana has seen an explosive growth in oil and gas exploration, such as with the Bakken shale, where the revolution in drilling technology led by hydraulic

fracturing has pushed United States oil production to a 24-year high.[58] BLM must therefore disclose and analyze the demonstrated likelihood of use of hydraulic fracturing and/or other unconventional recovery techniques in central and eastern Montana and western North Dakota.[59] Elements of these technologies have been used individually for decades. However, the combination of practices employed by industry recently is new: "Modern formation stimulation practices have become more complex and the process has developed into a sophisticated, engineered process in which production companies strive to design a hydraulic fracturing treatment to emplace fracture networks in specific areas."[60]

Hydraulic fracturing, a dangerous practice in which operators inject toxic fluid underground under extreme pressure to release oil and gas, has greatly increased industry interest in developing tightly held oil and gas deposits such as those in the proposed lease area. The first aspect of this technique is the hydraulic fracturing of the rock. When the rock is fractured, the resulting cracks in the rock serve as passages through which gas and liquids can flow, increasing the permeability of the fractured area. To fracture the rock, the well operator injects hydraulic fracturing fluid at tremendous pressure. The composition of fracturing fluid has changed over time. Halliburton developed the practice of injecting fluids into wells under high pressure in the late 1940s;[61] however, companies now use permutations of "slick-water" fracturing fluid developed in the mid-1990s.[62] The main ingredient in modern fracturing fluid (or "frack fluid") is generally water, although liquefied petroleum has also been used as a base fluid for modern fracking.[63] The second ingredient is a "proppant," typically sand, that becomes wedged in the fractures and holds them open so that passages remain after pressure is relieved.[64] In addition to the base fluid and proppant, a mixture of chemicals are used, for purposes such as increasing the viscosity of the fluid, keeping proppants suspended, impeding bacterial growth or mineral

[58] *See* Eaton, Joe. Bakken Oil Boom Brings Growing Pains to Small Montana Town, NATIONAL GEOGRAPHIC, July 18, 2014, *available at* http://news.nationalgeographic.com/news/special-features/energy/2014/07/140709-montana-oil-boom-bakken-shale/.

[59] Miles City Field Office Resource Management Plan and Environmental Impact Statement at 4-49 ("The use of hydraulic fracturing for well stimulation occurs in the planning area for oil and gas development. It is estimated that the typical Bakken or Three Forks Formation well requires between 2 and 4 million gallons . . . of freshwater for hydraulic fracturing operations . . ."); *See also* Isidore, Chris, *Natural gas and heating oil prices about half of last winter's cost*, NBC MONTANA, Dec. 14, 2015 *available at* http://www.790business.com/news/natural-gas-and-heating-oil-prices-about-half-of-last-winters-cost/ ("The increase in fracking resulted in record U.S. natural gas production this summer and near record supplies of natural gas.").

[60] Arthur, J. Daniel et al., Hydraulic Fracturing Considerations for Natural Gas Wells of the Marcellus Shale (Sept. 2008) ("Arthur") at 2-9.

[61] Tompkins, How will High-Volume (Slick-water) Hydraulic Fracturing of the Marcellus (or Utica) Shale Differ from Traditional Hydraulic Fracturing? Marcellus Accountability Project at 1 (Feb. 2011).

[62] New York State Department of Environmental Conservation, Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs at 5-5 (Sep. 7, 2011) ("NYDEC SGEIS") at 5-5.

[63] *Id.*; Arthur at 10; Waxman, Henry et al., United States House of Representatives, Committee on Energy and Commerce, Minority Staff, Chemicals Used in Hydraulic Fracturing (Apr. 2011) ("Waxman 2011").

[64] Arthur at 10.

deposition.[65]

Frack fluid is hazardous to human health, although industry's resistance to disclosing the full list of ingredients formulation of frack fluid makes it difficult for the public to know exactly how dangerous.[66] A congressional report sampling incomplete industry self-reports found that "[t]he oil and gas service companies used hydraulic fracturing products containing 29 chemicals that are (1) known or possible human carcinogens, (2) regulated under the Safe Drinking Water Act for their risks to human health, or (3) listed as hazardous air pollutants under the Clean Air Act."[67] Recently published scientific papers also describe the harmfulness of the chemicals often in fracking fluid. One study reviewed a list of 944 fracking fluid products containing 632 chemicals, 353 of which could be identified with Chemical Abstract Service numbers.[68] The study concluded that more than 75 percent of the chemicals could affect the skin, eyes, and other sensory organs, and the respiratory and gastrointestinal systems; approximately 40 to 50 percent could affect the brain/nervous system, immune and cardiovascular systems, and the kidneys; 37 percent could affect the endocrine system; and 25 percent could cause cancer and mutations.[69] Another study reviewed exposures to fracking chemicals and noted that trimethylbenzenes are among the largest contributors to non-cancer threats for people living within a half mile of a well, while benzene is the largest contributor to cumulative cancer risk for people, regardless of the distance from the wells.[70]

Separate from hydraulic fracturing, the second technological development underlying the recent shale boom is the use of horizontal drilling. Shale oil and shale gas formations are typically located far below the surface, and as such, the cost of drilling a vertical well to access the layer is high.[71] The shale formation itself is typically a thin layer-such that a vertical well only provides access to a small volume of shale, which is called the cylinder of permeability surrounding the well bore.[72] Although hydraulic fracturing increases the radius of this cylinder of shale, this effect is often itself insufficient to allow profitable extraction of shale resources.[73] Horizontal drilling solves this economic problem: by drilling sideways along the shale formation

[65] Arthur at 10.
[66] Waxman 2011; *see also* Colborn, Theo et al., Natural Gas Operations for a Public Health Perspective, 17 Human and Ecological Risk Assessment 1039 (2011) ("Colborn 2011"); McKenzie, Lisa et al., Human Health Risk Assessment of Air Emissions form Development of Unconventional Natural Gas Resources, Sci. Total Environ. (2012), doi:10.1016/j.scitotenv.2012.02.018 ("McKenzie 2012").
[67] Waxman 2011 at 8.
[68] Colborn 2011 at 1.
[69] Colborn 2011 at 1.
[70] McKenzie 2012 at 5.
[71] *See* CITI, Resurging North American Oil Production and the Death of the Peak Oil Hypothesis (Feb. 15, 2012) ("CITI") at 9; United States Energy Information Administration, *Review of Emerging Resources: U.S. Shale Gas and Shale Oil Plays* at 4 (July 2011) ("USEIA 2011"); Orszag, Peter, *Fracking Boom Could Finally Cap Myth of Peak Oil* (Jan. 31, 2011) ("Orszag").
[72] *See Id.*, U.S. EIA 2011 at 5.
[73] *Id.*; Arthur at 8 (Fig. 4).

once it is reached, a company can extract resources from a much higher volume of shale for the same amount of drilling through the overburden, drastically increasing the fraction of total well length that passes through producing zones.[74] The practice of combining horizontal drilling with hydraulic fracturing was developed in the early 1990s.[75]

A third technological development is the use of "multi-stage" fracking. In the 1990s industry began drilling longer and longer horizontal well segments. The difficulty of hydraulic fracturing increases with the length of the well bore to be fractured, however, both because longer well segments are more likely to pass through varied conditions in the rock and because it becomes difficult to create the high pressures required in a larger volume.[76] In 2002 industry began to address these problems by employing multi-stage fracking. In multi-stage fracking, the operator treats only part of the wellbore at a time, typically 300 to 500 feet.[77] Each stage "may require 300,000 to 600,000 gallons of water," and consequently, a frack job that is two or more stages can contaminate and pump into the ground over a million gallons of water.[78]

Notwithstanding the grave impacts that these practices have on the environment, this new combination of multi-stage slickwater hydraulic fracturing and horizontal drilling (hereinafter "fracking") has made it possible to profitably extract oil and gas from formations that only a few years ago were generally viewed as uneconomical to develop.[79] The effect of hydraulic fracturing on the oil and gas markets has been tremendous, with many reports documenting the boom in domestic energy production. A recent congressional report notes that "[a]s a result of hydraulic fracturing and advances in horizontal drilling technology, natural gas production in 2010 reached the highest level in decades."[80] A 2011 U.S. EIA report notes how recently these changes have occurred, stating that "only in the past 5 years has shale gas been recognized as a 'game changer' for the U.S. natural gas market."[81] With respect to oil, the EIA notes that oil production has been increasing, with the production of shale oil resources pushing levels even higher over the next decade:

> Domestic crude oil production has increased over the past few years, reversing a decline that began in 1986. U.S. crude oil production increased from 5.0 million barrels per day in 2008 to 5.5 million barrels per day in 2010. Over the next 10 years, continued

[74] Venoco, Inc., Monterey Shale Focused Analyst Day Slide Show at 23 (May 26, 2010) ("Venoco Slide Show"), U.S. Energy Information Administration, Annual Energy Outlook 2012 with Projections to 2035, DOE/EIA-0383 (2012) ("USEIA 2012") at 63.
[75] *Id.*
[76] NYDEC SGEIS at 5-93.
[77] *Id.*
[78] *Id.*
[79] CITI; USEIA 2011 at 4; Orszag.
[80] Waxman 2011 at 1.
[81] USEIA 2011 at 4.

development of tight oil, in combination with the ongoing development of offshore resources in the Gulf of Mexico, pushes domestic crude oil production higher.[82]

Thus, it is evident that fracking, including fracking with the most recent techniques that have been associated with serious adverse impacts in other areas of the country, is poised to expand; it is further evident that the oil and gas industry is still exploring new locations to develop, and the nation has not yet seen the full extent of fracking's impact on oil and gas development and production.

In large part through the use of fracking, the oil and gas sector is now producing huge amounts of oil and gas throughout the United States, rapidly transforming the domestic energy outlook. Fracking is occurring in the absence of any adequate federal or state oversight. The current informational and regulatory void on the state level makes it even more critical that the BLM perform its legal obligations to review, analyze, disclose, and avoid and mitigate the impacts of its oil and gas leasing decisions.

In a leasing EIS, BLM must consider the impact of fracking on specific geological formations, surface and ground water resources, seismic potential, or human, animal, and plant health and safety concerns present in the area to be leased.

IV. BLM Must Evaluate Potential Impacts to Air Quality

Oil and gas operations emit numerous air pollutants, including volatile organic compounds ("VOCs"), nitrogen oxides ("NO_X"), particulate matter, hydrogen sulfide, and methane. Hydraulic fracturing ("fracking") operations are particularly harmful, emitting especially large amounts of pollution, including toxic air pollutants. Permitting fracking and other well stimulation techniques will greatly increase the release of harmful air emissions in these and other regions. BLM must analyze air quality impacts from new development in conjunction with the existing air quality landscape for the proposed lease parcels. BLM must analyze increased emissions from foreseeable oil and gas development for these lease parcels in order to prevent further degradation of local air quality, respiratory illnesses, premature death, hospital visits, as well as missed school and work days.

The Clean Air Act requires compliance standards called the National Ambient Air Quality Standards ("NAAQS") for pollutants including ozone and particulate matter. Any leasing EIS must take steps to analyze the impacts of all foreseeable future air emissions from induced oil and gas development and operations on these lease parcels, and cumulatively with future lease parcel sales in the Montana/Dakotas region. Forecasting cumulative air quality impacts from the leasing and resource management of fossil fuel development is required by well-

[82] USEIA 2012 at 2.

established law. *WildEarth Guardians v. United States Office of Surface Mining Reclamation & Enforcement*, 104 F. Supp. 3d 1208, 1227–1228 (D. Colo. 2015).

BLM can readily identify oil and gas volume estimates for lease parcels by utilizing their own EPCA Phase III spatial data and overlaying the lease parcel boundary map provided in the lease sale notice. Estimating emissions from production of oil and gas wells per volume produced then can be readily calculated using a number of EPA emissions inventory calculation tools. The type, quantity and future impact of additional air emissions from this new potential development can and must be analyzed in conjunction with the existing air quality landscape in the affected region.

Given the likelihood that fracking and other similarly harmful techniques would be employed in the exploration and development of the parcels, BLM has an obligation to analyze and disclose the potential impacts resulting from such frequently used practices. BLM cannot excuse itself of this obligation on account of the fact that "the types, magnitude and duration of potential impacts cannot be precisely quantified at this time, and would vary according to many factors."[83] The purpose of a NEPA analysis is for BLM to look at the impacts in total, and to take a hard look at all "reasonably foreseeable" impacts now, before leasing the land. NEPA regulations and case law clearly establish that uncertainty about the precise extent and nature of environmental impacts does not relieve an agency of the obligation to disclose and analyze those impacts utilizing the best information available. *See* 40 C.F.R. § 1502.22(a),(b).

BLM's must also identify environmental impact mitigation methods for controlling air pollution emissions, under NEPA's requirement that the agency identify mitigation measures, 40 C.F.R. § 1508.25, and consider all reasonable alternatives. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. Cal. 2008) (citing 40 C.F.R. § 1502.14(a)).

A. Types of Air Emissions

BLM must disclose the type, extent, or source of emissions from unconventional oil and gas extraction methods, such as fracking. The rapid expansion of unconventional oil makes the impacts associated with fracking foreseeable.

Unconventional oil and gas operations emit large amounts of toxic air pollutants,[84] also referred to as Hazardous Air Pollutants, which are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental

[83] EA at 45.
[84] Sierra Club et al. comments on New Source Performance Standards: Oil and Natural Gas Sector; Review and Proposed Rule for Subpart OOOO (Nov. 30, 2011) ("Sierra Club Comments") at 13.

effects.[85] The reporting requirements recently implemented by the California South Coast Air Quality Management District ("SCAQMD") have shown that at least 44 chemicals known to be air toxics have been used in fracking and other types of unconventional oil and gas recovery in California.[86] Through the implementation of these new reporting requirements, it is now known that operators have been using several types of air toxics in California, including crystalline silica, methanol, hydrochloric acid, hydrofluoric acid, 2-butoxyethanol, ethyl glycol monobutyl ether, xylene, amorphous silica fume, aluminum oxide, acrylic polymer, acetophenone, and ethylbenzene. Many of these chemicals also appear on the EPA's list of hazardous air pollutants.[87] The EPA has also identified six "criteria" air pollutants that must be regulated under the NAAQS due to their potential to cause primary and secondary health effects. Concentrations of these pollutants—ozone, particulate matter, carbon monoxide, NO_X, sulfur dioxide and lead—will likely increase in regions where unconventional oil and gas recovery techniques are permitted.

VOCs, from car and truck engines as well as the drilling and completion stages of oil and gas production, make up about 3.5 percent of the gases emitted by oil or gas operations.[88] The VOCs emitted include the BTEX compounds—benzene, toluene, ethyl benzene, and xylene—which are listed as Hazardous Air Pollutants.[89] There is substantial evidence showing the grave harm from these pollutants.[90] Recent studies and reports confirm the pervasive and extensive amount of VOCs emitted by unconventional oil and gas extraction.[91] In particular, a study covering sites near oil and gas wells in five different states found that concentrations of eight volatile chemicals, including benzene, formaldehyde and hydrogen sulfide, exceeded risk-based comparison values under several operational circumstances.[92] Another study determined that vehicle traffic and engine exhaust were likely the sources of intermittently high dust and benzene

[85] *See* "Hazardous Air Pollutants" at U.S. Environmental Protection Agency, Hazardous Air Pollutants, https://www.epa.gov/haps (accessed Jan. 5, 2017).
[86] Center for Biological Diversity, Air Toxics One-Year Report 1 (June 2014).
[87] U.S. Environmental Protection Agency, The Clean Air Act Amendments of 1990 List of Hazardous Air Pollutants, Technology Transfer Network Air Toxics Web Site, *available at* http://www.epa.gov/ttnatw01/orig189.html (accessed July 29, 2015).
[88] Brown, Heather, Memorandum to Bruce Moore, U.S.EPA/OAQPS/SPPD re Composition of Natural Gas for use in the Oil and Natural Gas Sector Rulemaking, July 28, 2011 ("Brown Memo") at 3.
[89] 42 U.S.C. § 7412(b).
[90] Colborn 2011; McKenzie 2012; Food and Water Watch, The Case for a Ban on Gas Fracking (June 2011).
[91] McCawley, M., Air, Noise, and Light Monitoring Plan for Assessing Environmental Impacts of Horizontal Gas Well Drilling Operations (ETD-10 Project), West Virginia University School of Public Health, Morgantown, WV (2013) ("McCawley 2013"), *available at* http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/legislativestudies/Documents/WVU Final Air Noise Light Protocol.pdf; Center for Biological Diversity, Dirty Dozen: The 12 Most Commonly Used Air Toxics in Unconventional Oil Development in the Los Angeles Basin (Sept. 2013).
[92] Macey, G.P. et al., (2014). Air Concentrations of Volatile Compounds Near Oil and Gas Production: A Community-Based Exploratory Study, 13 Environmental Health 82 (2014) at 1.

concentrations observed near well pads.[93] Recent studies have found that oil and gas operations are likely responsible for elevated levels of hydrocarbons such as benzene downwind of the Denver-Julesburg Fossil Fuel Basin, north of Denver.[94] Another study found that oil and gas operations in this area emit approximately 55 percent of the VOCs in northeastern Colorado.[95]

VOCs can form ground-level (tropospheric) ozone when combined with NO_X, from compressor engines, turbines, other engines used in drilling, and flaring,[96] and sunlight. This reaction can diminish visibility and air quality and harm vegetation. Tropospheric ozone can also be caused by methane, which is leaked and vented at various stages of unconventional oil and gas development, as it interacts with nitrogen oxides and sunlight.[97] In addition to its role as a greenhouse gas, methane contributes to increased concentrations of ground-level ozone, the primary component of smog, because it is an ozone precursor.[98] Methane's effect on ozone concentrations can be substantial. One paper modeled reductions in various anthropogenic ozone precursor emissions and found that "[r]educing anthropogenic CH_4 emissions by 50 [percent] nearly halves the incidence of U.S. high-O_3 events . . . ."[99] Like methane, VOCs and NO_X are also ozone precursors; therefore, many regions around the country with substantial oil and gas operations are now suffering from extreme ozone levels due to heavy emissions of these pollutants.[100] Ozone can result in serious health conditions, including heart and lung disease and mortality.[101] A recent study of ozone pollution in the Uintah Basin of northeastern Utah, a rural area that experiences hazardous tropospheric ozone concentrations, found that oil and gas

[93] McCawley 2013.

[94] Pétron, G. et al., Hydrocarbon Emissions Characterization in the Colorado Front Range – A Pilot Study, 117 J. Geophysical Research D04304 (2012), at 8, 13 ("Pétron 2012").
[95] Gilman, J.B. et al., Source Signature of Volatile Organic Compounds from Oil and Natural Gas Operations in Northeastern Colorado, 47 Envtl. Sci. and Tech. 1297, 1303 (2013) ("Gilman 2013").
[96] *See, e.g.*, U.S. Environmental Protection Agency, Oil and Gas Sector: Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution: Background Technical Support Document for Proposed Standards at 3-6 (July 2011); Armendariz, Al, Emissions for Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (2009) ("Armendariz") at 24.
[97] Fiore, Arlene et al., Linking Ozone Pollution and Climate Change: The Case for Controlling Methane, 29 Geophys. Res Letters 19 (2002) ("Fiore 2002")
[98] U.S. Environmental Protection Agency, Oil and Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews Proposed Rule, 76 Fed. Reg 52,738 (Aug. 23, 2011).
[99] Fiore 2002; *see also* Martin, Randal et al., Final Report: Uinta Basin Winter Ozone and Air Quality Study Dec. 2010–March 2011 (2011) at 7.
[100] Armendariz, Al, Emissions for Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (2009) at 1, 3, 25–26; Wendy Koch, *Wyoming's Smog Exceeds Los Angeles' Due to Gas Drilling*, USA Today (May 9, 2011); Craft, Elena, Environmental Defense Fund, Do Shale Gas Activities Play a Role in Rising Ozone Levels? (2012); Colorado Dept. of Public Health and Environment, Conservation Commission, Colorado Weekly and Monthly Oil and Gas Statistics (July 6, 2012) at 12.
[101] U.S. Environmental Protection Agency, Integrated Science Assessment (ISA) for Ozone (O3) and Related Photochemical Oxidants (2013).

operations were responsible for 98 to 99 percent of VOCs and 57 to 61 percent of NO_X emitted from sources within the Basin considered in the study's inventory.[102]

Oil and gas operations can also emit hydrogen sulfide. The hydrogen sulfide is contained in the natural gas and makes that gas "sour."[103] Hydrogen sulfide may be emitted during all stages of operation, including exploration, extraction, treatment and storage, transportation, and refining. Long-term exposure to hydrogen sulfide is linked to respiratory infections, eye, nose, and throat irritation, breathlessness, nausea, dizziness, confusion, and headaches.[104]

The oil and gas industry is also a major source of particulate matter. The heavy equipment regularly used in the industry burns diesel fuel, generating fine particulate matter[105] that is especially harmful.[106] Vehicles traveling on unpaved roads also kick up fugitive dust, which is particulate matter.[107] Further, both NO_X and VOCs, which as discussed above are heavily emitted by the oil and gas industry, are also particulate matter precursors.[108] Some of the health effects associated with particulate matter exposure are "premature mortality, increased hospital admissions and development of chronic respiratory disease."[109]

Fracking results in additional air pollution that can create a severe threat to human health. One analysis found that 37 percent of the chemicals found at fracked gas wells were volatile, and that of those volatile chemicals, 81 percent can harm the brain and nervous system, 71 percent can harm the cardiovascular system and blood, and 66 percent can harm the kidneys.[110] Also, the SCAQMD has identified three areas of dangerous and unregulated air emissions from fracking: (1) the mixing of the fracking chemicals; (2) the use of the silica, or sand, as a proppant, which causes the deadly disease silicosis; and (3) the storage of fracking fluid once it comes back to the surface.[111] Preparation of the fluids used for well completion often involves onsite mixing of

[102] Lyman, Seth and Howard Shorthill, Final Report: 2012 Uintah Basin Winter Ozone & Air Quality Study, Utah Department of Environmental Quality (2013); *see also* Gilman 2013.
[103] Sierra Club Comments.
[104] U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Report to Congress on Hydrogen Sulfide Air Emissions Associated with the Extraction of Oil and Natural Gas (EPA-453/R-93-045) at i (Oct. 1993) ("USEPA 1993").
[105] Earthworks, Sources of Oil and Gas Pollution (2011).
[106] Bay Area Air Quality Management District, Particulate Matter Overview, Particulate Matter and Human Health (2012).
[107] U.S. Environmental Protection Agency, Regulatory Impact Analysis for the Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter (June 2012), http://www.epa.gov/ttnecas1/regdata/RIAs/PMRIACombinedFile_Bookmarked.pdfat 2-2, ("EPA RIA").
[108] EPA RIA at 2-2.
[109] U.S. Environmental Protection Agency, National Ambient Air Quality Standards for Particulate Matter Proposed Rule, 77 Fed. Reg. 38,890, 38,893 (June 29, 2012).
[110] Colborn 2011 at 8.
[111] South Coast Air Quality Management District, Draft Staff Report on Proposed Rule 1148.2 - Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers (January 2013) at 15 ("SCAQMD Draft Staff Report PR1148-2").

gravel or proppants with fluid, a process that potentially results in major amounts of particulate matter emissions.[112] Further, these proppants often include silica sand, which increases the risk of lung disease and silicosis when inhaled.[113] Finally, as flowback returns to the surface and is deposited in pits or tanks that are open to the atmosphere, there is the potential for organic compounds and toxic air pollutants to be emitted, which are harmful to human health as described above.[114]

The EIS should study the potential for oil and gas operations sites in the planning area to emit such air toxics and any other pollutants that may pose a risk to human health, paying particular attention to the impacts of air pollution on environmental justice communities that already bear the burden of disproportionately high levels of air pollution. The EIS should rely on the most up-to-date information regarding the contribution of oil and gas operations to VOC and air toxics levels. Recent studies in Weld County show that existing emissions inventories likely underestimate the contribution of oil and gas operations to VOC levels by a factor of two.[115] Further, researchers have found that existing emissions inventories vastly underestimate the contribution of oil and gas operations to hazardous air pollution concentrations in Weld County, suggesting that the health risk assessments conducted using these inventories are similarly inaccurate and therefore underestimate exposures and health risks.[116] This study estimated benzene emission rates and other VOCs using air quality measurements taken from an airplane over Weld County. Current inventories estimating benzene emissions from oil and gas operators in the study area underestimated emissions by four to nine times. The study suggests that other hazardous air pollutants (such as toluene, ethylbenzene, etc.) could similarly be underestimated and that oil and gas sites could be a bigger source of benzene than vehicle emissions, previously thought to be the largest source in the area.

B. Sources of Air Emissions

Harmful air pollutants are emitted during every stage of unconventional oil and gas recovery, including drilling, completion, well stimulation, production, and disposal. Drilling and casing the wellbore require substantial power from large equipment. The engines used typically run on diesel fuel, which emits particularly harmful types of air pollutants when burned. Similarly, high-powered pump engines are used in the fracturing and completion phase. This too

[112] *Id.*
[113] South Coast Air Quality Management District, Response to Questions re Air Quality Risks of Hydraulic Fracturing in California, Submission to Joint Senate Hearing (2013) at 3.
[114] SCAQMD Draft Staff Report PR1148-2 at 15.
[115] Pétron 2012 at 1, 18 (noting state and federal inventories likely underestimate hydrocarbon emissions from oil and gas operations by as much as factor of two).
[116] Pétron, G. et al., A New Look at Methane and Non-Methane Hydrocarbon Emissions from Oil and Natural Gas Operations in the Colorado Denver-Julesburg Basin, accepted for publication, online May 7, 2014, J. Geophys. Res: Atmospheres, *available at* http://onlinelibrary.wiley.com/doi/10.1002/2013JD021272/abstract.

can amount in large volumes of air pollution. Flaring, venting, and fugitive emissions of gas are also a potential source of air emissions. Gas flaring and venting can occur in both oil and gas recovery processes when underground gas rises to the surface and is not captured as part of production. Fugitive emissions can occur at every stage of extraction and production, often leading to high volumes of gas being released into the air. Methane emissions from oil and gas production are as much as 270 percent greater than previously estimated by calculation.[117] Recent studies show that emissions from pneumatic valves (which control routine operations at the well pad by venting methane during normal operation) and fugitive emissions are higher than EPA estimates.[118]

Evaporation from pits can also contribute to air pollution. Pits that store drilling waste, produced water, and other waste fluid may be exposed to the open air. Chemicals mixed with the wastewater—including the additives used to make fracking fluids, as well as volatile hydrocarbons, such as benzene and toluene, brought to the surface with the waste—can escape into the air through evaporation. Some pits are equipped with pumps that spray effluents into the air to hasten the evaporation process. Even where waste fluid is stored in so-called "closed loop" storage tanks, fugitive emissions can escape from tanks.

As mentioned above, increased truck traffic will lead to more air emissions. Trucks capable of transporting large volumes of chemicals and waste fluid typically use large engines that run on diesel fuel. Air pollutants from truck engines will be emitted not only at the well site, but also along truck routes to and from the site.

The EIS must provide an adequate analysis and disclosure of the effects the lease sale could have on air quality, including the impacts that would result from fracking. BLM cannot postpone the discussion of air pollution and climate change impacts until site-specific plans are proposed. Because BLM must analyze impacts at "the earliest practicable time," and no benefit would be gained from postponing the analysis, BLM must discuss these cumulative impacts before the lease sale.

c. Impact of Increased Air Pollution

The potential harms resulting from increased exposure to the dangerous air pollutants described above are serious and wide-ranging. The negative effects of criteria pollutants are well-documented and are summarized by the EPA's website:

[117] Miller, S. M. et al. Anthropogenic Emissions of Methane in the United States, Proc. Natl. Acad. Sci. Early Edition, DOI: 10.1073/pnas.1314392110 (2013) (Miller 2013).
[118] Allen, David et al., Measurements of methane emissions at natural gas production sites in the United States, PNAS Early Edition, doi:10.1073/pnas.1304880110 (2013). (Allen 2013); Harriss, Robert et al. Using Multi-Scale Measurements to Improve Methane Emission Estimates from Oil and Gas Operations in the Barnett Shale Region, Texas, Environ. Sci. Technol., 2015, 49 (13), pp. 7524–7526.

Nitrogen oxides ("NOx") react with ammonia, moisture, and other compounds to form small particles. These small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and can aggravate existing heart disease, leading to increased hospital admissions and premature death. NOx and VOCs react in the presence of heat and sunlight to form ozone.

Particulate matter ("PM")—especially fine particles—contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including: premature death in people with heart or lung disease, increased mortality, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.[119]

Sulfur Dioxide ("SO_2") has been shown to cause an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms.[120] Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics.[121]

Carbon Monoxide ("CO") can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues. At extremely high levels, CO can cause death.[122] Exposure to CO can reduce the oxygen-carrying capacity of the blood. People with several types of heart disease already have a reduced capacity for pumping oxygenated blood to the heart, which can cause them to experience myocardial ischemia (reduced oxygen to the heart), often accompanied by chest pain (angina), when exercising or under increased stress.[123] For these people, short-term CO exposure further affects their body's already compromised ability to respond to the increased oxygen demands of exercise or exertion.[124]

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[119] U.S. Environmental Protection Agency, Particulate Matter, (PM) http://www.epa.gov/airquality/particlepollution/health.html (accessed July 30, 2015); Ostro, Bart et al., Long-term Exposure to Constituents of Fine Particulate Air Pollution and Mortality: Results from the California Teachers Study, 118 Environmental Health Perspectives 3 (2010).
[120] U.S. Environmental Protection Agency, Sulfur Dioxide, *available at* http://www.epa.gov/airquality/sulfurdioxide/health html, (accessed July 29, 2015).
[121] *Id.*
[122] U.S. Environmental Protection Agency, Carbon Monoxide, *available at* http://www.epa.gov/airquality/carbonmonoxide/health html (accessed July 29, 2015).
[123] *Id.*
[124] *Id.*

> *Ozone* ("O_3") can trigger or worsen asthma and other respiratory ailments.[125] Ground-level ozone can have harmful effects on sensitive vegetation and ecosystems. Ozone may also lead to loss of species diversity and changes to habitat quality, water cycles, and nutrient cycles.

Air toxics and hazardous air pollutants, by definition, can result in harm to human health and safety. The full extent of the health effects of exposure is still far from being complete, but already there are numerous studies that have found these chemicals to have serious health consequences for humans exposed to even minimal amounts. The range of illnesses that can result are summarized in a study by Dr. Theo Colburn, which charts which chemicals have been shown to be linked to certain illnesses.[126]

Natural gas drilling operations result in the emissions of numerous non-methane hydrocarbons ("NMHCs") that have been linked to numerous adverse health effects. A recent study that analyzed air samples taken during drilling operations near natural gas wells and residential areas in Garfield County, detected 57 chemicals between July 2010 and October 2011, including 44 with reported health effects.[127] For example:

> Thirty-five chemicals were found to affect the brain/nervous system, 33 the liver/metabolism, and 30 the endocrine system, which includes reproductive and developmental effects. The categories with the next highest numbers of effects were the immune system (28), cardiovascular/blood (27), and the sensory and respiratory systems (25 each). Eight chemicals had health effects in all 12 categories. There were also several chemicals for which no health effect data could be found.[128]

The study found extremely high levels of methylene chloride, which may be used as cleaning solvents to remove waxy paraffin that is commonly deposited by raw natural gas in the region. These deposits solidify at ambient temperatures and build up on equipment.[129] While none of the detected chemicals exceeded governmental safety thresholds of exposure, the study noted that such thresholds are typically based on "exposure of a grown man encountering relatively high concentrations of a chemical over a brief time period, for example, during occupational exposure."[130] Consequently, such thresholds may not apply to individuals experiencing "chronic, sporadic, low-level exposure," including sensitive populations such as

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[125] U.S. Environmental Protection Agency, Ground Level Ozone, *available at* http://www.epa.gov/airquality/ozonepollution/health.html (accessed July 29, 2015).
[126] Colborn 2011; Colborn, Theo, et al., An Exploratory Study of Air Quality near Natural Gas Operations, 20 Human and Ecological Risk Assessment: An International Journal 1 (2012) ("Colborn 2012").
[127] Colborn 2012 at pp. 21–22 (pages refer to page numbers in attached manuscript and not journal pages).
[128] Colborn 2012, p. 11.
[129] *Id*., p. 10.
[130] *Id*., pp. 11–12.

children, the elderly, and pregnant women.[131] For example, the study detected polycyclic aromatic hydrocarbon ("PAH") levels that could be of "clinical significance," as recent studies have linked low levels of exposure to lower mental development in children who were prenatally exposed.[132] In addition, government safety standards do not take into account "the kinds of effects found from low-level exposure to endocrine disrupting chemicals . . . , which can be particularly harmful during prenatal development and childhood.[133]

The EIS should incorporate a literature review of the harmful effects of each of these chemicals known to be used in fracking and other unconventional oil and gas extraction methods. Without knowing the effects of each chemical, the EIS cannot accurately project the true impact of unconventional oil and gas extraction.

d. Air Modeling

BLM must employ readily-available air quality modeling tools to understand what areas and communities will most likely be affected by air pollution in any environmental review of this lease parcel sale. It is crucial to gather independent data rather than relying on industry estimates, which may be inaccurate or biased. Wind and weather patterns, and atmospheric chemistry, determine the fate and transport of air pollution over a region, over time. Any BLM environmental review document should be informed by air modeling to show where the air pollution will flow.

V. BLM Must Disclose Greenhouse Gas Emissions and Impacts to Climate From Oil and Gas Drilling, Processing, Transport, and Combustion

Meaningful consideration of greenhouse gas ("GHG") emissions is clearly within the scope of required NEPA review. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). As the Ninth Circuit has held, in the context of fuel economy standard rules:

> The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct. Any given rule setting a CAFE standard might have an "individually minor" effect on the environment, but these rules are "collectively significant actions taking place over a period of time." *Ctr. for Biological Diversity*, 538 F.3d at 1216 (quoting 40 C.F.R. § 1508.7).

[131] *Id*. p. 12.
[132] *Id*., p. 10–11.
[133] *Id*., p. 12.

The courts have ruled that federal agencies consider indirect GHG emissions resulting from agency policy, regulatory, and leasing decisions. For example, agencies cannot ignore the indirect air quality and climate change impact of decisions that would open up access to coal reserves. *See Mid States Coal. For Progress v. Surface Transp. Bd*., 345 F.3d 520, 532, 550 (8th Cir. 2003); *High Country Conservation Advocates v. U.S. Forest Serv*., 52 F.Supp. 3d 1174, 1197–98 (D. Colo. 2014).

BLM must analyze the impacts of increased oil and gas development on GHG emissions and climate change based on the proposed Montana and Dakota lease sales. Although BLM's *Climate Change Supplementary Information Report for Montana, North Dakota, and South Dakota* (Climate Change SIR, 2010) provides a useful broad-based analysis of climate impacts to Montana and the Dakotas, because of the readily foreseeable emissions consequences of additional leasing, BLM must provide site-specific emissions analyses for the proposed lease parcels. The U.S. 10th Circuit Court of Appeals has decisively rejected BLM arguments that the net effect of its fossil fuel leasing decisions is zero, under the (erroneous) assumption that federal fossil fuel leasing is subject to "perfect substitution" and does not effect energy price, consumption, or resulting emssions.[134]

NEPA requires "reasonable forecasting," which includes the consideration of "reasonably foreseeable future actions . . . even if they are not specific proposals." *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1079 (9th Cir. 2011) (citation omitted). That BLM cannot "accurately" calculate the total emissions expected from full development is not a rational basis for cutting off its analysis. "Because speculation is . . . implicit in NEPA," agencies may not "shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry." *Id*. Indeed, the EA for a recent lease sale in Utah undercuts BLM's assertion here that GHGs cannot be quantified at the leasing stage.[135] *See High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1196 (D. Colo. 2014) (decision to forgo calculating mine's reasonably foreseeable GHG emissions was arbitrary "in light of the agencies' apparent ability to perform such calculations").

The final CEQ *Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews* remains persuasive on the issue of federal agency review of greenhouse gas emissions as foreseeable direct and indirect effects of the proposed action. 81 Fed. Reg. 51,866 (Aug. 5, 2016). The CEQ guidance provides clear direction for BLM to conduct a lifecycle GHG analysis because the modeling and tools to conduct this type of analysis are readily available to the agency:

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[134] *Wildearth Guardians v. BLM*, No. 15-8109 (10th Cir., Sept. 15, 2017).

[135] U.S. Bureau of Land Management, Environmental Assessment for West Desert District, Fillmore Field Office, August 2015 Oil and Gas Lease Sale, pp. 57–58 (Dec. 2015); U.S. Bureau of Land Management, Greenhouse Gases Estimate (West Desert District Nov 2015 Lease Sale), http://www.blm.gov/style/medialib/blm/ut/natural_resources/airQuality.Par.38.

> If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action. Agencies should disclose the information and any assumptions used in the analysis and explain any uncertainties. To compare a project's estimated direct and indirect emissions with GHG emissions from the no-action alternative, agencies should draw on existing, timely, objective, and authoritative analyses, such as those by the Energy Information Administration, the Federal Energy Management Program, or Office of Fossil Energy of the Department of Energy. In the absence of such analyses, agencies should use other available information. 81 Fed. Reg. 51,866 at 16 (Aug. 5, 2016) (citations omitted).

CEQ's guidance even provides an example of where a lifecycle analysis is appropriate in a leasing context at footnote 42:

> The indirect effects of such an action that are reasonably foreseeable at the time would vary with the circumstances of the proposed action. For actions such as a Federal lease sale of coal for energy production, the impacts associated with the end-use of the fossil fuel being extracted would be the reasonably foreseeable combustion of that coal. *Id*.

Although the 2016 CEQ guidance has been "withdrawn for further consideration," 82 Fed. Reg. 16,576 (April 5, 2017), the underlying requirement to consider climate change impacts under NEPA, including indirect and cumulative combustion impacts foreseeably resulting from fossil fuels leasing decisions, has not changed. *See Wildearth Guardians*, No. 15-8109; *S. Fork Band*, 588 F.3d at 725; *Ctr. for Biological Diversity*, 538 F.3d at 1214-15; *Mid States Coalition for Progress*, 345 F.3d at 550; *WildEarth Guardians*, 104 F. Supp. 3d at 1230; *Dine Citizens Against Ruining Our Env't*, 82 F. Supp. 3d at 1201; *High Country Conservation Advocates*, 52 F. Supp. 3d at 1174.

The volume of potential oil and gas from these lease parcels is knowable and calculating the direct emissions impact from development of these lease parcels is also quantifiable. Numerous greenhouse gas calculation tools exist to develop lifecycle analyses, particularly for fossil fuel extraction, operations, transport, and end-user emissions.[136] Indeed, the Department of Energy has historically utilized these types of lifecycle emissions analyses in NEPA review of oil and gas infrastructure projects.[137] Other federal agencies have begun to employ upstream,

[136] *See* Council on Environmental Quality, Revised draft guidance for greenhouse gas emissions and climate change impacts (2014), https://ceq.doe.gov/current_developments/GHG-accounting-tools.html.
[137] U.S. Department of Energy National Energy Technology Laboratory, Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States, DOE/NETL-2014/1649 (May 29, 2014) *available at* http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf. *See also*, U.S. Department of Energy National Renewable Energy Laboratory, Life Cycle Greenhouse Gas Emissions from Electricity Generation Fact Sheet, Pub No. NREL/FS-6A20-57817 (2013) *available at*

downstream, and lifecycle greenhouse gas emissions analyses for NEPA review of energy-related projects.[138] Courts have upheld the viability and usefulness of lifecycle analyses, and adoption of this trend is clearly reflected in the CEQ Guidance on Climate Change. 81 Fed. Reg. 51, 866 at 11 (Aug. 5, 2016) ("This guidance recommends that agencies quantify a proposed agency action's projected direct and indirect GHG emissions. Agencies should be guided by the principle that the extent of the analysis should be commensurate with the quantity of projected GHG emissions and take into account available data and GHG quantification tools that are suitable for and commensurate with the proposed agency action").[139]

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http://www.nrel.gov/docs/fy13osti/57187.pdf; U.S. Department of Energy National Energy Technology Laboratory Role of Alternative Energy Sources: Natural Gas Technology Assessment, Pub No. DOE/NETL- 2012/1539 (NETL, 2012) *available at* https://www.netl.doe.gov/File%20Library/Research/Energy%20Analysis/Life%20Cycle%20Analysis/LCA-2012-1539.pdf; U.S. Department of Energy National Energy Technology Laboratory, Life Cycle Greenhouse Gas Inventory of Natural Gas Extraction, Delivery and Electricity Production, Pub No. DOE/NETL-2011/1522 (NETL, 2011) *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2013_applications/sierra_club_13-69_venture/exhibits_44_45.pdf; U.S. Department of Energy National Energy Technology Laboratory, Life Cycle Analysis: Natural Gas Combined Cycle (NGCC) Power Plant, Pub No DOE/NETL-403-110509 (Sept. 10, 2012) (NETL, 2010) *available at* https://www.netl.doe.gov/energy-analyses/temp/FY13_LifeCycleAnalysisNaturalGasCombinedCycle(NGCC)PowerPlantFinal_060113.pdf.

[138] U.S. Bureau of Land Management, Final Supplemental Environmental Impact Statement for the Leasing and Underground Mining of the Greens Hollow Federal Coal Leas Tract, UTU-84102, 287 (Feb. 2015) (BLM expressly acknowledged that "the burning of the coal is an indirect impact that is a reasonable progression of the mining activity" and quantified emissions from combustion without any disclaimer about other sources of coal. *Id.* at 286. In that same EIS, BLM also acknowledged that truck traffic to haul coal would be extended as a result of the proposed lease approval, and this would generate additional emissions.) *See also*, U.S. Forest Service, Record of Decision and Final Environmental Impact Statement, Oil and Gas Leasing Analysis, Fishlake National Forest, 169 (Aug. 2013) (Table 3.12-7: shows GHG emissions from transportation, offsite refining and end use; and total direct and indirect emissions. *See also id*., Appendix E/SIR-2 (more detailed calculations of direct and indirect emissions.)) U.S. Army Corps of Engineers, Final Environmental Impact Statement: Alaska Stand Alone Gas Pipeline, Volume 2 Sec. 5.20-70–71 (Oct. 2012). The Corps, in a 2012 EIS for an intrastate natural gas pipeline in Alaska, estimated downstream emissions from combustion of the natural gas that would be transported, and also discussed the potential for natural gas to displace other, dirtier fuel sources such as coal and oil.). U.S. Department of State, Final Supplemental Environmental Impact Statement for the Keystone XL Project, § 4.14.3, Appendix U (Jan. 2014) (The Department of State, as lead agency on the Keystone XL Pipeline Review conducted a relatively comprehensive life-cycle greenhouse gas analysis for the proposed pipeline, alternatives, and baseline scenarios that could occur if the pipeline was not constructed.) U.S. Environmental Protection Agency Region X, Letter from Dennis McLerran, Regional Administrator, to Randel Perry, U.S. Army Corps of Engineers Seattle District, re Gateway Pacific Projects (Jan. 22, 2013). (EPA submitted comments on the scope of impacts that should be evaluated in the coal terminal EIS that the Corps is preparing, in which it urged the Corps to conduct a lifecycle emissions analysis of GHG emissions from the coal that would be transported via the terminal.)

[139] *High Country Conservation Advocates v. United States Forest Serv*., 52 F. Supp. 3d 1174 (D. Colo. 2014) (Court held that the agencies' failure to quantify the effect of greenhouse gas emissions from the mining lease modifications was arbitrary in violation of NEPA because the social cost of carbon protocol tool existed for such analysis under 40 C.F.R. § 1502.23 but the agencies did not provide reasons in the final EIS for not using the tool; and that the agencies' decision to forgo calculating the foreseeable GHG emissions was arbitrary in light of their ability to perform such calculations and their decision to include a detailed economic analysis of the benefits.) *See also, Dine Citizens Against Ruining Our Env't v. United States Office of Surface Mining Reclamation & Enf't*, 82 F.

Is readily foreseeable, that this lease sale will induce oil and natural gas production, transmission and ultimate end-user climate change impacts. The effects of this induced production must be considered in the EA, and in fact, necessitate a more robust review under an EIS. *See, e.g.*, *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1081–82 (9th Cir. 2011) (finding that NEPA review must consider induced coal production at mines, which was a reasonably foreseeable effect of a project to expand a railway line that would carry coal, especially where company proposing the railway line anticipated induced coal production in justifying its proposal); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549–50 (8th Cir. 2003) (environmental effects of increased coal consumption due to construction of a new rail line to reach coal mines was reasonably foreseeable and required evaluation under NEPA).

The development of an area for lease and subsequent oil and gas production would certainly result in combustion of the extracted product. As courts have held in similar contexts, combustion emissions resulting from opening up a new area to development are "reasonably foreseeable," and therefore a "proximate cause" of the leasing. See *Mid States Coal. for Progress v. Surface Transp. Bd*., 345 F.3d 520, 549 (8th Cir. 2003) (holding that agency violated NEPA when it failed to disclose and analyze the future coal combustion impacts associated with the agency's approval of a railroad line that allowed access to coal deposits); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1197 (D. Colo. 2014) (same with respect to GHG emissions resulting from approval of coal mining exploration project).

In both *Mid States Coalition* and *High Country*, the courts rejected the government's rationale that increased emissions from combustion of coal was not reasonably foreseeable because the same amount of coal would be burned without opening up the areas at issue to new coal mining. Both courts found this argument "illogical at best" and noted that "increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas." *See High Country*, 52 F. Supp. 3d at 1197 (quoting *Mid States Coalition*, 345 F.3d at 549). "On similar grounds, the development of new wells over the proposed areas for lease will increase the supply of [oil and natural gas]. At some point this additional supply will impact the demand for [oil and gas] relative to other fuel sources, and [these minerals] that otherwise would have been left in the ground will be burned. This reasonably foreseeable effect must be analyzed, even if the precise extent of the effect is less certain." *Id. See also WildEarth Guardians v. United States Office of Surface Mining, Reclamation & Enf't*, 104 F. Supp. 3d 1208, 1229–30 (D. Colo. 2015) (coal combustion was

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Supp. 3d 1201, 1213–1218 (D. Colo. 2015) (Court held that the agency failed to adequately consider the reasonably foreseeable combustion-related downstream effects of the proposed action. Also held that that combustion emissions associated with a mine that fed a single power plant were reasonably foreseeable because the agency knew where the coal would be consumed).

indirect effect of agency's approval of mining plan modifications that "increased the area of federal land on which mining has occurred" and "led to an increase in the amount of federal coal available for combustion.").[140]

Even if cannot definitively be estimated with a high degree of accuracy, it is possible for BLM to identify significant sources of GHG emissions and range of emissions scenarios, which would enable the identification of specific measures to reduce emissions and an understanding of the extent to which certain emissions are avoidable. The extreme urgency of the climate crisis requires BLM to pursue all means available to limit the climate change effects of its actions. Any emissions source, no matter how small, is potentially significant, such that BLM should fully explore mitigation and avoidance options for all sources.

BLM often suggests that quantification of GHGs would occur when actual drilling is proposed. But by delaying quantification until after a lease is issued, BLM may prejudice the consideration of alternatives or leasing stipulations that would avoid or reduce greenhouse gas emissions to an extent not otherwise available after leasing. BLM has long (but incorrectly) maintained that leasing stipulations can only be imposed with the issuance of the lease. Thereafter, purportedly, its authority to condition drilling is limited to "reasonable measures" or "conditions of approval" that may not be "[in]consistent with lease rights granted." 43 C.F.R. § 3101.1-2. Cost-prohibitive measures could therefore potentially be barred. Further, measures to "minimize" impacts may be imposed, but those may not necessarily avoid impacts altogether. *Id.* Waiting until the drilling stage could also be too little too late, as various other actions may occur between leasing and drilling, such as the execution of unit agreements, or construction of roads or pipelines, all of which may narrow mitigation options available at the drilling stage. *See William P. Maycock et al.*, 177 I.B.L.A. 1, 20–21 (Dec. Int. 2008) (holding that unit agreements limit drilling-stage alternatives).

BLM must make reasonable efforts to quantify foreseeable GHG emissions that could result from new leasing within the Montana and North Dakota regions proposed for lease—including emissions from construction, operating fossil-fuel powered equipment during production, reclamation, transportation, processing and refining, and combustion of the extracted product. Only by conducting a comprehensive EIS can BLM accurately weigh the climate change costs and benefits of alternatives, and address the following:

[140] *See also*, CEQ's Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51,866 at 14 (Aug. 5, 2016) (For example, NEPA reviews for proposed resource extraction and development projects typically include the reasonably foreseeable effects of various phases in the process, such as clearing land for the project, building access roads, extraction, transport, refining, processing, using the resource, disassembly, disposal, and reclamation. Depending on the relationship between any of the phases, as well as the authority under which they may be carried out, agencies should use the analytical scope that best informs their decision making.).

1. Sources of Greenhouse Gases

In performing a full analysis of climate impacts, BLM must consider all potential sources of GHG emissions (e.g. GHG emissions generated by transporting large amounts of water for fracking). BLM should also perform a full analysis of all gas emissions that contribute to climate change, including methane and carbon dioxide. The EIS should calculate the amount of GHG that will result on an annual basis from (1) each of the fossil fuels that can be developed within the planning area, (2) each of the well stimulation or other extraction methods that can be used, including, but not limited to, fracking, acidization, acid fracking, and gravel packing, and (3) cumulative GHG emissions expected over the long term (expressed in global warming potential of each greenhouse pollutant as well as CO_2 equivalent), including emissions throughout the entire fossil fuel lifecycle discussed above.

2. Effects of Climate Change

In addition to quantifying the total emissions that would result from the lease sale, an EIS should consider the social costs of these emissions, resulting from climate disruption's ecological and social effects. Although cost-benefit analysis is not necessarily the ideal or exclusive method for assessing contributions to an adverse effect as enormous, uncertain, and potentially catastrophic as climate change, BLM does have tools available to provide one approximation of external costs and has previously performed a "social cost of carbon" analysis in prior environmental reviews.[141] Its own internal memo identifies one available analytical tool: "For federal agencies the authoritative estimates of [social cost of carbon] are provided by the 2013 technical report of the Interagency Working Group on Social Cost of Carbon, which was convened by the Council of Economic Advisers and the Office of Management and Budget."[142] As explained in that report:

> The purpose of the "social cost of carbon" ("SCC") estimates presented here is to allow agencies to incorporate the social benefits of reducing CO_2 emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions. The SCC is an estimate of the monetized damages associated with an

[141] *See High Country Conservation Advocates v. U.S. Forest Serv.*, 2014 U.S. Dist. Lexis 87820 (D. Colo. 2014) (invalidating environmental assessment ["EA"] for improperly omitting social cost of carbon analysis, where BLM had included it in preliminary analysis); Taylor, P., *BLM crafting guidance on social cost of carbon – internal memo*, Greenwire, April 15, 2015, *available at* http://www.eenews.net/greenwire/stories/1060016810/; U.S. Bureau of Land Management, Internal Memo from Assistant Director of Resources and Planning Ed Roberson ("Roberson Internal Memo"), April 2015, *available at* http://www.eenews.net/assets/2015/04/15/document_gw_01.pdf (noting "some BLM field offices have included estimates of the [social cost of carbon] in project-level NEPA documents") (accessed July 29, 2015); *see also* Council on Environmental Quality, Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts, p. 18, *available at* www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance (accessed Jul 29, 2015) (quantitative analysis required if GHGs > 25k tons/yr).

[142] Roberson Internal Memo.

> incremental increase in carbon emissions in a given year. It is intended to include (but is not limited to) changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change.[143]

Leasing and development of unconventional wells could exact extraordinary financial costs to communities and future generations, setting aside the immeasurable loss of irreplaceable, natural values that can never be recovered. The EIS must provide an accounting of these potential costs in addition to the social cost of carbon.

Development of the planning area's oil and gas resources will fuel climate disruption and undercut the needed transition to a clean energy economy. A no new leasing alternative is, therefore, not only reasonable but also imperative. As BLM has not yet had a chance to consider a no new leasing and no fracking alternative as part of its planning processes, BLM should suspend new leasing until it properly considers this alternative in an updated RMP or in the EIS. BLM would be remiss to continue leasing when it has never stepped back and taken a hard look at this problem at the appropriate scale. Before allowing more oil and gas extraction in the planning area, BLM must: (1) comprehensively analyze the total GHG emissions which result from past, present, and potential future fossil fuel leasing and all other activities within the planning area, (2) consider their cumulative significance in the context of global climate change, carbon budgets, and other GHG pollution sources outside the planning area, and (3) formulate measures that avoid or limit their climate change effects.

VI. BLM Must Ensure That the Federal Land Policy and Management Act and the Mineral Leasing Act Are Not Violated

The MLA requires BLM to demand lessees take all reasonable measures to prevent the waste of natural gas. The MLA states:

> All leases of lands containing oil or gas, made or issued under the provisions of this chapter, shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to prevent

[143] *See* Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866, May 2013, *available at* https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf (accessed July 29, 2015); *see also* Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Feb. 2010, *available at* http://www.epa.gov/otaq/climate/regulations/scc-tsd.pdf (accessed July 29, 2015).

> waste of oil or gas developed in the land, or the entrance of water through wells drilled by him to the oil sands or oil-bearing strata, to the destruction or injury of the oil deposits.

30 U.S.C. § 225; *see also id.* § 187 (stating that for the assignment or subletting of leases that "[e]ach lease shall contain . . . a provision . . . for the prevention of undue waste"). This statutory mandate is unambiguous and must be enforced. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978) (stating that "[w]hen confronted with a statute which is plain and unambiguous on its face," "it is not necessary to look beyond the words of the statute."). As already discussed in previous sections, oil and gas operations emit significant amounts of natural gases, including methane and carbon dioxide, which can be easily prevented.[144]

Pursuant to FLPMA, BLM must "take any action necessary to prevent unnecessary or undue degradation of the [public] lands." 43 U.S.C. § 1732(b). Written in the disjunctive, BLM must prevent degradation that is "unnecessary" and degradation that is "undue." *Mineral Policy Ctr. v. Norton*, 292 F.Supp.2d 30, 41–43 (D. D.C. 2003). The protective mandate applies to BLM's planning and management decisions. *See Utah Shared Access Alliance v. Carpenter*, 463 F.3d 1125, 1136 (10th Cir. 2006) (finding that BLM's authority to prevent degradation is not limited to the RMP planning process). Greenhouse gas pollution for example causes "undue" degradation. Even if the activity causing the degradation may be "necessary," where greenhouse gas pollution is avoidable, it is still "unnecessary" degradation. 43 U.S.C. § 1732(b).

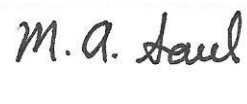
[144] *See* U.S. Government Accountability Office, Federal Oil and Gas Leases, Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases (2010) at 20.

VII. Conclusion

Oil and gas development not only fuels the climate crisis but poses significant potential public health risks and harms to the environment. Accordingly, an EIS must be prepared for the proposed lease sale, with full consideration of impacts to listed and sensitive species, water quality, air quality, climate, recreational and aesthetic uses, and cultural and historic properties.

Thank you for your consideration of these comments.

Sincerely,



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From: Rachel Granneman
To: blm_mt_north_dakotafo_lease_ea@blm.gov
Subject: RE: Comments on DOI-BLM-MT-C030-2017-0133-EA
Date: Tuesday, October 31, 2017 9:30:53 AM
Attachments: Corrected Comments on BLM Lease EA 10.30.17.pdf

Good morning,

Please find attached a corrected version of the comments submitted yesterday afternoon, fixing a minor typographical error. Thank you!

From: Rachel Granneman
Sent: Monday, October 30, 2017 4:01 PM
To: 'blm_mt_north_dakotafo_lease_ea@blm.gov'
Cc: Scott Strand; Mindi Schmitz; Howard Learner
Subject: Comments on DOI-BLM-MT-C030-2017-0133-EA

Please see the attached comments on the Environmental Assessment for DOI-BLM-MT-C030-2017-0133-EA (March 13, 2018 Oil and Gas Lease Sale).

Thank you,

Rachel Granneman

Staff Attorney

Environmental Law & Policy Center

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ENVIRONMENTAL LAW & POLICY CENTER
Protecting the Midwest's Environment and Natural Heritage

October 30, 2017

Paul Kelley
North Dakota Field Office
99 23rd Avenue West, Suite A
Dickinson, ND 58601

RE: Comments on EA for March 13, 2018 Lease in McKenzie County
(DOI-BLM-MT-C030-2017-0133-EA)

Dear Mr. Kelley,

Thank you for the opportunity to provide comments on the Environmental Assessment ("EA") and Finding of No Significant Impact ("FONSI") for the proposed March 13, 2018 lease of 120 acres of federal mineral rights in McKenzie County. Unfortunately, the EA is legally inadequate, inconsistent with the North Dakota Resource Management Plan ("RMP"), fails to fully and fairly disclose important environmental impacts, and incorrectly determines that there will not be any significant impacts from the proposed action.

I. The EA and FONSI Suffer from Procedural Failings

The procedure followed by the Bureau of Land Management ("BLM") in their release of the EA failed to comply with the purpose and spirit of the National Environmental Policy Act ("NEPA"). First, BLM drafted and released an "unsigned" FONSI at the same time that it released the EA, revealing that BLM had predetermined the result of the EA before it had even provided interested stakeholders and the public an opportunity to comment. "[I]t is clear that an agency may violate NEPA . . . when it predetermines the result of its environmental analysis." *Forest Guardians v. United States Fish & Wildlife Serv.*, 611 F.3d 692, 714 (10th Cir. 2010). In fact, pre-commitment to a FONSI was found improper by a federal court in *Davis v. Mineta*, 302 F.3d 1104, 1112 (10th Cir. 2002). Although the FONSI is "unsigned," it is clear that BLM has already made a determination that it will find that there are no significant impacts from the proposed lease. This predetermination of the issue robs stakeholders and the public of the opportunity to meaningfully comment on the substance and analysis contained within the EA.

II. The EA Improperly Fails to Consider Reasonable Alternatives

The EA discusses only two alternatives: the proposed action and a no-action alternative. This is insufficient to meet the requirements and purpose of NEPA. Just as the choice of what alternatives to include in an EIS "and the ensuing analysis, forms 'the heart of the environmental impact statement,'" *Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997) (quoting 40 C.F.R. § 1502.14), an EA must also include a discussion on appropriate

alternatives and their impacts. 40 C.F.R. § 1508.9(b); 42 U.S.C. § 4332(2)(E). The EA should have considered other alternatives, such as a no surface occupancy ("NSO") stipulation or restrictions on certain surface uses for the entire parcel or for certain portions, or alternatives that committed to various mitigation measures or timing restrictions. BLM's failure to consider reasonable alternatives renders the EA inadequate.

III. The EA Is Inconsistent with the North Dakota RMP

The EA is inconsistent with the requirements of the North Dakota Resource Management Plan (RMP). The North Dakota RMP was finalized in 1988, almost 30 years ago, before the fossil fuel boom in the Bakken area. This region is therefore improperly being developed without the benefit of an RMP that analyzes the alternative approaches to managing leases in the context of such intense oil and gas development. Yet even the 1988 RMP acknowledges that impacts to National Parks should be subject to deeper scrutiny. The RMP provides:

> Visual resources will continue to be evaluated as a part of activity planning and environmental analysis. The protection of the high visual qualities of the National Park Service units (Theodore Roosevelt National Park, Fort Union Historic Site, Knife River Indian Villages) will be considered, in cooperation with Park Service officials, when a specific mineral lease or development action potentially affecting the existing visual qualities is proposed.

North Dakota RMP at 13. As discussed in detail below, the EA fails to adequately consider the impacts of the proposed lease on the Theodore Roosevelt National Park, including the significant negative impacts on the visual resources and visitor experience. The leasing of the proposed parcel, which directly borders on the North Unit of the Theodore Roosevelt National Park, would destroy the viewshed of the park with oil rigs, trucks, and industrial equipment in the middle of some of the most scenic views in the country. Oil and gas development would lead to increased haze in the National Park and surrounding area, limiting visibility, and would interrupt the peaceful, dark night sky with flaring and industrial lighting.

IV. A Full Analysis of the Environmental Impacts for Oil and Gas Development is Required Before Leasing and the EA and FONSI Improperly Frame the Environmental Impacts of the Proposed Lease

The EA and FONSI frame the environmental impacts from the proposed lease in an improper and misleading way. BLM emphasizes throughout the EA that the actual leasing of the parcel in and of itself will not have impacts on many of the environmental resources discussed. The FONSI states, "The selected alternative does not authorize any lease exploration or development activities. . . An EA will be conducted for proposed exploration and development projects." FONSI, at 2. The EA includes statements like, "There are no impacts from offering the parcel for lease to the Theodore Roosevelt National Park visitors" (EA, p.70) and "Leasing the subject parcel would have no direct impacts on air quality." EA, p.51. While it may be technically true that the leasing of the land itself has limited impacts, this is a misleading and disingenuous way of framing the issues. It is virtually certain that if the proposed parcel is leased, oil and/or gas development will take place on the land. Indeed, that is the purpose for leasing the parcel.

Under NEPA and the Council on Environmental Quality's ("CEQ") implementing regulations, BLM is required to assess environmental impacts as soon as those impacts are "reasonably foreseeable" and before an "irretrievable commitment of resources" occurs. *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 716 (10th Cir. 2009) (quoting 40 C.F.R. § 1502.22 and 42 U.S.C. § 4332(2)(C)(v)). Issuing a federal oil and gas lease that does not have a no surface occupancy stipulation constitutes an irretrievable commitment of resources. *Richardson*, 565 F.3d at 718. Further, environmental impacts are reasonably foreseeable at the leasing stage.

First, BLM received an Expression of Interest from a private party requesting that BLM offer the parcel for lease. This indicates serious interest in the parcel from the industry. Further, it is already known that the parcel, located in the Williston Basin, is in an area with oil and gas resources. The EA notes that the township in which the parcel is located already has "5 federal oil wells and 17 private and state wells." EA, p.41. The EA also reveals that oil and gas leases in McKenzie County are in high demand, and often command significant bonus bids. EA, p.42. In addition, the relatively small size of the proposed lease means that site-specific environmental impacts are reasonably foreseeable.

Although further NEPA analyses may be required in later stages of development (e.g., permitting), it is not appropriate to break down the process into small steps and then claim that each individual step does not technically directly cause the environmental impacts. Once a private company has a legal property interest in the minerals, the ball is already rolling. Although BLM may impose some restrictions and mitigation measures, the lease purchaser has a right to use the surface of the leased parcel and the BLM cannot prevent such use. 43 C.F.R. § 3101.1-2; *Richardson*, 565 F.3d at 718. The EA also should have considered the environmental impacts from a greater level of development than the one estimate provided (7 oil wells). The EA explains that BLM cannot predict with certainty the number of wells that will be developed or the details of how development activity would be carried out. Under these circumstances, BLM should include a "worst case" scenario showing the impacts from a more intense development forecast.

V. The EA and FONSI Do Not Adequately Disclose Environmental Impacts

The EA and FONSI do not fully and fairly disclose the significant environmental impacts of the proposed lease.

A. Theodore Roosevelt National Park

1. Background on Theodore Roosevelt National Park

The EA's brief and sterile description of the Theodore Roosevelt National Park fails to capture or acknowledge its great cultural and ecological significance. The National Park Service perhaps says it best: "On a visit to Theodore Roosevelt National Park, you enter more than a landscape of unique scenery and abundant wildlife – you enter an ancient home filled with legends, lore, and sacred places." *Cultural History*, National Park Service, https://www.nps.gov/thro/learn/historyculture/cultural-history.htm.

When Theodore Roosevelt came to the badlands for the first time in 1883, he was amazed by the rugged and beautiful landscape. This area played a "key role . . . in fostering his conservation ethics." *People*, National Park Service, https://www.nps.gov/thro/learn/historyculture/people.htm. Inspired by the wild west that he had explored, and deeply concerned about how wild and natural places were being destroyed, and bison, elk, bighorn sheep, and other animals killed off, as president, Theodore Roosevelt created the National Park Service and placed approximately 230 million acres of land under federal protection. *Theodore Roosevelt and Conservation*, National Park Service, https://www.nps.gov/thro/learn/historyculture/theodore-roosevelt-and-conservation.htm.

Importantly, the cultural history of the land included in the Theodore Roosevelt National Park "extends back thousands of years" and many native peoples lived in and used the badlands, including the Mandan, Hidatsa, and Crow. *People*, National Park Service, https://www.nps.gov/thro/learn/historyculture/people.htm "Today, Theodore Roosevelt National Park remains a significant place for many Native Americans whose association with the land is rooted deeply in the past." *Cultural History*, National Park Service, https://www.nps.gov/thro/learn/historyculture/cultural-history.htm

The Theodore Roosevelt National Park also has great environmental and ecological value. For example:

> A wide diversity of animals make their home in Theodore Roosevelt National Park. An abundance of native grasses provide sustenance for grazing animals both large and small while the tapestry of different habitats attracts a great number of birds. The terrain of the badlands creates microclimates of warm, dry slopes, relatively cool and wet juniper woodlands, and riverbottoms.

Animals, National Park Service, https://www.nps.gov/thro/learn/nature/animals.htm.

Visitors come from across the country to see the majestic and rugged landscapes and diverse wildlife of the Theodore Roosevelt National Park. Members of the public enjoy camping, bicycling, canoeing and kayaking, cross-country skiing and snowshoeing, fishing, hiking, horseback riding, wildlife viewing, and star-gazing. It should be noted that the EA understates visitor levels for the National Park. Although the EA states that the Theodore Roosevelt National Park "receives nearly 600,000 visitors each year," (EA, p.42), it in fact received 753,880 visitors in 2016. *Theodore Roosevelt National Park Statistics*, National Park Service, https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20(1904%20-%20Last%20Calendar%20Year)?Park=THRO.

About 42% of the total area of the Theodore Roosevelt National Park, including the majority of the North Unit, has been designated as wilderness. TRNP General Management Plan, at 2, 35 (1986). The Theodore Roosevelt National Park General Management Plan states that "[e]nergy development outside the park, in its several aspects, constitutes the greatest single concern for the park." *Id.* at 18. The National Park Service is not the only agency that has expressed concerns about the impacts of oil and gas development on the National Park. During the scoping period, the State Historical Society of North Dakota submitted a letter to BLM recommending that

"surface development be kept at least two miles from Theodore Roosevelt National Park." State Historical Society of North Dakota, Scoping Comments (Aug. 15, 2017). The entire proposed lease is within the suggested exclusion zone.

2. Impacts on Theodore Roosevelt National Park

The EA includes only a limited discussion of the impacts of the proposed lease on the Theodore Roosevelt National Park. First, in keeping with the improper framing of the environmental impacts, discussed above, the EA states that "[t]here are no impacts from offering the parcel for lease to the Theodore Roosevelt National Park visitors." EA, p.70. The EA then states that future oil and gas development "may potentially impact" the National Park and its visitors. EA, p.70. "Impacts could include reduction of current viewsheds, dark night skies, and soundscape." EA, p.70. The section on visual resources echoes this limited analysis, stating that "potential impacts . . . could include reduction or alteration of current viewsheds and dark night skies." EA, p.65. In the section on social conditions and economic justice, the EA states that "development of the lease parcel would likely impact visitors and recreation enthusiasts using the area or visiting Theodore Roosevelt National Park by affecting solitude, scenic beauty, and potentially increase [sic] recreation related conflicts." EA, p.69. The EA states that "[t]hese impacts are discussed in Sections 4.3.14 and 4.3.15." EA, p.69. The section in which that statement is made, however, is section 4.3.14, and the following section, 4.3.15, is on economics. It is unclear which sections BLM intended to reference there.

These very brief statements listing possible impacts, with no explanation of degree or context, do not fairly and fully disclose the environmental impacts. First, the EA downplays the likelihood of visual and aesthetic impacts to the Theodore Roosevelt National Park and its visitors. The proposed lease includes surface occupancy of the entire parcel, which lies directly adjacent to the National Park. The only NSO stipulation incorporated in the proposed action restricts surface occupancy within a half mile of golden eagle nests that have been used in the past seven years. Allowing surface occupancy on the proposed lease virtually guarantees significant impacts to the National Park.

Further, the EA states that "dark night skies" could be impacted, but fails not only to describe how it will be impacted (Flaring? Constant or intermittent? How many flares? Around-the-clock industrial lighting?), but also exactly what the impacts are. Light pollution is an aesthetic nuisance, disrupting the encompassing darkness of remote wilderness and limiting opportunities for star-gazing. The EA does not mention that there were 35,000 overnight stays in Theodore Roosevelt National Park in 2016 alone. Overnight Stays by Category and Year for Theodore Roosevelt NP: 1979 to 2016, National Park Service, (https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Overnight%20Stays%20(1979%20-%20Last%20Calendar%20Year)?Park=THRO). Light pollution can also impact wildlife: "Light pollution may affect the ability for nocturnal animals, such as some owls, to function normally. Artificial light 'tricks' plants into thinking the days are longer than they are, which may affect their growth and reproductive cycles." *Lightscape / Night Sky*, National Park Service, https://www.nps.gov/thro/learn/nature/lightscape.htm.

The EA notes in passing that the "soundscape" of the National Park could be impacted. EA, p.70. Yet it doesn't explain that equipment and machinery used for oil and gas development can be extremely loud. The EA gives no data on the level of noise that could be expected at or near wells on the parcel.

The EA and FONSI largely ignore the air quality impacts that would likely affect the Theodore Roosevelt National Park. Although the haze chart shows that the visibility at the Theodore Roosevelt National Park, a Class I area, is already significantly degraded, (EA, p.13) the EA fails to describe what role current oil and gas production in the area has had in that degradation. The EA also fails to acknowledge that additional oil and gas development directly on the border of the National Park, by itself and in conjunction with existing development, may increase haze at the National Park. The "visual" impacts at Theodore Roosevelt National Park briefly discussed later in the EA seem to discuss only the disruption of scenic vistas from industrial development in the viewshed, rather than the likely increased haze and decreased visibility.

In addition, the EA discusses that total wet and dry nitrogen deposition at Theodore Roosevelt National Park has increased over the period from 2000 to 2015 (although the title of the accompanying chart states that it is for "Glacier national Park"—just another indication that the EA was drafted with a less-than-adequate degree of care). EA, p.14. However, the EA does not discuss the extent to which this increasing nitrogen deposition is due to oil and gas development in the area, nor does it discuss whether additional new development adjacent to the park would worsen the problem. Moreover, the discussion of the impacts of nitrogen and sulfur deposition is inadequate. The EA makes vague and neutral statements such as, "Atmospheric nitrogen and sulfur deposition may affect water chemistry, resulting in impacts to aquatic vegetation, invertebrate communities, amphibians, and fish." EA, p.14. What kind of impacts? The EA does not even disclose that these impacts are harmful, let alone the degree to which they harm wildlife and the ecosystem.

The EA also references a 2016 study, explaining that the "area has shown evidence of being impacted by regional oil and gas development." EA, p.52. This, however, is an understatement. The study not only reveals that federal lands in the Bakken area, including the North Unit of the Theodore Roosevelt National Park, are already being impacted, but that "larger effects [are] observed in those areas near the most extensive oil and gas development" and "continued development is expected to exacerbate these problems, particularly during periods when lower wind speeds allow pollutants to accumulate and react in the atmosphere, forming secondary pollutants. Stagnant air conditions have also been associated with health impacts in regions with unconventional natural gas development." A. J. Prenni, *Oil and Gas Impacts on Air Quality in Federal Lands in the Bakken Region*, Atmospheric Chemistry and Physics, at 1413, https://www.atmos-chem-phys.net/16/1401/2016/acp-16-1401-2016.pdf (2016). "Chemicals used in oil and gas extraction are associated with a wide range of human health hazards, and potential health impacts have been identified for communities near well pads." *Id.* at 1402 (citation omitted). The study notes that "[i]n 2011, McKenzie County . . . accounted for the highest emissions of NOx, VOCs, PM, CO, and SO2 from oil and gas in the Williston Basin, making [the North Unit of Theodore Roosevelt National Park] highly vulnerable to impacts from air pollutants related to oil and gas development." *Id.* Increased oil and gas development leads to increases in indirect emissions, also. The study states that from 2008 to 2014, truck traffic more

than tripled on Highway 85 in McKenzie County next to the North Unit of Theodore Roosevelt National Park. *Id.*

There are also other types of impacts that increased oil and gas development near the park would cause. The oil and gas boom in the surrounding area has already led to increased crime and destruction in and around the Theodore Roosevelt National Park, including drug use, toppling of pedestal rocks, and even an instance of a bomb placed in a pickup truck. Sierra Crane-Murdoch, *A Defender of North Dakota's Badlands Wonders if it's Time to Leave*, High Country News, http://www.hcn.org/issues/47.7/as-oil-drilling-approaches-north-dakotas-badlands-their-most-ardent-defender-wonders-if-its-time-to-leave (Apr. 27, 2015). BLM's failure to discuss these significant impacts to the Theodore Roosevelt National Park is a serious inadequacy of the EA.

B. Little Missouri National Grasslands

The EA states that the proposed lease tract would abut the Little Missouri National Grasslands. Yet, the EA does not give any information about the characteristics or importance of the Little Missouri National Grasslands, nor give any information on the impacts that oil and gas development on the proposed lease would have on the National Grasslands.

The Little Missouri National Grasslands is the largest grassland in the country and features "colorful and beautiful badlands and rugged terrain extensively eroded by wind and water" and a "mixed grass prairie." *Little Missouri National Grasslands*, U.S. Forest Service, https://www.fs.usda.gov/recarea/dpg/recarea/?recid=79469. Visitors enjoy bicycling, camping, fishing, hiking, horseback riding, hunting, and picnicking. *Id.* The EA does not provide any analysis of how the ecological resources or recreational opportunities at the National Grasslands would be impacted by oil and gas development. This failure to consider impacts to the Little Missouri National Grasslands is a significant gap in the EA.

C. Air Quality

BLM's analysis of air quality impacts is also insufficient. To begin, the EA discusses existing air quality in the region, yet states that it is not providing data for CO or lead, "which are typically not pollutants of concern associated with oil and gas leasing." EA, p.11. Yet not only is CO a pollutant associated with flaring in North Dakota, CO emissions in McKenzie County are especially high (A. J. Prenni, *Oil and Gas Impacts on Air Quality in Federal Lands in the Bakken Region*, Atmospheric Chemistry and Physics, at 1402-03, https://www.atmos-chem-phys.net/16/1401/2016/acp-16-1401-2016.pdf (2016)), and the EA itself predicts more tons of CO per year will be emitted by oil and gas development on the proposed lease than PM2.5, PM10, and SOx put together. EA, p.52. It is unclear why BLM would decide not to provide baseline data for CO emissions in the area, but this data clearly should have been included.

BLM then characterizes the estimated emissions of criteria pollutants, VOCs, and HAPs from oil and gas development on the proposed lease parcel as "minor" and states that the emissions are "unlikely to result in direct impacts to air quality associated with oil and gas development such as ozone formation or visibility degradation." EA, p.52. Only in combination with other sources does the EA admit that air quality impacts could even be "measurable." EA, p.52. This

description does not come close to adequately disclosing the air quality impacts. For example, it is unreasonable to assert that 12 tons/year of NOx and 113 tons/year of VOCs are "unlikely to result in . . . ozone formation." In addition, the cumulative air impacts of the new lease in combination with existing oil and gas development will be much more than "measurable." Air monitoring shows that ozone levels in the North Unit of Theodore Roosevelt National Park are already 82% of the NAAQS, *without* any oil and gas development right on its border. Ozone levels in the park will likely increase as a result of the proposed lease.

D. Greenhouse Gases and Climate Change

The EA also inadequately discusses greenhouse gas emissions and climate change. Although the EA acknowledges in the "Affected Environment" section that fossil fuel development generally can contribute to greenhouse gas emissions, (EA, p.16) it fails to discuss this in the Environmental Impacts section. Instead, the EA limits its discussion of the impacts of oil and gas development to a discussion of the "downstream" greenhouse gas emissions. EA, p.52-53. The EA should have discussed how the greenhouse gas emissions from both the production and development—estimated to be 4805 tons/year of CO2 equivalent—and downstream emissions will contribute to climate change.

In addition, the EA states that while "BLM is disclosing the likelihood and potential magnitude of downstream GHG emissions," it "is not able to disclose potential impacts to climate change" from those emissions. EA, p.54. While of course BLM is not expected to predict with certainty the exact climate change impacts that will occur due to the increase in greenhouse gas emissions from this specific lease, the EA fails to even acknowledge that greater greenhouse gas emissions will lead to more severe climate change impacts. This failure to include any analysis of the climate change impacts from the proposed action is unacceptable. Recent federal court decisions have made it clear that NEPA requires a full and fair analysis of climate change impacts from greenhouse gas emissions directly and indirectly caused by the leasing of mineral rights. *See, e.g.*, *WildEarth Guardians v. BLM*, No. 15-8109 (10th Cir. Sept. 15, 2017).

E. Water Resources

The discussion of impacts to water resources is also deficient. EA, p.56. First, the EA lists possible impacts, such as erosion, increased water temperature, increased sedimentation, turbidity, etc., without explaining what effects those various impacts have on aquatic ecosystems. The list has little meaning because it is given no context and the bigger picture is not described. In fact, the EA actually unequivocally states that no fish would be impacted, without even disclosing whether any fish are present on or near the lease parcel. EA, p.61. Certainly if fish are present in rivers, streams, ponds, or lakes on the parcel or in the area, they could be impacted by things like runoff, increased sedimentation and turbidity, and potential spills and water contamination. As explained by the court in *WildEarth Guardians v. BLM*, No. 15-8109, at 23-24 (10th Cir. Sept. 15, 2017), unsupported assumptions about impacts make an alternatives analysis arbitrary and capricious.

The EA also notes potential impacts to groundwater resources, but again without giving sufficient information to be useful. EA, p.57. Although acknowledging the risk of surface or

groundwater contamination, the EA provides no information about the prevalence of spills, leaks, or loss of drilling fluid. Notably, a recent study found over 6,600 fracking spills in 4 states over 10 years. Brook Hays, *Study Finds 6,600 Fracking Spills in Four States Over 10 Years*, United Press International, https://www.upi.com/Science_News/2017/02/21/Study-finds-6600-fracking-spills-in-four-states-over-10-years/5611487691909/ (Feb. 21, 2017). The EA then states, "If contamination of aquifers from any source occurs, changes in groundwater quality could impact springs and residential wells that are sourced from the affected aquifers," (EA, p.57) but does not mention that this "impact" could mean serious negative health effects on people and animals. The EA does not provide any information about the massive volume of water used for fracking, or the huge amounts of "produced" waste water that then must be disposed of, which can contain dangerous contaminants, including heavy metals and radioactive material. The reinjection of produced water has been known to cause earthquakes, yet this possible impact also was not discussed. Richard D. Andrews, Oklahoma Geological Survey, *Summary Statement on Oklahoma Seismicity*, http://earthquakes.ok.gov/wp-content/uploads/2015/04/OGS_Summary_Statement_2015_04_20.pdf (Apr. 21, 2015).

The EA also tries to downplay the dangerous nature of fracking fluid, describing it as being "typically more than 99 percent water and sand, with small amounts of readily available chemical additives." EA, p.67. A recent analysis by researchers at the Yale School of Public Health looked at available information on 1,021 chemicals used in and produced by fracking. "While they lacked definitive information on the toxicity of the majority of the chemicals, the team members analyzed 240 substances and concluded that 157 of them — chemicals such as arsenic, benzene, cadmium, lead, formaldehyde, chlorine, and mercury — were associated with either developmental or reproductive toxicity. Of these, 67 chemicals were of particular concern because they had an existing federal health-based standard or guideline, said the scientists, adding that data on whether levels of chemicals exceeded the guidelines were too limited to assess." Michael Greenwood, *Toxins Found in Fracking Fluids and Wastewater, Study Shows*, Yale News, https://news.yale.edu/2016/01/06/toxins-found-fracking-fluids-and-wastewater-study-shows (Jan. 6, 2016).

The EA states that "[t]o ensure that [hydraulic fracturing] is conducted in a safe and environmentally sound manner, the BLM approves and regulates all drilling and completion operations, and related surface disturbance on Federal public lands." EA, p.67-68. Yet the proposed lease parcel is not *on* Federal public lands—it is on State lands, with subsurface federal mineral rights. It is not clear that the protections explained in the EA are even applicable to the proposed lease tract.

The EA claims that "[k]nown water bearing zones in the lease area are protected by drilling requirements and, with proper practices, contamination of ground water resources is highly unlikely." EA, p.57. Yet BLM cannot simply claim that because there are regulations in place to prevent contamination, this means that it will not occur. *Richardson*, 565 F.3d at 715. A 2014 report analyzing oil and gas well integrity found that of unconventional shale gas wells, 6.2% of the wells drilled between 2000 and 2012 showed a loss of structural integrity. Robert B. Jackson, *The Integrity of Oil and Gas Wells*, Proceedings of the Nat'l Academy of Sciences of the U.S.A., https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4121783/ (July 9, 2014). The BLM understates and downplays potential impacts to water resources.

F. Special Status Species

1. State Conservation Priority Species

In the Affected Environment section, the EA provides a listing of state conservation priority species that could be impacted by the proposed lease. Although many of the species, including several Level I species, could occur on the lease parcel, for most of these species, the EA provided either no statement describing impacts, or a very limited statement along the lines of, "individuals could be displaced."

For example, for the plains spadefoot, a Level I species, the EA states, "This species could occur on the proposed lease tract and is susceptible to land disturbance while it is aestivating. If the species occurs on land and the landscape is altered individuals would be displaced." EA, p.23. Similar statements with no meaningful analysis are listed for the monarch butterfly (Level I), Baird's sparrow (Level I), chestnut-collared longspur (Level I), and loggerhead shrike (Level II). Simply stating that individuals may be displaced is an inadequate description of the impacts.

For at least two species, the EA acknowledges that the species could occur on or use the proposed lease tract, but provides zero information on impacts. For example, for the Golden Eagle (which is also protected under the Bald and Golden Eagle Protection Act) (Level II), the EA notes that there is "both primary and secondary range for this species" in McKenzie County and that there is foraging habitat on the proposed lease land. EA, p.24. Yet no information on potential impacts is provided. Similarly, the EA reveals that the long-billed curlew (Level 1) "could occur on the proposed lease tract" and the Sprague's pipit (Level I) "may utilize [the tract] during their migration." EA, p.25. Yet the EA does not state what the potential impacts to these priority conservation species would be from the proposed action.

2. Federally-Listed Species

The EA's analysis of potential impacts to federally-listed species is also inadequate. BLM acknowledges that oil and gas development could impact whooping cranes, but simply states that if BLM determines down the road that the species will be affected, BLM would "work with" the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act, "if warranted" and other best management practices would be developed. EA, p.59-60. Similar statements are made for the Dakota skipper butterfly and the long eared bat. As explained in Section III of this comment letter, environmental impacts should be addressed as soon as possible. And even if BLM complies with requirements of the Endangered Species Act, this does not mean that zero impacts to the species would occur.

G. Noise Pollution

The EA includes no meaningful analysis of noise pollution impacts from oil and gas development on the proposed lease parcel. The EA mentions in passing that noise from oil and gas development might impact animals or visitors at the Theodore Roosevelt National Park. Yet the EA does not contain any information about the expected sound levels from the various equipment and processes used during oil and gas development. It does not disclose decibel levels

expected at the wells, or at the border of the Theodore Roosevelt National Park or other sensitive areas. Notably, 91% of people in a survey of park visitors "considered enjoyment of natural quiet and the sounds of nature as compelling reasons for visiting national parks." Scott D McFarland, National Park Service, *Theodore Roosevelt National Park: Acoustic Monitoring Report*, at 1, http://soundandlightecologyteam.colostate.edu/pdf/theodoreroosevelt.pdf (2016).

The only impact to wildlife from noise that the EA discloses is that individuals of a species may be driven away by noise. It fails to note that noise can be disruptive and harmful to wildlife in other ways. For example, it can cause stress and behavioral changes in some species, as well as mask communications between species, as well as other noises. The EA therefore does not adequately discuss the potential impacts to wildlife from noise.

H. Cumulative Impacts

The EA's cumulative impacts analysis is wholly inadequate. The Cumulative Impacts section of the EA avoids the issue almost entirely by claiming that "[t]he ability to assess the potential cumulative impacts at the leasing stage for this project is limited for many resources due to the lack of site-specific information for potential future activities. Upon receipt of an APD for any of the lease parcels addressed in this document, more site-specific planning would be conducted in which the ability to assess contributions to cumulative impacts in a more detailed manner would be greater due to the availability of more refined site-specific information about proposed activities." EA, p.49.

According to federal regulations, "'Cumulative impact' is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. Although the EA notes that other mineral exploration and development could potentially lead to cumulative effects, it does not describe the level of development that has occurred in the area or that is expected in coming years. Nor does it explain what cumulative impacts might be expected, such as increased air pollution, habitat fragmentation, etc., or the degree to which cumulative impacts might affect surrounding resources. The cumulative impacts discussion is entirely inadequate.

I. Mitigation

BLM's discussions of mitigation throughout the EA are insufficient and do not render the impacts insignificant. Importantly, many of the mitigation discussions are *just* discussions of what mitigation measures *could* be taken, and do not include any binding commitments. For example, the Mitigation section states that BLM "*encourages* industry to incorporate and implement BMPs to reduce impacts to air quality by reducing emissions, surface disturbances, and dust from field production and operations." EA, p.54 (emphasis added). The EA then lists measures that "*could* be imposed at the development/APD stage if additional analysis showed the potential for significant impacts to air quality." EA, p.54 (emphasis added). The EA does not

even say that even of the measures *would* be required if BLM determined that there would be significant impacts to air quality (which ELPC believes there will be).

Similar language is included throughout the EA. For example, in the Soil Resources section, the EA states that "[m]easures would be taken to reduce, avoid, or minimize potential impacts to soil resources from exploration and development activities," but it does not commit to any specific mitigation measures. EA, p.55. Similarly, in the section on Water Resources, the EA states that steps "would be taken to reduce, avoid, or minimize potential impacts to water resources," but the EA only lists possible mitigation measures, without committing to any specific mitigation action. EA, p.56. Again, the Visual Resources section notes that oil and gas development "may cause potential impacts" and claims that BMPs would be implemented, yet fails to commit to any of the possible BMPs listed. EA, p.65-66.

The EA should not only list specific possible mitigation measures, but should also explain how BLM would choose which ones to require, how BLM would ensure that they would be implemented, how the effectiveness of the mitigation would be monitored, and how the agency would respond if mitigation measures prove to be ineffective. The approach to mitigation included in the EA is ineffective and does not make the impacts of the proposed lease insignificant.

VI. The Environmental Impacts of the Proposed Lease are Significant and an Environmental Impact Statement Is Required

The EA and FONSI incorrectly determine that the impacts of the proposed lease are not significant. In fact, the environmental impacts are significant, and an Environmental Impact Statement should be prepared. Under the Council on Environmental Quality's regulations, a determination on significant of environmental impacts "requires considerations of both context and intensity." 40 C.F.R. § 1508.27.

The context consideration "means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant." 40 C.F.R. § 1508.27(a). The context of the proposed lease is important because the tract is directly next to the Theodore Roosevelt National Park, a special protected area of ecological, historical, cultural, and recreation importance; it is a national treasure. The proposed lease tract would also abut the Little Missouri National Grasslands, the largest grassland in the country.

Federal regulations also provide several points for consideration in determining intensity, or "the severity of impact." 40 C.F.R. § 1508.27(b). Many of these considerations also weigh in favor of a "significant impact" finding. For example, point 2 is "[t]he degree to which the proposed action affects public health or safety." 40 C.F.R. § 1508.27(b)(2). Oil and gas development causes emissions of harmful air pollutants, and growing evidence links health impacts in local communities to nearby fossil fuel development. In the case of water contamination due to spills, leaks, well failures, etc., there could be significant harm to public

health and safety. There is also the fact that the oil and gas boom has already lead to increased crime at the Theodore Roosevelt National Park.

The third consideration is the "[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas." 40 C.F.R. § 1508.27(b)(3). As mentioned above, the proposed lease parcel is on the border both of the Theodore Roosevelt National Park and the Little Missouri National Grasslands. This factor weighs strongly in favor of finding significant impacts.

The fourth and fifth factors consider the degree to which the impacts are "likely to be highly controversial" and "are highly uncertain or involve unique or unknown risks." 40 C.F.R. § 1508.27(b)(4)-(5). The extent of the hazards associated with fracking are far from clear. Health problems likely due to air emissions and water contamination are linked to unconventional drilling, and reinjection of produced water likely has caused earthquakes in some regions. However the risks are not well quantified and likely include risks that are not yet well understood.

The sixth consideration is "[t]he degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration." 40 C.F.R. § 1508.27(b)(6). Leasing a parcel for oil and gas development directly on the border of the remote North Unit of the Theodore Roosevelt National Park, especially with only an EA, would establish a negative precedent of allowing fossil fuel development that negatively affects National Parks without sufficient consideration of the environmental impacts.

The seventh point is "[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment." 40 C.F.R. § 1508.27(b)(7). As discussed above, the EA inadequately discusses the cumulative significant impacts from the significant oil and gas development in the area, which are already significantly affecting air quality and other environmental values in the region.

The eighth factor requires consideration of "[t]he degree to which the action . . . may cause loss or destruction of significant scientific, cultural, or historical resources." 40 C.F.R. § 1508.27(b)(8). The Theodore Roosevelt National Park is important not only due to its ecological and recreational value, but also because of its cultural and historical significance. It is for this reason that the State Historical Society of North Dakota recommended that "surface development be kept at least two miles from Theodore Roosevelt National Park." State Historical Society of North Dakota, Scoping Comments (Aug. 15, 2017).

The ninth consideration is "[t]he degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973." The EA acknowledges that the proposed lease may negatively impact endangered or threatened species, yet puts off detailed consideration and required consultation until later in the process. At this point, then, it must be assumed that there could be significant impacts to endangered or threatened species or habitat.

VII. Conclusion

The EA and FONSI are inadequate and do not fully and fairly disclose the environmental impacts of the proposed lease. The lease and subsequent development of the parcel will cause significant impacts, and BLM is required to prepare an Environmental Impact Statement for the action.

Sincerely,



Rachel Granneman
Staff Attorney
Environmental Law & Policy Center

From: Spencer, Duane
To: Mike McGrady
Subject: Fwd: Nala North POD SDR
Date: Friday, November 3, 2017 12:12:45 PM
Attachments: ATT00001.txt
SDR Nala North POD.pdf

---------- Forwarded message ----------
From: Dan Heilig <dan@wyomingoutdoorcouncil.org>
Date: Fri, Oct 27, 2017 at 10:26 AM
Subject: Nala North POD SDR
To: Duane Spencer <dspencer@blm.gov>
Cc: "Gamper, Merry" <mgamper@blm.gov>, "Madrid, Michael" <mmadrid@blm.gov>

Dear Duane,

I am attaching a courtesy copy of the request for State Director Review I filed yesterday regarding the Nala North POD, located in the Buffalo Field Office. I wasn't able to find the email address for the BFO manager; I'd appreciate it if you would pass this along.

Thank you very much, and have a great weekend.

Dan

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dan@wyomingoutdoorcouncil.org

National Audubon Society
Powder River Basin Resource Council
The Wilderness Society
Wyoming Outdoor Council

DELIVERED BY CERTIFIED MAIL and FAX TRANSMISSION

October 26, 2017

Mary Jo Rugwell
State Director
Bureau of Land Management
P.O. Box 1828
Cheyenne, WY 82003

Re: Request for State Director Review and Petition to Stay the Effectiveness of the Buffalo Field Office's Decision to Approve the Nala North Oil & Gas Plan of Development, DOI-BLM-WY-P070-2016-0068-EA (Revised).

Dear Director Rugwell:

On behalf of the National Audubon Society, Powder River Basin Resource Council, The Wilderness Society and the Wyoming Outdoor Council ("Petitioners"), I am requesting State Director Review of the Buffalo Field Office's (BFO) September 28, 2017, decision to approve seventeen (17) Applications for Permits to Drill (APD) that comprise the Nala North Oil and Gas Plan of Development in Johnson County, Wyoming (hereinafter "the Nala North POD"). I am also requesting that you stay the effectiveness of the BFO's decision until the issuance of a final decision in this matter.

Statement of Interest of Petitioners

The National Audubon Society's mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity.

The Powder River Basin Resource Council ("Powder River") is a grassroots community conservation and family agriculture organization. Our members are highly interested in sage-grouse conservation from the standpoint of protecting wildlife populations in the state and ensuring that Greater sage-grouse populations remain robust in order to avoid the need to list the species as threatened or endangered pursuant to the Endangered Species Act. Such a listing would negatively impact agricultural operations and could also hinder other economic activities that allow Wyoming's economy to thrive. Powder

River members live throughout the state of Wyoming, but the majority of them are rural landowners, many of whom live in a split estate situation with federally-controlled minerals underlying their lands. Powder River members thus have a keen interest in the BLM's role in sage-grouse management.

Founded in 1935, The Wilderness Society's mission is to protect wilderness and inspire Americans to care for our wild places.

Founded in 1967, the Wyoming Outdoor Council is the state's oldest and largest independent conservation organization. Our mission is to protect Wyoming's environment and quality of life for present and future generations.

The Petitioners have a long-standing interest in the management of Bureau of Land Management (BLM) lands in Wyoming and throughout the West. We engage frequently in the decision-making processes for land use planning and project proposals that could potentially affect our public lands and mineral estate, including the oil and natural gas leasing and development processes. Our members and staff enjoy a myriad of recreational, scientific and other opportunities on BLM-managed public lands, including hunting and fishing, hiking, biking, nature-viewing, photography, and quiet contemplation in the solitude offered by wild places. As indicated, our missions are to work for the protection and enjoyment of the public lands for and by the public.

Our organizations have been actively involved in efforts to ensure that the BLM properly implements and enforces the conservation and wildlife protection measures required by the BLM's Approved Resource Management Plans and Plan Amendments for the Greater Sage-Grouse, September 2105 ("ARMPA"). Our activities have included, but are not limited to, submitting numerous requests for State Director Reviews of decisions made by the Rawlins Field Office approving drilling permits without the mitigation measures required by the ARMPAs.

Oil and gas development activities have been shown to have a negative impact on wildlife species that are found in and near the Nala North project area, including Greater sage-grouse and other sagebrush obligate species. We are concerned that the proposed 17-well Nala North POD, proposed entirely with the Buffalo Core Area, a BLM-designated Priority Habitat Management Area, will adversely affect Greater sage-grouse populations and other sagebrush obligate species, and consequently diminish opportunities for our members and staff to view and appreciate sage-grouse, raptors and other wildlife species that depend on intact and healthy stands of sagebrush.

Project Description

Anschutz Oil Company, LLC, proposes to construct and operate 17 horizontal oil wells and associated infrastructure on 10 well pads in Johnson County, Wyoming. It is estimated that drilling and construction activities required to develop the Nala North POD would occur year-round, twenty-four hours per day, and would be completed within two years. All wells are horizontal bores proposed on a 640 acre spacing pattern

with two wells per pad at seven locations, and one well per pad on three locations. Additional details about the project, including drilling and completion operations, are contained within the APDs, which BLM incorporated by reference into the revised EA (at 6, 7).

Project Setting

The entire Nala North project, with the exception of the Rye pad and a portion of its access road, is located within the Buffalo Core Population Area (CPA), a BLM-designated Priority Habitat Management Area (PHMA). Revised EA at 14. PHMAs are defined as "BLM-administered lands identified as having the highest value to maintaining sustainable Greater Sage-Grouse populations." Buffalo Approved RMP at 15. The project area is located along the southeastern edge of the Buffalo CPA. Six occupied Greater sage-grouse leks have been identified within 4 miles of the Nala North project area. Id. at 15 (Table 3.4).

The Buffalo CPA comprises 488,000 acres in eastern Johnson County. High quality Greater sage-grouse habitat has been documented in the Nala North project area:

> Moderate to high quality seasonal habitats for sage-grouse were verified within the project area during field visits. The immediate area surrounding the proposed infrastructure has been validated through credible habitat suitability models to have high quality winter and nesting habitats, suitable habitat has been identified to be a limiting factor for sage-grouse sustainability within the PRB [citations omitted]."

Id.

Despite the presence of high quality sage-grouse habitat within the Nala North project area, the revised EA presents a fairly disturbing prognosis concerning the health of this ecosystem:

> The sagebrush habitats within the BFO have elevated levels of fragmentation when compared to most of the State of Wyoming. The Powder River Basin patch size has decreased by more than 63% in forty years, from 820 acre patches and an overall coverage of 41% in 1964 (Rowland et al. 2005). This fragmentation results in very few large areas of contiguous high quality habitats within the BFO. Of the modeled high quality nesting and winter habitats within the BFO Core Populations Areas only 2.49% of nesting and 1.75% of winter habitats currently have no existing disturbances within 0.5 miles. This illustrates that the sage-grouse population within the PRB is more vulnerable to additional development that most other populations within the State, supporting the need to mitigate impacts to high quality habitat.

Revised EA at 26.

Background and Concerns

The rather dubious procedural history of this project is described in a revised EA issued by the BFO on September 28, 2017. For purposes of this SDR, the key facts are as follows:

On March 10, 2017, the BFO issued a Decision Record (DR) deferring all 17 APDs in the Nala North POD. In justifying its decision, the BFO explained that:

> The project area is within a Greater Sage-Grouse (GSG) BLM Priority Habitat Management Area (PHMA), State of Wyoming Core Population Area (Core Area). The BLM will ensure that any activities or projects in Greater Sage-Grouse priority habitats would: (1) only occur in compliance with the Buffalo RMP Greater Sage-Grouse goals and objectives; and (2) assure a net conservation gain. … It is determined that there would not be net conservation gain to Greater Sage-Grouse from the proposed action after applying avoidance and minimization measures, and required design features were not adequately incorporated.
>
> The project proposal, combined with application of Required Design Features, and Conditions of Approval result in residual impacts requiring compensatory mitigation. In order to address the compensatory mitigation needs the BLM and Anschutz will propose and implement a mitigation package within the deferral period.

Nala North DR at 1.

On September 28, 2017, approximately six months after the issuance of the initial decision, the BFO completely reversed itself and issued a revised decision approving all 17 APDs. The revised decision does not require or contain a commitment for compensatory mitigation, nor does it achieve or even attempt to achieve a net conservation gain for Greater sage-grouse in the Buffalo CPA, a fundamental requirement of the BLM's Greater sage-grouse conservation strategy.

In attempting to justify the revised decision, the BFO explains (citing an expired Instruction Memorandum, WY-2012-019) that:

> It is the policy [of WY BLM] to manage greater sage-grouse seasonal habitats and maintain connectivity in in [sic] support of the State of Wyoming's population management objectives. BLM WY's guidance is consistent with the most recent Wyoming Governor's Executive Order (EO) 2015-4. The proposed Nala North POD is consistent with EO-2015-4 and complies with the BFO RMP goals of optimizing distribution and abundance of special status species, and sustaining sage-grouse habitats and populations across the State.

Revised FONSI at 1.

The policy cited above to support the FONSI is an expired interim policy that was in effect during a portion of the period in which the BLM was developing the national GSG conservation policy that is now embodied in the ARMPAs, including the Buffalo Approved RMP (September 2015). While it was important for the BLM to develop and implement this policy in 2012, the agency's duty now is to properly and faithfully implement the direction contained in the Buffalo RMP, which it has failed to do. In addition, the BLM has a responsibility to ensure that its decision approving the Nala North POD conforms to all RMP goals, objectives and direction relating to sage-grouse conservation, including policies that require net conservation gain in Priority Habitat Management Areas, which it has also failed to do.

As explained below, the BFO's revised decision to approve the 17 APDs without requiring compensatory mitigation to ensure a net conservation gain in the Buffalo Core Population Area is arbitrary and capricious, and fails to conform to the Buffalo Approved RMP provisions for Greater sage-grouse conservation.

Discussion

The BFO's March 10, 2017 decision correctly implements the Greater sage-grouse conservation measured contained in the Buffalo Approved RMP.

The BFO's initial decision to defer approval of the 17 well POD pending the approval of a plan for compensatory mitigation correctly interpreted the Buffalo Approved RMP. The findings and conclusions set forth in the March 2017 EA and DR provide a correct and accurate interpretation of the BLM's duties regarding the implementation of the Greater sage-grouse conservation measures set forth in the Buffalo Approved RMP.

The March 2017 decision was predicated on the Interdisciplinary Team finding that, "[t]he project proposal, combined with application of Required Design Features, and Conditions of Approval result in residual impacts requiring compensatory mitigation. Nala North DR at 1.[1] The BFO determined that, "[i]n order to address the compensatory mitigation needs the BLM and Anschutz will propose and implement a mitigation package within the deferral period." Id. The decision to defer approval of the Nala North POD was based on a determination that, "there would not be net conservation gain to Greater Sage-Grouse from the proposed action after applying avoidance and

[1] The conclusions expressed in the DR were based on the EA, which disclosed that "the residual effects from habitat fragmentation and disruptive activities associated with production would result in negative impacts to sage-grouse, and therefore compensatory mitigation is necessary to achieve the goals, objectives, and commitments (net conservation gain) of the Buffalo Field Office 2015 RMP, Appendix D, P. 339." Nala North EA at 24.

minimization measures, and required design features were not adequately incorporated." Id.

In its decision, the BFO acknowledged that the BLM has a responsibility to "ensure that any activities or projects in Greater Sage-Grouse priority habitats would: (1) only occur in compliance with the Buffalo RMP Greater Sage-Grouse goals and objectives; and (2) assure a net conservation gain. Id. [2]

The BFO's revised decision fails to conform to the Buffalo Approved RMP and is arbitrary and capricious for failing to provide a sufficient explanation to justify reversing the initial decision.

On September 28, 2017, the BFO issued a revised EA, FONSI and DR approving the 17-well Nala North POD.

In an effort to explain the reversal, the Revised DR states that:

> The BLM has determined that the Nala North POD complies with the RMP's applicable requirements pertaining to avoidance, cumulative disturbance limitations, disturbance density limitations, and other measures intended to reduce effects to greater sage-grouse from oil & gas operations. Approval of the 17 APDs is also consistent with, in the BLM's view, EO 2015-4's requirement that compensating for any unavoidable impacts is only necessary 'when Core Population Area thresholds are exceeded.' (EO 2015-4 at Attachment A, page 5). As the attached EA describes (see Section 4.6.4.1), the applicable thresholds for avoidance and disturbance limitations have been met by Anschutz's proposed Nala North POD, and in consideration of the mitigation measures adopted by Anschutz and/or required by the BLM as Conditions of Approval (COAs).

See Revised EA at 3.

As the above statement shows, while the BFO's revised decision complies with *some* of the Buffalo RMP mitigation requirements (e.g. efforts to avoid and reduce impacts), it plainly lacks measures required in the Buffalo RMP to achieve net conservation gain in PHMA. The BFO attempts to justify the lack of such measures (which were included in

[2] FLPMA Section 302(a) provides that: "The Secretary shall manage the public lands under principles of multiple use and sustained yield, in accordance with the land use plans developed by him under section 202 of this Act …" 43 U.S.C. § 1732(a). The BLM's regulations implementing this section provide that: "All future resource management authorizations and actions, and subsequent more detailed or specific planning, shall conform to the plan components of the approved resource management plan." See 43 CFR § 1610.6-3.

the original March 10, 2017 decision) by citing to the Wyoming Sage-Grouse Executive Order ("SGEO"), which the BFO interprets as requiring compensatory mitigation only when disturbance and density thresholds are exceeded.

The sole focus on the SGEO's requirements is misplaced. The only issue is whether the BFO's revised decision conforms to the Buffalo RMP. It plainly does not. Compliance with the SGEO is not compliance with the Buffalo RMP.

The Buffalo RMP Requires Net Conservation Gain in PHMA – this standard was not achieved in the Nala North POD Decision Record.

Table 2.4 of the Buffalo RMP displays *Key Components of the Buffalo Greater Sage-Grouse Approved RMP Addressing COT Report Threats*. For PHMA, it states: "Require and ensure mitigation that provides a net conservation gain to Greater Sage-Grouse. See Table 2.4., page 20.

The Buffalo RMP further provides that: "For mitigation, the BLM would coordinate with the Wyoming Sage Grouse Implementation Team for application of the "avoid, minimize, compensate" process to ensure anthropogenic activities result in a net conservation gain for Greater Sage-Grouse habitat." Buffalo RMP at 25.

This "net gain" requirement is set forth in the *Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Regions, Including the Greater Sage-Grouse Sub-Regions of Lewiston, North Dakota, Northwest Colorado, Wyoming, and the Approved Resource Management Plans for Billings, Buffalo, Cody, HiLine, Miles City, Pompeys Pillar National Monument, South Dakota, and Worland* ("Rocky Mountain Region ROD"):

"Require and ensure mitigation that provides a net conservation gain to the species, when authorizing third-party actions that result in habitat loss and degradation." See Table 1-4. *Key Management Responses from the Rocky Mountain Region GRSG ARMPs and ARMPAs that Address the COT Report Threats.*

The net conservation gain requirement is addressed again in the Rocky Mountain Region ROD on page 1-27, under the heading, *Mitigation and Net Conservation Gain*. It states, in part, that:

> During the implementation of the ARMPs and ARMPAs, and, subject to valid existing rights and consistent with applicable law, when authorizing third-party actions that result in GRSG habitat loss and degradation, the BLM will require and ensure mitigation that provides a net conservation gain (the actual benefit or gain above baseline conditions) to the species. This would include accounting for any uncertainty associated with the effectiveness of such mitigation in PHMAs and GHMAs (except for the Wyoming ARMPs and ARMPAs, where this requirement only applies in PHMAs). It would do this by avoiding, minimizing, and compensating for

> unavoidable impacts and by applying beneficial conservation actions to offset remaining impacts associated with the action.

Rocky Mountain Region ROD at 1-27 (emphasis added).[3]

And finally, the Rocky Mountain Region ROD provides an explanation and justification for the net conservation gain requirement in all of the ARMPAs:

> Mitigation for activities adversely impacting GRSG or GRSG habitat in PHMAs will be designed to a net conservation gain standard, consistent with the recommendation included in the September 2014 FWS document, Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0 (FWS 2014b). According to the authors, the framework was prepared "...to communicate some of the factors the [FWS] is likely to consider in evaluating the efficacy of mitigation practices and programs in reducing threats to GRSG. The recommendations provided here are consistent with the information and conservation objectives provided in the 2013 Conservation Objectives Team (COT) Report for sage-grouse" (FWS 2014b).

Rocky Mountain Region ROD at 1-36 (Section 1.8 Decision Rationale)

The notion that permeates the revised EA that compliance with the density and disturbance thresholds contained in Wyoming's sage-grouse executive order can achieve a net conservation gain for the Greater sage-grouse in the Buffalo CPA is entirely unfounded. Industrial development, even industrial development at the regulated levels permitted in the SGEO, is not beneficial to Greater sage-grouse. The science is clear on that point, and as evidenced in the BFO's initial March 10th decision requiring compensatory mitigation, the BLM certainly understands that.

Net conservation gain is defined in the Buffalo RMP as "[t]he actual benefit of gain above baseline conditions." For there to be a net conservation gain for Greater sage-grouse in the Buffalo CPA, an explicit requirement in the Buffalo RMP, the BLM will have to do more than simply minimize the impacts caused by project activities. The BFO has a responsibility under the Buffalo RMP to achieve a net conservation gain. If left unaddressed, the residual impacts that will remain on the landscape after the application of measures to "avoid and minimize" impacts, the mitigation approach adopted by the BFO, will constitute a *net loss* for the species, an impact that could have been prevented (or at least offset to some degree) by the application of compensatory mitigation.

[3] If the BLM believes that valid existing rights held by the project proponent prevent the application of compensatory mitigation, the Decision Record should explicitly state that conclusion and address the legal issue in detail in the EA.

The Revised EA discloses – but fails to mitigate – residual impacts to Greater Sage-Grouse.

New language inserted in the revised EA seems to vaguely imply that new information submitted by the project proponent, unspecified project modifications, and implementation of "applicable" RDFs, have negated the need for compensatory mitigation. These improvements, coupled with a new interpretation of the Buffalo RMP, led the BFO to conclude that compensatory mitigation is not required and that a net conservation gain is being achieved by application of the density and disturbance thresholds in Wyoming's SGEO. Yet the revised EA discloses a range of residual impacts that persist, even after the implementation of SGEO requirements. The Buffalo RMP requires that these remaining impacts be mitigated.

The BFO addressed the issue of residual effects in the March 10, 2017 EA:

> As defined in the Mitigation Handbook (H-1794-1), the BLM applied the CEQ mitigation hierarchy in coordination with the operator to avoid, minimize, and then mitigate reasonably foreseeable impacts to resources. Despite application of the mitigation hierarchy, the BLM identified through the NEPA process that the residual effects from habitat fragmentation and disruptive activities associated with production would result in negative impacts to sage-grouse, and therefore compensatory mitigation is necessary to achieve the goals, objectives, and commitments (net conservation gain) of the Buffalo Field Office 2015 RMP, Appendix D, P. 339."

See EA section 4.10.4 Residual Effects at page 24.

As with the initial March 2017 EA, the revised EA discloses that residual impacts will remain after the application of mitigation:

> High quality nesting and winter habitats, limiting factors for sage-grouse population dynamics, will be negatively impacted by project implementation. Habitat removal and fragmentation combined with avoidance of disruptive activities drive both long and short-term impacts to the local GSG population. The Required Design Features (RDFs) that have been identified and committed to in the MSUPO have been evaluated by the biologist. The applied design features will lessen impacts although quantifiable impacts would still occur as a result.

Revised EA at 25.

However, instead of analyzing and requiring mitigation to offset the residual impacts as required by the Buffalo RMP, the revised EA asserts that:

> The Nala North proposal will result in habitat loss and potentially have negative effects to the PRB sage-grouse population; however, with continued application of Wyoming's core area strategy across the State by all land owners, adequate protection for sage-grouse and their habitat should be achieved (USFWS 2010, EO 2015-4).

See Revised EA at 26, Section 4.6.4.4. Residual Effects.

The fundamental premise underlying this statement –that application of the core area strategy in other areas of the state– is sufficient to offset or counter the unmitigated residual impacts to Greater sage-grouse in the Buffalo CPA, is incorrect on a number of levels, the most obvious of which is that it fails on its face to conform to the requirements set out in the Buffalo RMP for Greater sage-grouse. The Buffalo RMP did not identify PHMA only to have them be treated as sacrifice zones.

Unfortunately, instead of enforcing the conservation measures in the Buffalo RMP to ensure a net conservation gain for Greater sage-grouse in the Buffalo CPA, the BFO has completely abdicated its duty by deferring to the State of Wyoming's position that compensatory mitigation for residual impacts "is only necessary 'when Core Population Area thresholds are exceeded.'" Revised DR at 3. This constraint on the application of compensatory mitigation is not found in the Buffalo RMP and must not be allowed to stand.

The BFO has gone to extremes in its efforts to defend the revised decision, including new claims in the DR that defy logic, such as: "The proposed Nala North POD conforms to the BFO RMP goals of optimizing distribution and abundance of special status species, and sustaining sage-grouse habitats and populations across the State." Revised DR at 2. Of course, this conclusion is insupportable, and is refuted by multiple contradictory disclosures in the revised EA, such as:

"The direct loss of a total of 76.20 acres (table 2.4) of occupied habitat, nearly all (71.17 acres) with the exclusion of the Rye Pad, are within PHMA, would occur. This is new surface disturbance required for the project's implementation and will negatively impact the species. The access road for the Rye Pad goes through priority habitat." Revised EA at 24.

and

"High quality nesting and winter habitats, limiting factors for sage-grouse population dynamics, will be negatively impacted by project implementation. Habitat removal and fragmentation combined with avoidance of disruptive activities drive both long and short-term impacts to the local GSG population. The Required Design Features (RDFs) that have been identified and committed to in the MSUPO have been evaluated by the biologist. The applied design features will lessen impacts although quantifiable impacts would still occur as a result." Id. at 25.

and

"The proposed action, when combined with reasonable foreseeable development may contribute to a decline in male attendance at the remaining active leks that occur within four miles of the Nala North project area and have negative effects to the PRB sage-grouse population." Id. at 26.

It is quite clear, based on these and other disclosures in the revised EA, that the Nala North POD does not conform to the Buffalo RMP goals of "optimizing distribution and abundance of special status species, and sustaining sage-grouse habitats and populations across the State."

It is equally clear that the revised decision does not conform to the Buffalo RMP requirement to achieve a net conservation gain in PHMA. The revised decision approving the 17-well POD inside the Buffalo Core Population Area without providing for compensatory mitigation to offset the residual impacts to Greater sage-grouse is arbitrary and capricious and not consistent with the Buffalo Approved RMP. For these and other reasons discussed above, the Wyoming State Office should remand the decision to the Buffalo Field Office with instructions to comply with the Greater sage-grouse conservation measures contained within the Buffalo Approved RMP.

If, as mentioned earlier, the BLM has decided that valid existing rights held by Anschutz Company prevent the application of compensatory mitigation, the EA and DR should be clear on that point. Petitioners are aware of the new language added to the revised EA addressing this point, but what is not clear is whether the BLM decided that compensatory mitigation could not be required without infringing on Anschutz's lease rights. In any case, the BLM has an obligation under NEPA to analyze a range of mitigation options, including compensatory mitigation, to address the residual effects identified in the EA, even if it lacks the authority to require them. See BLM Mitigation Handbook (H-1794-1). The revised EA contains no such analysis.

Other RMP conformity issues.

As noted earlier, BLM actions must conform to the Buffalo Approved RMP. Below are several areas where conformity with the Buffalo RMP may not have been achieved. 43 CFR § 1610.6-3.

Absence of Coordination with the Sage-Grouse Implementation Team

There is no evidence in the revised EA that the BFO coordinated with the Wyoming Sage-Grouse Implementation Team (SGIT).

The Buffalo Approved RMP requires the BLM to coordinate with the Sage-Grouse Implementation Team when analyzing mitigation options for project level authorizations within Priority Habitat Management Areas: "For mitigation, the BLM would coordinate with the Wyoming Sage-grouse Implementation Team for application

of the 'avoid, minimize, compensate' process to ensure anthropogenic activities result in a net conservation gain for Greater Sage-grouse habitat." See Buffalo Approved RMP at 25; Table 3-7 (p.116) SS WL-4010, BR: 10.1.

There is no evidence in the revised EA that the required coordination took place. Although the revised EA (at 1) indicates that the BLM coordinated with the Wyoming Game and Fish Department (WGFD), the WGFD is not the SGIT. The SGIT is a legislatively created entity (Wyo. Stat. § 9-19-101) with its own unique set of responsibilities and tradition of openness and transparency in all of its affairs. Had the required coordination with the SGIT taken place, the decision about whether compensatory mitigation should be required for the Nala North POD might have been different. Unfortunately, the BFO's decision to bypass this important and very public step in the process allowed important decisions about mitigation to be made behind closed doors, creating an impression, right or wrong, that political considerations rather than science, drove the process.

The Potential Development of Valid Existing Rights was not addressed in the EA

The revised EA fails to examine the potential for the development of valid existing rights in the Buffalo Core Population Area.

The revised EA (at 1) discloses that "[t]here are eight federal fluid mineral leases within the Nala North project area, all issued in 1998." The EA also reveals that "Anschutz and other operators are likely to continue seeking permits to develop unconnected leases within or near the project area." Revised EA at 9. But what the revised EA fails to do is to examine the potential environmental effects that would result from the exercise of those rights, whether they be oil and gas leases, the grants of rights of way, locatable mining claims, mineral leases, etc. Although this level of inquiry should be included in the analysis of cumulative impacts of reasonably foreseeable future actions, the Rocky Mountain Region ROD makes clear, nonetheless, that BLM has an obligation to: "Consider the likelihood of developing not-yet-constructed surface-disturbing activities, as defined in Table 2 of the Monitoring Framework, under valid existing rights before authorizing new projects in PHMAs." See September 2015 ROD and ARMPAs/ARMPs for the Rocky Mountain GRSG Sub-Regions at 2-5.

Here, an inventory (e.g., map with detailed summaries) of lands encumbered by valid existing rights in the Buffalo CPA would help to reveal the nature, scope, degree (and possibly, the immediacy) of environmental threats to Greater sage-grouse, and would help to illuminate and inform the range of mitigation measures that may be warranted for this and other industrial projects proposed or reasonably foreseeable inside the core area. For example, a large mine proposed nearby might justify the suspension of leases in the project area to mitigate effects to the grouse. The absence of this information in the EA has deprived the public and the BLM of information needed to ensure a fully informed decision, an important goal of NEPA.

Required Design Features

The Revised EA fails to provide an independent and objective analysis of RDFs not incorporated by Anschutz, contrary to the requirements of the 2015 Buffalo Approved RMP and the Rocky Mountain Region ROD (Appendix C).

The March 2017 EA states that, "Anschutz submitted a *Required Design Feature (RDF) Summary for Projects within Greater Sage-grouse Habitat* checklist for the Nala North POD project. Anschutz did not address all applicable RDFs. A summary of the RDFs incorporated by Anschutz and their rationale for those not incorporated can be found in the SUPO." EA at 4 (emphasis added).

The revised September 2017 EA takes an abrupt "about face," simply stating that, "Anschutz submitted a *Required Design Feature (RDF) Summary for Projects within Greater Sage-grouse Habitat* checklist for the Nala North POD project. Anschutz addressed all applicable RDFs. A summary of the RDFs incorporated by Anschutz and their rationale for those not incorporated can be found in the SUPO." Revised EA at 5 (emphasis added).

The initial EA found that Anschutz failed to address all applicable RDFs. Without any explanation, the revised EA found that they did. The Buffalo Approved RMP (Appendix C) requires that the applicability and overall effectiveness of each RDF must be reviewed at the project level in a site-specific NEPA document. This was not done here. Moreover, the review must be performed by the BLM; the project proponent doesn't get to unilaterally decide which RDFs are applicable to its project and which are not.

The BLM's Methane Waste Prevention Rule

The revised EA fails to address the requirements contained in the BLM's waste prevention rule.

The BLM is now required to ensure compliance with its waste prevention rule (the Waste Prevention, Production Subject to Royalties, and Resource Conservation rule, See 81 Fed. Reg. 83,008). The Rule's purpose is to "reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian (other than Osage Tribe) leases . . . [and] also clarify when produced gas lost through venting, flaring, or leaks is subject to royalties, and when oil and gas production may be used royalty-free on-site." Id.

Although the BLM has attempted to stay the effect of its rule, a court has now confirmed that this effort was illegal and confirmed that the rule remains in effect. *State of California v. U.S. Bureau of Land Management*, Case 3:17-cv-03804-EDL (N.D. Cal. October 4, 2017), The court's Order is available here: https://www.eenews.net/assets/2017/10/05/document_ew_01.pdf

BLM must comply with the current rule and, even as the agency moves to consider repealing the rule, BLM must meet its Mineral Leasing Act waste prevention obligations,

which it has failed to do. This must be corrected in a revised or supplemental environmental analysis.

Petition for Stay

Petitioners respectfully request a stay of the effectiveness of the Nala North POD Decision Record, including a temporary cessation of any planned drilling or construction activity until this appeal is decided.

1. Petitioners are likely to suffer immediate and irreparable harm if the stay is not granted.

If a temporary stay of the decision is not granted, the operator is authorized to begin construction and operation of the Nala North POD, subject to applicable stipulations and COAs. Construction and operation of the wells in the absence of appropriate analysis and implementation of mitigation measures needed to achieve a net conservation gain and to compensate for residual impacts may cause immediate and irreparable hard to the wildlife resource and therefore to Petitioners' environmental, aesthetic, and recreational interests in this area of the Powder River Basin.

2. The relative harm to the parties favors granting a stay.

If construction of the Nala North POD begins before the Wyoming State Office (WSO) is able to review the merits of this appeal, the harm to the environment and to Petitioners' interests is immediate, irreparable and largely unnecessary. Construction and operation of the Nala North POD and the environmentally harmful activities related to its operation, particularly impacts to Greater sage-grouse, may cause significant environmental harm that was neither contemplated nor disclosed in the Nala North POD.

Neither the BLM nor the project proponent would suffer harm if the stay is granted. BLM will suffer no harm by the grant of a stay in this matter. In fact, the opposite is true. BLM will benefit from the stay as it will allow the agency to correct flaws in its environmental review process, thereby avoiding further administrative reviews and delays and the potential for future legal challenges. Likewise, the project proponent will not be harmed by a stay of the decision. Based on information and belief, Anschutz Oil Co., LLC possesses other approved APDs in the Powder River Basin and in other areas of the State that could be drilled to achieve desired revenue streams. On the other hand, construction of the Nala North POD would cause immediate and irreparable harm to the environment, and therefore to Petitioners' environmental and recreational interests. The Supreme Court has stated that if environmental injury is sufficiently likely, the balance of harms will usually favor the issuance of an injunction to protect the environment. That is certainly the case here. Petitioners' harm outweighs any potential harm to BLM or to Anschutz Oil Co., LLC, so the stay should be granted.

3. The public interest favors a stay.

Staying the BFO's decision to approve the Nala North POD pending a brief review by the WSO serves the public interest because it protects the environment by avoiding unnecessary environmental harm and by preserving the status quo during the State Director review period. The public interest is served by a BLM decision that is based on a complete and accurate disclosure of the environmental impacts and compliance with NEPA and the Buffalo Approved RMP including the requirement to analyze and implement compensatory mitigation to offset residual effects to Greater Sage-Grouse and to achieve a net conservation gain for the Greater sage-grouse in the Buffalo CPA. A brief stay of the effectiveness of the decision will provide the BLM an opportunity to address the deficiencies identified in this appeal and to issue a revised decision that complies with applicable law and policies, while avoiding the potential for immediate and unnecessary harm to the wildlife and other natural resources found within and near the project area.

4. Petitioners are likely to prevail on the merits of this appeal.

FLPMA requires that actions authorized by BLM conform to applicable Resource Management Plans. In addition, NEPA requires that agencies take a "hard look" at the environmental effects of actions before decisions are made. In this case, the BFO failed to analyze mitigation measures that could compensate for the residual environmental effects to Greater sage-grouse identified in the revised EA. Further, the BFO's failure to implement key provisions of the BLM's Greater Sage-Grouse Conservation Strategy contained in the Buffalo Approved RMP, namely, the duty to achieve a net conservation gain through the application of compensatory mitigation, present sufficient grounds to support a State Director decision to remand the Nala North POD EA/FONSI/DR to the BFO for further review. The BFO's failure to implement a key component of the RMP – the duty to achieve net conservation gain in PHMA– and to analyze compensatory mitigation in a NEPA document is unlawful and reversible error and constitutes a sufficient demonstration that Petitioners are likely to prevail on the merits.

Request for relief:

In view of the foregoing, Petitioners respectfully request that the State Director:

1. Vacate the September 28, 2017, Decision Record approving the Nala North POD.
2. Direct the Buffalo Field Manager to revise the Nala North POD EA (WY-D070-2017-0068) to address the deficiencies set forth herein.
3. Direct the BFO to issue a new decision consistent with applicable law and policy including but not limited to FLPMA, NEPA, the Buffalo Approved RMP (September 2015); and BLM Manual 1794 – Mitigation (12/22/2016). The revised NEPA document should include an analysis of compensatory mitigation that would fully mitigate residual effects identified in previous EAs, and a Decision Record that adopts compensatory mitigation measures designed to achieve a net conservation gain in the Buffalo CPA.

4. In all of these procedures, ensure there is full and adequate opportunity for public participation and comment.

Sincerely,



Dan Heilig
Senior Conservation Advocate
Wyoming Outdoor Council
262 Lincoln St.
Lander, WY 82520

FOR AND ON BEHALF OF PETITIONERS

From: Montoya, Jennifer
To: Judy Calman; Nada Culver
Subject: Fwd: From the Desk of the Acting State Director
Date: Wednesday, November 8, 2017 5:41:11 PM
Attachments: From the Desk #5.docx

For your reading enjoyment....

-Jennifer

Jennifer A. Montoya
Planning & Environmental Specialist
Bureau of Land Management
1800 Marquess Street
Las Cruces, NM 88005
575-525-4316 jamontoy@blm.gov

---------- Forwarded message ----------
From: Seidlitz, Aden <aseidlitz@blm.gov>
Date: Wed, Nov 8, 2017 at 3:31 PM
Subject: From the Desk of the Acting State Director
To: BLM_NM_ALL_NM-OK-TX-KS <BLM_NM_ALL_NM-OK-TX-KS@blm.gov>

All,

It's good to be back in the office for awhile! Appreciate everyone's efforts to keep things moving.

Have an enjoyable long weekend and be sure to thank our veterans.

Aden

From the Desk of Acting State Director Aden Seidlitz

November 8, 2017

BLM Team:

"From the Desk of the Acting State Director", is a forum for sharing what I hear from you, my thoughts on important issues, and solution-centric ideas to help the Bureau thrive. Today's topic is devoted to what I observed and heard in Washington D.C. last week.

But first, a very special thank you for the many veterans within our organization. We appreciate your past, present, and future service to the wonderful nation. Thanks for protecting and keeping us free.

Issue: Executive Leadership Team (ELT) Meeting

Discussion: This past week I attended the ELT meeting. As always, it was good to see my colleagues again, many of them I consider good friends. That happens during the course of a 30+ year career with the same outfit. No regrets whatsoever!

As we see on the evening news and read on the internet, our President has a strong desire to change the focus and business processes of government. There certainly is no exception at the Department of the Interior or at our agency. The focus on the Administrative priorities, which we have discussed before. What I learned last week that I hadn't fully appreciated is their impatience with the bureaucracy and their simplified approach to the NEPA and program processes. While refreshing in many aspects, implementing what they have directed us to do is challenging.

We need to continue to recalibrate not only our priorities, but how we complete the tasks in meeting the needs of our customers while continuing good stewardship of our natural resources. Acting Director Nedd will be sending out a short note tomorrow regarding the ELT meeting and will attach a Federal Land Policy & Management Act (FLPMA) employee booklet. Please review the booklet as it is our guide in times of change and transition.

Mr. Nedd defined what BLM meant to him during his visit to Carlsbad and I paraphrase it here. I have been reflecting on it every day the past couple of weeks. It is an honor to **Boldly** move forward working with people and natural resources I enjoy and **Love**, and to be determined to **Make** a difference each and every day. Thank you for allowing me this opportunity.

Respectfully,

Aden

From: Mike McGrady
To: Rugwell, Mary
Subject: Fwd: Citizen Complaint, North Antelope-Rochelle Mine, PT-0569
Date: Friday, November 17, 2017 12:47:11 PM
Attachments: 2017-11-17 Complaint North Antelope-Rochelle Right of Entry.pdf

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Mary Jo,

I hope you travels were uneventful. I wanted to bring to your attention the attached citizen complaint filed today by WildEarth Guardians and the Sierra Club with the Office of Surface Mining Reclamation and Enforcement. They allege that, because the BLM Wyoming High Plains District Manager signed Peabody's North and South Porcupine federal coal leases, the leases were not signed by someone with delegated authority and lack any legal force or effect. Therefore, they claim that Wyoming DEQ's mining permits are not valid. They are asking OSMRE to issue a mining cessation order.

Wyoming obviously does not want to see the mining stop.

Mike McGrady

Policy Advisor
Office of Governor Matt Mead

2323 Carey Avenue
Cheyenne, WY 82002
307-777-2083

---------- Forwarded message ----------
From: Todd Parfitt <todd.parfitt@wyo.gov>
Date: Fri, Nov 17, 2017 at 10:15 AM
Subject: Fwd: Citizen Complaint, North Antelope-Rochelle Mine, PT-0569
To: andrew kuhlmann <andrew kuhlmann@wyo.gov>, Mike McGrady <mike.mcgrady1@wyo.gov>
Cc: Alan Edwards <alan.edwards@wyo.gov>

fyi
---------- Forwarded message ----------
From: Jeremy Nichols <jnichols@wildearthguardians.org <mailto:jnichols@wildearthguardians.org> >
Date: Fri, Nov 17, 2017 at 9:49 AM
Subject: Citizen Complaint, North Antelope-Rochelle Mine, PT-0569
To: David Berry <dberry@osmre.gov>, todd.parfitt@wyo.gov, kyle.wendtland@wyo.gov
Cc: "Fleischman, Jeffrey" <jfleischman@osmre.gov>, Shannon Hughes <shughes@wildearthguardians.org <mailto:shughes@wildearthguardians.org> >, Mike Scott <mike.scott@sierraclub.org>

Attached, please find a citizen complaint regarding apparent violations of surface coal mining laws and regulations at the North Antelope-Rochelle coal mine, Permit No PT-0569, in Campbell County, Wyoming. Hard copies have also been sent via certified mail. Please contact us with any questions or concerns. Thank you.

Sincerely,

Jeremy Nichols

<http://twitter.com/climatewest>

--

Todd Parfitt

Director

Department of Environmental Quality NOTE NEW ADDRESS

200 W. 17th St. 4th Floor
Cheyenne, WY 82002

307-777-7937 <tel:(307)%20777-7937>

todd.parfitt@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

November 17, 2017

BY ELECTRONIC MAIL AND
CERTIFIED U.S. MAIL
RETURN RECEIPT REQUESTED

David Berry, Director
Western Regional Office
U.S. Office of Surface Mining Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, CO 80202-3050
dberry@osmre.gov

Re: Citizen Complaint and Request for Cessation Order Under the Surface Mining Control and Reclamation Act Over Right of Entry Violation at North Antelope-Rochelle Mine in Campbell County, Wyoming, Permit No. PT0569

Pursuant to the Surface Mining Control and Reclamation Act ("SMCRA"), 30 U.S.C. §§ 1267(h)(1) and 1271(a)(1), and SMCRA implementing regulations, 30 C.F.R. § 842.12(a), WildEarth Guardians hereby submits the following citizen complaint to inform the Office of Surface Mining Reclamation and Enforcement ("OSMRE") that violations of SMCRA appear to be occurring in Wyoming at Peabody Energy Corporation's ("Peabody") North Antelope-Rochelle Mine in Campbell County, Wyoming, Permit Number PT-0569. We request that OSMRE inspect and take appropriate action to address these violations pursuant to 30 C.F.R. § 842.11. Furthermore, because it appears that Peabody was not issued a valid surface coal mining permit, we request that OSMRE issue a cessation order pursuant to 30 C.F.R. § 843.11(a)(2).

At issue is the fact that Peabody was improperly permitted by the Wyoming Department of Environmental Quality ("DEQ") to mine the purported North and South Porcupine federal coal leases, WYW-173408 and WYW-176095, respectively. Through a permit revision approved on December 3, 2013, DEQ authorized surface mining of coal from these leases. However, Peabody did not have the legal right to enter and commence surface mining of these leases because they were approved by a U.S. Bureau of Land Management ("BLM") District Manager who lacked delegated authority to approve federal coal leases.

As the U.S. Department of the Interior has held, BLM District Managers in Wyoming do not have delegated authority to approve coal leases. *See* Exhibit 1, *WildEarth Guardians*, 189 IBLA 274, 278-279 (Feb. 7, 2017). The IBLA has held that, "[i]f a decision is not issued by an employee with delegated authority to issue it, then the action does not bind the Department [of

the Interior] and is not properly considered a decision of the BLM." *Id*. at 279. If a coal lease is approved by a BLM official without delegated authority, it "has no legal effect." *Id*. at 283.

A BLM District Manager purportedly approved both the North and South Porcupine federal coal leases. Accordingly, these leases have "no legal effect." *Id*. Subsequently, Peabody inaccurately represented that it had the legal right to enter and commence surface mining of these leases in its application and DEQ improperly approved Peabody's application for a permit revision. Consequently, both Peabody and DEQ violated and continue to violate SMCRA and SMCRA regulations.

I. LEGAL BACKGROUND

Before an entity can conduct surface coal mining operations, a permit must be obtained. *See* 30 U.S.C. § 1256(a). To obtain a permit, an entity must submit an application to conduct surface coal mining operations and obtain approval from the permitting authority. *See* 30 U.S.C. § 1257. A permit application must contain specific information demonstrating the applicant qualifies for permit issuance under SMCRA. Among other things:

> [A permit application must contain information] clearly showing the land to be affected as of the date of the application, the area of land within the permit area upon which the applicant has the legal right to enter and commence surface mining operations and shall provide the regulatory authority a statement of those documents upon which the applicant bases his legal right to enter and commence surface mining operations on the area affected[.]

30 U.S.C. § 1257(b)(9); *see also* 30 C.F.R. § 778.15(a). If an entity does not properly demonstrate a legal right to enter and commence surface mining operations, its application for a permit cannot be approved. *See* 30 U.S.C. § 1260(b)(1) and C.F.R. § 773.15(a).

To this end, a failure to demonstrate a legal right to enter and commence surface mining operations is subject to inspection and enforcement under SMCRA, even if a permit has been issued. *See* Exhibit 2, *Paul F. Kuhn*, 120 IBLA 1 (July 3, 1991). Although permitting authorities are not authorized to adjudicate property rights, they must take "appropriate action" to resolve any error in permitting and inform the entity of inadequacies. *Id*. at 25.

Accordingly, if a person files a complaint with OSMRE that a permittee has failed to demonstrate a right to enter lands and conduct surface mining in violation of SMCRA, the agency has a duty to ensure that "appropriate" action be taken to cause the violation to be corrected. 30 U.S.C. § 1271(a) and 30 C.F.R. § 842.11(b)(1)(ii)(B); *see also Paul F. Kuhn*, 120 IBLA 15. If a violation continues, a cessation order and/or notice of violation shall be issued. *See* 30 C.F.R. §§ 843.11(a)(2) and 843.12(a)(2).

II. FACTUAL BACKGROUND

The North and South Porcupine federal coal lease applications were approved in 2011. In Records of Decision, Stephanie Connolly, the BLM Wyoming High Plains District Manager,

claims to have approved both coal leases. For the North Porcupine lease, Ms. Connolly stated in an October 17, 2011 Record of Decision, "I approve the decision to offer Federal coal tract WYW173408 for competitive lease sale." Exhibit 3, BLM, Record of Decision for North Porcupine Federal Coal Lease at 21 (Oct. 17, 2011). For the South Porcupine lease, Ms. Connolly stated in an August 10, 2011 Record of Decision, "I approve the decision to offer Federal coal tract WYW176095 for competitive lease sale." Exhibit 4, BLM, Record of Decision for South Porcupine Federal Coal Lease at 22 (Aug. 10, 2011).

However, the BLM Wyoming High Plains District Manager was not delegated authority to approve the North and South Porcupine federal coal leases. Indeed, pursuant to the BLM Washington Office's Manual Section, MS-1203, Delegation of Authority (internal), and the BLM Wyoming Supplement to this Manual, the BLM did not specifically delegate authority to District Managers to approve coal lease modifications at the time Ms. Connolly issued her Records of Decision. *See* Exhibit 5, BLM Washington Office's Manual Section, MS-1203, Delegation of Authority (internal) at Appendix 1, p. 67 (delegating authority to approve coal lease applications to State Director) and Exhibit 6, Wyoming Supplement to the BLM Delegation of Authority at Appendix 1, p. 89 (delegating authority to approve coal lease applications to State Director and Deputy State Director for Minerals and Lands).

As the U.S. Department of the Interior has held, because Ms. Connolly, a BLM District Manager, was not delegated authority to approve the North and South Porcupine coal lease applications, her decisions "were not properly considered decision[s] of the BLM" and had "no legal effect." 187 IBLA 274, 279. Consequently, the North and South Porcupine federal coal leases are not based on valid approvals form the BLM and the U.S. Department of the Interior, and are not legitimate coal leases. This means Peabody was not properly vested with the right to enter the purported North and South Porcupine coal leases and commence surface mining.[1]

Further, although the North and South Porcupine leases have been the subject of adjudicatory review, no review body has ever ruled on whether the leases were properly approved based on the agency's delegation of authority to sign the leases. In rulings in 2012 and 2015, the IBLA and Wyoming District Court, respectively, upheld BLM's issuance of the leases under the National Environmental Policy Act ("NEPA") and the Federal Land Policy and Management Act ("FLPMA"). *See Powder River Basin Resource Council*, 183 IBLA 83 (Dec. 21, 2012); *WildEarth Guardians v. U.S. Forest Service*, 120 F.3d 1237 (D. Wyo. 2015). Neither the IBLA nor the Wyoming District Court held that the District Manager had properly delegated authority to approve the coal leases or even address the issue in their rulings. Similarly, in a September 2017 ruling, the U.S. Court of Appeals for the 10th Circuit overturned these earlier decisions and held that BLM's environmental review of the North and South Porcupine coal leases failed to comply with NEPA, but the ruling did not address the delegation of authority issue raised here. *See WildEarth Guardians v. U.S. Bureau of Land Management*, 870 F.3d 1222 (10th Cir. 2017).

[1] The IBLA has consistently held that coal leasing approvals by BLM employees without delegated authority have no legal effect. *See* Exhibit 7, *WildEarth Guardians*, 187 IBLA 349 (May 6, 2016); Exhibit 8, Order in IBLA 2016-79 (Aug. 25, 2016); and Exhibit 9, Order in IBLA 2016-80 (Aug. 25, 2016).

On December 3, 2013, DEQ approved a permit revision allowing Peabody to enter the purported North and South Porcupine coal lease areas and commence surface mining. This approval was in error. Because the purported North and South Porcupine coal leases were not properly approved by the BLM, they had no legal effect. Peabody therefore had no valid right to enter the purported coal lease areas and commence surface mining. The company therefore failed to provide proper documentation demonstrating a right to enter and commence surface mining operations. DEQ further failed to verify the accuracy of Peabody's submissions and further failed to demonstrate that the December 3, 2013 approval was supported pursuant to SMCRA and SMCRA regulations.

III. COMPLAINT, REQUEST FOR INSPECTION AND APPROPRIATE ACTION

Where there is reason to believe that a violation of SMCRA or SMCRA regulations exists, OSMRE is required to notify the state regulatory authority pursuant to 30 C.F.R. § 842.11(b)(1)(ii)(B). Where a state fails to respond within 10 days, or otherwise fails to take appropriate action, OSMRE must conduct an inspection of mining operations. If a violation is found as a result of an inspection, OSMRE must issue a "cessation order" and/or "notice of violation" pursuant to 30 C.F.R. §§ 843.11 and/or 843.12 to remedy the violations.

Based on the aforementioned information, there is reason to believe that Peabody Energy has not accurately disclosed whether it has the legal right to enter the purported North and South Porcupine federal coal leases and conduct surface mining. This is a violation of, among other requirements, 30 U.S.C. § 1257(b)(9) and 30 C.F.R. § 778.15(a). Further, there is reason to believe that DEQ has failed to properly scrutinize Peabody's application to mine the purported North and South Porcupine federal coal leases and whether the application to mine these purported leases was appropriately approved. This is a violation of, among other requirements, 30 U.S.C. § 1260(b)(1) and C.F.R. § 773.15(a).

Accordingly, OSMRE must notify Wyoming regulatory authorities, conduct any necessary inspections, and take appropriate action to rectify these violations. Given that it appears Peabody is mining without valid permits, we request a cessation order be issued pursuant to 30 C.F.R. § 843.11.

We look forward to your prompt attention and action in this matter.

Sincerely,

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Exhibit 1

WILDEARTH GUARDIANS
POWDER RIVER BASIN RESOURCE COUNCIL
SIERRA CLUB

189 IBLA 274 Decided February 7, 2017

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
801 N. Quincy St., Suite 300
Arlington, VA 22203

703-235-3750 703-235-8349 (fax)

WILDEARTH GUARDIANS
POWDER RIVER BASIN RESOURCE COUNCIL
SIERRA CLUB

IBLA 2014-263 & 283 Decided February 7, 2017

Appeal from a decision by the District Manager of the Wyoming High Plains District Office of the Bureau of Land Management authorizing the modification of a coal lease. WYW-177903.

Cases consolidated; set aside and remanded.

1. Administrative Procedure: Consolidation

Under the Board's regulations, we may consolidate appeals at our own initiative if the facts or legal issues pending before us in each case are the same or similar.

2. Administrative Procedure: Decisions;
Bureau of Land Management: Delegation of Authority

If a decision is not issued by a BLM employee with delegated authority to issue it, then the decision does not bind the Department. If a purported decision has no legal effect, then the Board properly sets it aside and remands it for further action. Opining on the merits of an unauthorized BLM decision would constitute an advisory opinion, which the Board will not issue.

3. Administrative Procedure: Decisions;
Bureau of Land Management: Delegation of Authority

A delegation of authority to issue a NEPA document is not a delegation of authority to make the decision that the NEPA document supports. A decision record is neither a NEPA document nor part of the NEPA document preparation process. Because a decision record is not a NEPA document, the authority to issue a decision record must be

> exercised consistent with delegations governing the substance of the decision, not the delegations governing the NEPA document preparation process.

APPEARANCES: Samantha Ruscavage-Barz, Esq., Santa Fe, New Mexico, for WildEarth Guardians; Shannon Anderson, Esq., Sheridan, Wyoming, for Powder River Basin Resource Council and Sierra Club; Andrew C. Emerich, Esq., Greenwood Village, Colorado, for Antelope Coal LLC; James Kaste, Esq., Cheyenne, Wyoming, for State of Wyoming; Philip C. Lowe, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Lakewood, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE RIECHEL

WildEarth Guardians, Powder River Basin Resource Council (PRBRC), and Sierra Club (Appellants) appeal a Decision Record (DR) issued by the District Manager of the Wyoming High Plains District Office of the Bureau of Land Management (BLM). In the DR, BLM authorized the modification of coal lease WYW-177093 to add 857 acres to the lease, which is located in Wyoming in the Powder River Basin.

For a BLM decision to bind the Department of the Interior, it must be issued by a BLM employee with delegated authority to issue it. If a decision is not issued by an employee with delegated authority, the decision has no legal effect. The BLM Wyoming State Director delegated the authority to approve coal lease modifications to the Deputy State Director, but not to any subordinate officials. Any delegations of authority to those subordinate officials to issue National Environmental Policy Act (NEPA) documents supporting coal lease modifications would not equate to a delegation to those officials to approve the coal lease modification that the NEPA document supports. Because the District Manager did not have delegated authority to approve coal lease modifications, BLM's DR has no legal effect. We therefore set aside the DR and remand for further action consistent with this decision.

Background

Antelope Coal LLC filed an application in November 2012 to modify Federal coal lease WYW-177903.[1] In its application, Antelope Coal sought to add 857 acres to

[1] Lease By Modification for Federal Coal Lease WYW-177903, West Antelope II South Tract (Nov. 29, 2012) (Lease by Modification); Decision Record (DR) at unpaginated (unp.) 1.

its lease.[2] These acres are adjacent to the Antelope Mine and would add 15,751,000 tons of coal to the lease, adding 6 months of reserves for the mine.[3]

BLM prepared an Environmental Assessment (EA) to identify potential environmental impacts related to Antelope Coal's proposed lease modification.[4] On August 15, 2014, the District Manager for BLM's High Plains District Office issued a Finding of No Significant Impact (FONSI) and a DR documenting her "decision to approve the lease modification to WYW-177903 to include tracts of unleased federal coal."[5]

In two separate appeals, WildEarth Guardians in one appeal and PRBRC and Sierra Club in another, Appellants challenged the DR, arguing that the EA supporting the DR is inadequate.[6] We granted motions by Antelope Coal and the State of Wyoming to intervene in the appeals.[7] In light of a May 2016 Board decision in another case filed by WildEarth Guardians,[8] we issued an Order to Show Cause directing BLM to show that the DR was issued by a BLM employee with delegated authority.[9] Because we resolve this appeal based on the absence of authority for the District Manager to approve the lease modification, we do not address Appellants' arguments about the adequacy of the EA.

We Consolidate the Two Appeals Because They Have the Same Facts and Legal Issues

Under the Board's regulations, we may consolidate appeals at our own initiative if the facts or legal issues pending before us in each case are the same or similar.[10] Because the facts and legal issues in the two appeals docketed as IBLA 2014-263 and IBLA 2014-283 are the same, we consolidate them for disposition.

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[2] Lease by Modification at 1; DR at unp. 1.

[3] Lease by Modification at 1, 4; DR at unp. 3; Antelope Coal LLC's Answer in IBLA 2014-283 at 6.

[4] Environmental Assessment (EA) WY-060-EA13-147, West Antelope II South Lease Modification (March 2014).

[5] DR at unp. 1; *see also id*. at 5 ("I approve the decision to modify lease WYW-177903 by an addition of an 856.61-acre tract.").

[6] Notice of Appeal of WildEarth Guardians (Sept. 5, 2014); Notice of Appeal of PRBRC and Sierra Club (Sept. 12, 2014).

[7] Order (Oct. 16, 2014).

[8] *WildEarth Guardians*, 187 IBLA 349 (2016).

[9] Order (Sept. 12, 2016).

[10] 43 C.F.R. § 4.404.

Delegations of Authority to Approve Coal Lease Modifications

The Mineral Leasing Act authorizes the Secretary of the Interior to issue coal leases, in her discretion, upon request by any qualified applicant.[11] The Mineral Leasing Act also authorizes the Secretary of the Interior to approve modifications of coal leases "by including additional coal lands or coal deposits contiguous or cornering to those embraced in the lease."[12] The regulations implementing the Mineral Leasing Act empower an "authorized officer" to act for the Secretary.[13] "Authorized officer" is defined as "any employee of the [BLM] delegated the authority to perform the duty described in the section in which the term is used."[14] To determine which BLM employees have authority to approve and modify coal leases, we consult the Department's and BLM's written delegations of authority.[15]

The Secretary has delegated her authority to implement the Mineral Leasing Act to the Assistant Secretary – Land and Minerals Management.[16] The Assistant Secretary, in turn, delegated her authority to implement the Mineral Leasing Act to the Director of BLM.[17]

Delegations from the Director of BLM to other BLM employees are documented in the BLM Manual, which reflects that the BLM Director delegated his authority to

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[11] 30 U.S.C. § 201(a)(1) (2012); *see also* 43 C.F.R. Subpart 3425 (Leasing on Application).

[12] 30 U.S.C. § 203(a)(1) (2012); *see also* 43 C.F.R. Subpart 3432 (Lease Modifications).

[13] *See, e.g.*, 43 C.F.R. §§ 3425.1-8, 3425.3(a), 3432.2(a).

[14] 43 C.F.R. § 3400.0-5(b).

[15] *See* 200 Departmental Manual (DM) 1.3 (delegations from the Secretary are issued in the Delegation Series of the DM), 2.3 ("Redelegations of authority within a bureau or office will be issued as part of the bureau or office directives system.") (effective Aug. 22, 2001); BLM Manual Section 1203, Delegation of Authority (Internal) (Nov. 16, 2006).

[16] 209 DM 7.1 (effective June 28, 2001).

[17] 235 DM 1.1K (effective Oct. 5, 2009).

approve coal lease modifications to the State Directors.[18] Delegations from the State Director are documented in State Office supplements to the BLM Manual.[19]

In the Wyoming State Office Supplement to the BLM Manual, the Wyoming State Director delegated the authority to approve coal lease modifications to the Deputy State Director, Division of Minerals and Lands, and indicated that the authority may not be re-delegated below that office.[20] Consequently, BLM district and field managers, who are subordinate to the Deputy State Director, do not have delegated authority to approve coal lease modifications.[21]

The High Plains District Manager Does Not Have Delegated Authority to Approve Coal Lease Modifications

The District Manager for the BLM High Plains District Office signed the DR for the West Antelope II South coal lease modification, WYW-177903. In the DR, the District Manager states, "[I]t is my decision to approve the lease modification to WYW-177903 to include tracts of unleased federal coal."[22] The DR provides the rationale for her decision and procedures to appeal it.[23] The District Manager's signature appears under a statement that she agrees with the Assistant District Manager's recommendation and approves the decision to modify the lease by an addition of an 856.61-acre tract.[24]

[1] The DR is plainly a decision to approve a lease modification. But the decision was not signed by a BLM employee with delegated authority to approve lease modifications—either the Wyoming State Director or the Deputy State Director for Minerals and Lands. If a decision is not issued by an employee with delegated

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[18] BLM Manual Section 1203, Appendix (App.) 1 at 67 (submitted by WildEarth Guardians as Exhibit (Ex.) A to its Response to Order to Show Cause and Related BLM/Antelope Coal Filings).

[19] BLM Manual Section 1203 at .22.

[20] Wyoming State Office, BLM Manual Supplement 1203, (Wyoming Delegation of Authority), App. 1 at 89 (Change 1 May 2010) (submitted by WildEarth Guardians as Ex. B to its Response to Order to Show Cause and Related BLM/Antelope Coal Filings); *see id.* at .41C.1.b (a small box in the "Authority Delegated to" column "indicates that the authority may **not** be re-delegated below the designated official").

[21] *Id.*, App. 1 at 89.

[22] DR at unp. 1.

[23] *Id.* at unp. 3-4.

[24] *Id.* at unp. 5.

authority to issue it, then the action does not bind the Department and is not properly considered a decision of the BLM.[25] The purported decision therefore has no legal effect, and the Board properly sets it aside and remands it for further action.[26]

BLM defends the District Manager's authority to approve coal lease modifications by referring us to the BLM delegations of authority for issuing documents implementing NEPA.[27] BLM argues that the Wyoming State Director delegated authority to District Managers to sign all decision records as part of the NEPA delegations.[28] BLM explains that this delegation, when considered in conjunction with the delegation to the State Director and Deputy State Director for Minerals and Lands to approve coal lease modifications,

> mean[s] that a District Manager was delegated the authority to sign records of decision and decision records for coal leasing and lease modification actions while the underlying lease itself would be signed by the State Director or Deputy State Director, consistent with the District or Field Manager's record of decision or decision record.[29]

BLM provides an authority chart and instruction memoranda (IMs) issued by the Wyoming State Office in support of its argument that District Managers may sign decision records for coal lease modifications.[30]

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[25] *See* BLM Manual Section 1203, Glossary of Terms (defining "authority" as "[t]he ability to make the final, binding decision or to take specific action, or both, as an official representing the United States Government. Such authorities have a legal basis in statute or regulation.").

[26] *WildEarth Guardians*, 187 IBLA at 353.

[27] 42 U.S.C. §§ 4321-4370h (2012).

[28] BLM's Response to Order to Show Cause at 4 (citing Wyoming Delegation of Authority, App. 1 at 46 (delegating authority to "[p]ublish, file, and approve draft and final environmental impact statements and associate records of decisions" to district managers)).

[29] *Id.* at 4-5.

[30] *Id.* at 5-6 (comparison chart titled Completing Coal Program NEPA Under BLM Wyoming 1203 Manual (4/2010) (Ex. 4 to BLM's Response to Order to Show Cause); Instruction Memorandum (IM) No. WY-2013-040, Wyoming Coal Lease-by-Application (LBA) Processing Responsibilities (July 8, 2013) (Ex. 5 to BLM's Response to Order to Show Cause); and IM No. WY 2014-027, Update of Review Procedures for Environmental Documents (May 23, 2014) (Ex. 6 to BLM's Response to Order to Show Cause)).

One of the documents cited by BLM is a Wyoming BLM IM titled "Wyoming Coal Lease-by-Application (LBA) Processing Responsibilities."[31] In this document, the BLM Wyoming State Office presents a summary of the process and responsibilities for adjudicating Federal coal leases-by-application filed in Wyoming.[32] The IM explains that district office staff is responsible for preparing the NEPA documents for a coal lease-by-application, specifying that "[a] NEPA analysis is completed on any proposed LBA before a decision is made to lease or not lease the tract."[33] The IM also states as follows: "The [Record of Decision (ROD)] is written by the [district staff] and is signed by the District Manager."[34] Although the IM does not mention DRs, because DRs are analogous to RODs—a ROD documents a BLM decision following preparation of an environmental impact statement (EIS) and a DR documents a BLM decision following preparation of an EA[35]—this statement in the IM is fairly interpreted to apply to DRs, too. The other IM BLM cites, titled "Update of Review Procedures for Environmental Documents," sets forth the State Director's goals for the quality of NEPA documents.[36] This IM also suggests that district managers have authority to make decisions through RODs and DRs, but it is not specific to the coal leasing context.[37]

The flaw in BLM's argument, and reflected in the Wyoming IMs, is that BLM conflates decisions authorizing coal lease modifications with the NEPA documentation *supporting* such decisions. Decisions authorizing an action and NEPA documentation supporting those decisions have discrete purposes. One of the purposes of the NEPA process is to gather and analyze information to support decision making.[38] Only after the NEPA process is complete may the authorized official make its decision. As the

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[31] IM No. WY-2013-040.

[32] *Id.* at 1; *see also id.,* Attachment (Att.) at 1.

[33] *Id.*, Att. at 4.

[34] *Id.*, Att. at 5.

[35] *See* 40 C.F.R. § 1505.2 ("[ROD] in cases requiring environmental impact statements"); BLM NEPA Handbook H-1790-1 at 84 (Jan. 2008) ("BLM has chosen to use the "decision record" (DR) to document the decision regarding the action for which the EA was completed.").

[36] IM No. WY 2014-027 at 1.

[37] *Id.* at 1-2 (informing District Managers that they are responsible for ensuring that "environmental documents"—defined in the IM to include DRs—contain "[t]he rationale for the decision made by the Authorizing Officer (AO) in the ROD or DR.").

[38] *See* 40 C.F.R. § 1500.1(c) ("The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.").

Council on Environmental Quality stated in its regulations implementing NEPA, "NEPA procedures must insure that environmental information is available to public officials and citizens *before decisions are made* and before actions are taken."[39] Consistent with this direction, BLM's NEPA Handbook explains that "BLM has chosen to use the 'decision record' (DR) to document the decision regarding the action for which the EA was completed."[40] The decision-maker signs and dates the DR, which is "the authorizing document" for the action.[41]

[2] A delegation of authority to issue a NEPA document is not a delegation of authority to issue the DR that the NEPA document supports. A DR is neither a NEPA document nor part of the NEPA document preparation process.[42] Because the DR is not a NEPA document, the authority to issue a DR must be exercised consistent with delegations governing the substance of the decision, not the delegations governing the NEPA document preparation process. And for decisions to approve coal lease modifications, the Wyoming State Office Supplement to BLM's delegation manual specifies that the authority to make such decisions may not be redelegated below the Deputy State Director.[43] This delegation cannot be modified by an IM,[44] and the IMs BLM cites do not purport to do so.[45] Because BLM has not demonstrated that the

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[39] 40 C.F.R. § 1500.1(b) (emphasis added).

[40] BLM NEPA Handbook H-1790-1 at 84 (Jan. 2008).

[41] *Id.* at 83 ("The FONSI is not the authorizing document for the action: the decision record is the authorizing document."), 85 ("The decision-maker must sign and date the DR.").

[42] *See* 40 C.F.R. § 1508.10 (Council on Environmental Quality's NEPA regulation defining "environmental document" as including EAs, environmental impact statements, FONSIs, and notices of intent); 43 C.F.R. § 46.325 (stating that "the environmental assessment process" concludes with a FONSI, a notice of intent to prepare an EIS, or no further action).

[43] Wyoming Delegation of Authority, App. 1 at 89.

[44] *Id.* at .22 ("Written documentation of a Wyoming delegation of authority must be made in the form of an amendment to Appendix 1 using a Form 1203-2."); *see also* 200 DM 2.3 ("Redelegations of authority within a bureau or office will be issued as part of the bureau or office directives system."); BLM Manual Section 1203 at .22 ("Written documentation of a delegation of authority must be in the form of an amendment to the Index to this Manual Section (see Appendix 1), or to the Index of a State Manual Supplement to the BLM Manual Section 1203.").

[45] IM No. WY 2014-027 at 8 ("Manual/Handbook Sections Impacted. BLM Handbook 1790-1 [BLM's NEPA Handbook]."); IM No. WY-2013-040 at 2 ("Manual/Handbook Sections Affected: None.").

District Manager possessed the requisite authority to authorize a coal lease modification, the DR is not properly considered a decision of the BLM.[46] Because the DR is not a BLM decision, it has no legal effect and cannot be appealed to the Board.[47]

BLM notes that the lease itself will be signed by the State Director or Deputy State Director, suggesting that BLM's action will be consistent with the delegations for coal lease modification decisions.[48] But once the decision is made to modify a coal lease through a DR, execution of the document implementing that decision is merely ministerial. BLM itself refers to the State Director's or Deputy State Director's signature on the lease as an "administrative step" and emphasizes that the District Manager is the official who makes the decision:

> The other administrative steps involved in offering a tract for lease or modification [after the District Manager issues a decision to offer the lease modification tract] are not subject to appeal …. [These] administrative requirements of issuing the coal lease modification … in no way call into question the District Manager's threshold decision to offer the lease modification[.][49]

BLM points to cases in which the High Plains District Manager's authority to modify coal leases was not challenged,[50] and both BLM and Antelope Coal note that WildEarth Guardians did not challenge the District Manager's authority in its statements of reasons.[51] However, as WildEarth Guardians observes, no prior Board ruling expressly determined whether the High Plains District Manager has delegated authority to approve coal lease modifications.[52] Furthermore, if the District Manager does not have delegated authority, then the DR is not properly considered a decision of

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[46] *WildEarth Guardians*, 187 IBLA at 353; BLM Manual Section 1203, Glossary of Terms (defining "authority").

[47] 43 C.F.R. §§ 4.1(b)(2), 4.410(a).

[48] BLM's Response to Order to Show Cause at 5.

[49] *Id.* at 6-7; *see also id.* at 5 ("[T]he underlying lease itself would be signed by the State Director or Deputy State Director, consistent with the District or Field Manager's record of decision or decision record.").

[50] *Id.* at 7-9.

[51] *Id.* at 4-9; Antelope Coal LLC's Response to Show Cause Order at 1-2.

[52] Response to Order to Show Cause and Related BLM/Antelope Coal Filings at 4.

the BLM, and we do not have jurisdiction over this appeal.[53] Jurisdictional issues may be raised at any time in a proceeding and cannot be waived.[54]

Based on BLM's delegations of authority, we find that the District Manager was not authorized to approve the coal lease modification in the DR. The purported decision therefore has no legal effect, and the Board properly sets it aside and remands it for further action by those with delegated authority to act.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior,[55] we set aside and remand BLM's DR for further action consistent with this opinion.

/s/
Silvia M. Riechel
Administrative Judge

I concur:

/s/
James K. Jackson
Administrative Judge

[53] 43 C.F.R. §§ 4.1(b)(2), 4.410(a).
[54] *UOS Energy, LLC*, 176 IBLA 286, 291 (2009); *Hopi Tribe v. Office of Surface Mining Reclamation and Enforcement*, 103 IBLA 44, 47 (1988).
[55] 43 C.F.R. § 4.1.

Exhibit 2

Editor's note: 98 I.D. 231

PAUL F. KUHN

IBLA 89-539 Decided July 3, 1991

Appeal from the decision of the Director, Office of Surface Mining Reclamation and Reinforcement, declining to conduct a Federal inspection pertaining to 10-day Notice No. 89-07-117-003 in response to appellant's citizen complaint.

Reversed and remanded.

1. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   If a citizen files a complaint with the Office of Surface Mining Reclamation and Enforcement alleging that a permittee has no right to enter and mine upon his land and that state program action has not been appropriate, pursuant to sec. 521(a)(1) of the Surface Mining Control and Reclamation Act of 1977, the Office of Surface Mining Reclamation and Enforcement has authority to issue a 10-day notice to the state, and to review resulting state program action to determine whether the state has taken "appropriate action to cause said violation to be corrected or has shown good cause for such failure" under 30 U.S.C. § 1271(a)(1) (1988).

2. Surface Mining Control and Reclamation Act of 1977: Permits: Generally -- Surface Mining Control and Reclamation Act of 1977: Words and Phrases

A permit is a written license or warrant, issued by a person in authority, empowering the grantee to do some act not forbidden by law, but not allowable without such authority. Under the Surface Mining Control and Reclamation Act of 1977, the issuance of a surface mining permit by a regulatory authority empowers the permittee to surface mine a designated area under the conditions specified in the permit, without which permit such mining would not be allowable.

3. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: Enforcement Procedures: Generally

Pursuant to the Surface Mining Control and Reclamation Act of 1977, this Board has no authority to award damages for trespass. While sec. 520 of the Act permits a damage action by "[a]ny person who is injured in his person or property through the violation by any operator of any rule, regulation, order, or permit issued pursuant to this chapter," the Act provides that, in the event of operator error, malfeasance, or damage to a citizen's private property, the citizen's remedy is with the courts. 30 U.S.C. § 1270(f) (1988).

4. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: Permits: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

Under the Surface Mining Control and Reclamation Act of 1977, a permit applicant is required to file legal documentation of a right to mine an area under consideration, and maps which accurately depict the area within which the applicant possesses the legal right to mine. 30 U.S.C. § 1257(b)(9) (1988). These requirements come within sec. 521(a)(1) of the Act (30 U.S.C. § 1271(a)(1) (1988)), providing that, "[w]henever, on the basis of any information available to him, including receipt of information from

any person, the Secretary has reason to believe that any person is in violation of any requirement of this chapter or any permit condition required by this chapter, the Secretary shall notify the State regulatory authority," and the state authority shall take "appropriate action."

5. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: Permits: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   If a citizen alleges and provides evidence that a state program has granted a permit to enter and mine where the permittee has not obtained a legal right to enter and mine, a state is required by sec. 521(a)(1) (30 U.S.C. § 1271(a)(1) (1988)) and sec. 507(b)(9) (30 U.S.C. § 1257(b)(9) (1988)) of the Surface Mining Control and Reclamation Act of 1977 to take any "appropriate action" short of adjudication of property title disputes.

6. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   Where a landowner provides evidence that an initial decision that an operator has a right to enter and mine an area that has been permitted may be in error, state authorities must assure that the operator has the right to enter and mine before the area is mined, and state action which fails to do so will be deemed inappropriate action pursuant to sec. 521(a)(1) of the Act. 30 U.S.C. § 1257(b)(9) (1988); 30 U.S.C. § 1271(a)(1) (1988). So long as the operator retains full authority to mine the disputed area under a validly issued permit, the intent and purpose of the Act as stated in sec. 102(b) (30 U.S.C. § 1202(b) (1988)) to "assure that the rights of surface landowners and other persons with a legal interest in the land or appurtenances thereto are fully protected from such operations" is jeopardized.

7. Surface Mining Control and Reclamation Act of 1977: Enforcement Procedures: Generally -- Surface Mining Control and Reclamation Act of 1977: Inspections: 10-Day Notice to State -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   The Office of Surface Mining Reclamation and Enforcement is authorized to issue a 10-day notice when it has reason to believe that a person is conducting surface mining activity causing a surface disturbance in an area not covered by a permit in violation of the requirements of the Surface Mining Control and Reclamation Act of 1977. When, in response to this notice, the state agency refuses to take action because it does not consider the activity to be surface mining or a related activity, and thus finds a permit is not required, but the interpretation of the statute advanced by the state is contrary to both the intent of the Act and a reasonable interpretation of state law, it is proper for the Office of Surface Mining Reclamation and Enforcement to order a Federal inspection. If, after Federal inspection, the Office of Surface Mining Reclamation and Enforcement determines that the activity is in violation of any requirement of the Act, the Office of Surface Mining Reclamation and Enforcement may issue a notice of violation to the operator or cessation order, fixing a reasonable time for abatement.

8. Surface Mining Control and Reclamation Act of 1977: Notices of Violation: Permittees

   Under sec. 521(a) of the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. § 1271(a) (1988), a permittee of a minesite was properly cited for a violation of the Act notwithstanding the fact that the surface mining or related activity was performed by a third party.

APPEARANCES: Paul F. Kuhn, Harrison, Ohio, pro se..

OPINION BY ADMINISTRATIVE JUDGE ARNESS

Paul F. Kuhn appeals a letter decision dated June 21, 1989, issued by the Director, Office of Surface Mining Reclamation and Enforcement (OSM).

The decision notified Kuhn that OSM would not take enforcement action on his appeal, dated May 17, 1989, from a decision by the Columbus Field Office (CFO), OSM. CFO's decision declined to conduct a Federal inspection of a mining site under permit D-217-2 to Empire Coal Company (Empire), located adjacent to Kuhn's property in Clay and Salem Townships, Tuscarawas County, Ohio.

On March 23, 1989, Kuhn filed a citizen's complaint with CFO, pursuant to section 521(a)(1) of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), 30 U.S.C. § 1271(a)(1) (1988), 1/ alleging that Empire had committed four infractions against him. Kuhn alleged that in June 1988, Empire had committed a surface disturbance on his property when it bulldozed across a property line onto a strip of his property; that it had committed a mining encroachment and removed coal by auger from his property; that a gas pipeline had been laid across his property in furtherance of Empire's mining operations without his permission; and that trees

1/ 30 U.S.C. § 1271(a)(1) (1988) provides, in pertinent part:

"Whenever, on the basis of any information available to him, including receipt of information from any person, the Secretary has reason to believe that any person is in violation of any requirement of this chapter or any permit condition required by this chapter, the Secretary shall notify the State regulatory authority, if one exists, in the State in which such violation exists. If * * * the State regulatory authority fails within ten days after notification to take appropriate action to cause said violation to be corrected or to show good cause for such failure and transmit notification of its action to the Secretary, the Secretary shall immediately order Federal inspection of the surface coal mining operation at which the alleged violation is occurring * * *. The ten-day notification period shall be waived when the person informing the Secretary provides adequate proof that an imminent danger of significant environmental harm exists and that the State has failed to take appropriate action."

were cut and his property damaged as a result. 2/ He also alleged that the Ohio Department of Natural Resources, Division of Reclamation (DOR) had improperly approved permit D-217-2 to include part of his land within the permit boundaries.

On March 27, 1989, OSM issued a 10-day notice to DOR, informing DOR that citizen's complaint had been received alleging removal of overburden and coal by auguring beyond permit limits onto Kuhn's property. On March 29, 1989, DOR conducted an on-site investigation of the portion of Empire's permit D-217-2 abutting appellant's property. At that time DOR issued two notices of violation (NOV's) to Empire. Both NOV's alleged violations by Empire of Ohio Revised Code (ORC) 1513.16(a)(20) and 1513.17(a). NOV 18414 alleged that Empire had "removed vegetation beyond the western limits of the permit during construction of pond number 013, on the property of Franklin Horsfall and Wilma Kuhn"; NOV 18415 alleged that "the permittee has augered coal beyond the western limits of the permit on the Franklin Horsfall property and the Wilma Kuhn property." Both NOV's required Empire to "immediately cease all mining beyond the permit limits," and to reclaim the areas pursuant to standards in section 1513, ORC. DOR did not require Empire to suspend mining on the disputed

2/ The record establishes that "the stakes placed by [Empire's surveyor] * * * delineating the mining permit area in Salem Township were incorrect, encroaching onto Mr. Kuhn's property approximately 80 feet at the north-easterly corner and approximately 30 feet at the southeasterly corner of Mr. Kuhn's 36.25 acre tract in Salem Township" (Letter of David A. Miskimen, P.E., P.S., dated Mar. 27, 1989). Although somewhat ambiguous as to location, the record also establishes an encroachment upon Kuhn's property in an area not affected by the disputed survey.

land within the permit area, nor was relocation of the gas line across Kuhn's property determined to be violative of any Ohio statutory or regulatory provisions.

DOR reinspected the site on March 30, the day following the initial inspection. Finding the land to have been satisfactorily reclaimed, DOR terminated both NOV's owing to Empire's prompt reclamation efforts. While minor assessments were calculated for the two NOV's, they were deleted pursuant to provisions within the Ohio State plan which permit discretionary deletion of penalty assessments less than $ 500 per violation. On April 4, 1989, Kuhn visited CFO and objected to DOR's determination that assessments should not be levied and the NOV's terminated.

On April 5, CFO issued a notification of inappropriate response to DOR. CFO found that the issuance of NOV's 18414 and 18415 did not comply with the program requirements of Ohio Administrative Code (OAC) 1501:13-14-02(A)(2), which requires issuance of a cessation order (CO) where mining off the permit has occurred, as follows:

> Coal mining and reclamation operations conducted by any person without a valid permit issued pursuant to these rules constitute a condition or practice which causes or can reasonably be expected to cause significant environmental harm to land, air or water resources, unless such operations are an integral, uninterrupted extension of previously permitted operations, and the person conducting such operations has filed a timely and complete application for a permit to conduct such operations.

(Letter Decision (Apr. 5, 1989) at 1).

With respect to the permit boundary dispute, CFO stated that, while the information available to DOR at the time the permit was issued supported the initial decision, Kuhn's documentation provided DOR with reason to believe that the permit may have been issued in error. CFO found DOR's refusal to suspend mining in the disputed permit area pending resolution of the dispute to be arbitrary and capricious action, and therefore found DOR's failure to suspend mining on the disputed area within the permit boundaries to be inappropriate action.

CFO found DOR's resolution of the gas pipeline issue in favor of Empire to be appropriate, stating:

> [DOR's] * * * response to this allegation is considered appropriate since no surface area was affected, ie. [no] disturbance to the actual ground surface has occurred. It is our understanding that the gas line is a plastic line laid across the surface of the ground and could not be construed as a surface coal mining operation activity.

Id. at 2.

Pursuant to 30 CFR 842.11(b)(1)(iii), on April 10, 1989, DOR requested the Assistant Director, OSM, to conduct an informal review of CFO's determination. DOR alleged that it was reasonable to issue an NOV for "incidental off-permit affectment" and that its decision not to suspend mining within the disputed area of the permit was not arbitrary.

With respect to the disputed boundary, DOR stated:

> What is characterized in the field office's inappropriate determination as an "improper location of a permit boundary" based on a "property line error" essentially mischaracterizes what is clearly a property dispute. The Division has, in its investigation, ascertained that the basis of the Kuhn/Empire dispute is not simply due to a surveyor's measuring error, but is due to a disagreement on appropriate surveying reference points. The Division has requested that Empire review its original survey, and in that way may attempt to facilitate a voluntary resolution of this property dispute. However, unless one party or the other recognizes or agrees to an error, the Division is powerless to resolve this dispute. See attached Ohio Revised Code 1513.07(B)(2)(i) which clearly states that the Chief has no authority to adjudicate property title disputes.

Id. at 3. DOR disputed CFO's determination that mining operations should have been suspended, stating: "After careful review, it is the Division's opinion that it has no authority to [order the permittee to] cease operations in the disputed and unaffected area; further, the authority cited in the April 5, 1989 letter * * * does not support the contention that the Division does have such authority." Id. at 3-4. According to DOR, at the time of its inspection, "Empire * * * [was] not affecting any of the disputed area 80 feet east from its permit boundary running along the Paul and Jean Kuhn property; * * * [nor did] Empire * * * propose to affect such disputed area." Id. at 4.

On April 28, 1989, Brent Walquist, OSM Assistant Director for Program Policy, issued a decision upholding CFO's determination that DOR's response concerning the failure to issue imminent harm cessation orders for mining outside permit limits was inappropriate, and reversing CFO's determination

that DOR should have taken action to prohibit mining within areas of the permit allegedly encroaching upon appellant's property. Concerning DOR's responsibility to issue a CO for mining off the permit site, the Assistant Director stated pertinently:

> [ORC 1501.13-14-02(A)] clearly requires a cessation order for surface coal mining and reclamation operations conducted without a valid permit regardless of the extent of the disturbance unless such operations are an integral, uninterrupted extension of previously permitted operations and the person conducting such operations has filed a timely and complete application for a permit for such operations. * * * In this case, there is no practical difference between issuing a notice of violation and issuing a cessation order, except that a cessation order requires a mandatory assessment. [Emphasis in original.]

(Letter Decision (Apr. 28, 1989) at 2). As a result of this letter decision, and prior to any entry on the site by OSM, DOR issued CO's Nos. I-098 and I-099 on May 2, 1989. 3/ Concerning the disputed permit boundary, the Assistant Director stated:

3/ Despite the Assistant Director's finding in his Apr. 28 decision that, "a cessation order requires a mandatory assessment," DOR waived the assessments for CO I-098 and I-099 on May 9, 1989, because they were calculated at less than $ 500. Twenty days subsequent to DOR's issuance of the CO's, on May 22, 1989, CFO again informed DOR that the Ohio code does not permit waiver of assessments in the case of cessation orders. DOR agreed to revise the initial assessment and to reissue assessments on both CO's. On June 9, 1990, Kuhn called CFO to discuss his concerns about when civil penalty assessments would be issued (Telephone Record of Bob Mooney, June 9, 1989). CFO contacted DOR, and DOR issued assessments to Empire on June 12, 1989, 43 days after issuance of the imminent harm CO.

Under the Ohio plan, DOR was required to issue assessments within 30 days of issuance of the CO's. Our review of the record leads us to conclude that CFO had jurisdiction to issue a 10-day notice to DOR on June 2, 1989, and should have done so without prodding from Kuhn; indeed, CFO could have made DOR aware of the ramifications of dragging its feet in the matter. DOR was placed on notice twice of the assessment issue; certainly CFO had

> While I agree that * * * [DOR] does not adjudicate property disputes, it is appropriate for your agency under program provisions such as ORC 1513.09(B)(1)(e) to notify the permittee that his right to enter is subject to dispute and to require reasonable and necessary information to ensure that the permittees' basis for right of entry remains consistent with program requirements. In this regard, the record indicates that your agency has taken such action. Although the Ohio program may authorize a range of actions short of adjudicating a property dispute which could serve as a basis to restrict mining operations on the disputed area until there is a resolution, such actions are not mandatory.

(Letter Decision (Apr. 28, 1989) at 1). The Assistant Director therefore reversed the determination that DOR's failure to suspend mining was inappropriate action.

On May 9, 1989, CFO notified Kuhn of the Assistant Director's decision of April 28, 1989, and of the finding that the gas pipeline relocation onto Kuhn's property was not within the purview of SMCRA. Pursuant to 30 CFR 842.15, Kuhn then appealed OSM's decision not to take Federal action by letter dated May 17, 1989. On June 21, 1989, the Director issued a letter

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fn. 3 (continued)
continuing jurisdiction to see that appropriate action was taken on Kuhn's complaint, which encompassed the breadth of appropriate enforcement, including assessments. Be that as it may, DOR did eventually take appropriate action by issuing assessments, and the issue is not now before this Board.

OSM's file does not contain documentation of the assessments issued to or paid by Empire for CO I-098 and I-099. In his Nov. 26, 1990, response to Empire's answer, Kuhn has provided the Board with copies of DOR's assessment worksheets for CO I-098 (removing vegetation without a permit) and I-099 (auguring without a permit). These worksheets indicate that on June 12, 1989, Empire was assessed $ 620 for CO I-098, and was granted a 25-percent reduction in penalty for the good faith demonstrated by its prompt abatement, which reduced the assessment for Co. No. I-098 to $ 465. An assessment of $ 1,020 was issued on June 12, 1989, for CO I-099; no good faith reductions were granted.

decision in response to Kuhn's appeal, upholding OSM's decision not to inspect or enforce. Kuhn's appeal of the Director's June 21, 1989, decision was filed with this Board on July 13, 1989.

In his statement of reasons on appeal (SOR), 4/ Kuhn alleges that two issues concerning the response of DOR to 10-day notice No. 89-07-117-003 remain unresolved to his satisfaction. With regard to Walquist's findings concerning the disputed permit boundary, Kuhn alleges that DOR should have investigated and confirmed that the "right of entry" information submitted by Empire was correct, and that DOR's failure to verify Empire's documentation of permit boundaries "improperly shifts the burden of demonstrating right-of-entry from the permit applicant to the public" (SOR at 2). Kuhn further contends that, once DOR was aware of his complaint, the appropriate procedure for the State regulatory agency to follow was to suspend mining in the disputed area until the matter was resolved. Id. According to Kuhn, "[i]n this case, the coal company obtained a 'negative' incidental boundary revision to delete the acreage that my land surveyor had shown to be within the boundaries of my property, indicating that there was no 'dispute' but rather a trespass on my lands." 5/ Kuhn states that "[t]he damage done to my land and removal of coal from beneath my land has not been fully remediated," and demands that this Board "reverse the Ohio Field Office and require appropriate action by the state of Ohio" (SOR at 2-3).

4/ Kuhn filed his SOR by letter dated Sept. 26, 1989.

5/ On Apr. 17, 1989, Empire filed an application with DOR for a Negative Incidental Boundary Revision, which conceded the boundary error alleged by Kuhn. On Apr. 19, DOR approved the boundary revision (see letter, May 1, 1989, from Robert Mooney to Sally Rickert).

Second, Kuhn alleges that Empire relocated a gas line onto his land, and that such activity was a "surface coal mining activity" within the meaning of section 701(28) of the Act, and should have initially been found to be so by the DOR, and by OSM (SOR at 3). Kuhn requested a hearing and expedited consideration of his appeal. These requests were denied by order dated January 24, reaffirmed on March 14, 1990.

On September 26, 1990, appellant filed additional evidence supporting his appeal in the form of a supplemental SOR. Kuhn alleged that Empire's permit map D-0398, submitted to DOR on September 6, 1989, indicated that the plan for the natural gas line to be removed from the mining pit onto Kuhn's property was submitted by Empire to DOR and approved without Kuhn's notice or approval. Kuhn alleged that "[t]he same map by Empire and approved by the State of Ohio indicated my boundary therefore it was the full intention of Empire Coal Company to steal my land, my coal and my forest." On October 5, 1990, this Board issued an order giving notice to Empire of the new evidence submitted by Kuhn, and granting Empire opportunity to respond. Empire filed a response on November 15, 1990; Kuhn responded to Empire on November 26, 1990. 6/

6/ In his Nov. 26, 1990, response, Kuhn reiterated his plea to this Board to require OSM and DOR "to issue cessation orders to Empire Coal Co. and assess penalties in the amount of $ 750. per day per cessation order from the date of Empire action to the present" for (1) "[t]respassing on my land with a bulldozer destroying my forest"; (2) "[l]aying of gas line through my forest destroying my trees"; (3) "[f]or the auguring of my coal and require Empire to uncover the auger holes on vein number five"; (4) "[f]or trespassing on my property to set stakes with full intention of stealing my land and coal"; and (5) "[r]eclaim all mined areas by Empire Coal Co. in Tuscarawas County State of Ohio."

Empire has admitted that "[i]n June of 1988 Empire's contractor's dozer * * * [trespassed] onto the Kuhn property and disturbed 0.03 acres of brush on the Kuhn side of the Horsfall/Kuhn Property line." According to Empire, "[t]he area was repaired by seeding and mulching the next day." Empire has averred that "[a]n automatic Civil Penalty Assessment of $ 750.00 was paid to the state as a result of the CESSATION ORDER." Empire has admitted that a second trespass occurred between February 18 and February 23, 1989, and that "[b]etween the dates of Feb. 18 to Feb. 23, 1989 Empire augered the #6 seam along the Kuhn property line." Empire explained that:

> [D]ue to a lack of detail on an engineering sketch showing the toe of the #6 highwall in relation to the Kuhn property line our auger penetrated a maximum of 8 feet into Kuhn's coal. The sketch showed the highwall as a straight line when in fact the wall bowed toward the Kuhn line.

Empire has conceded that it augered 46.6 tons of appellant's coal and that a second NOV and CO were issued against it by DOR. For the second infringement, Empire states that it paid $ 750.

Concerning relocation of the Horsfall gas pipeline on Kuhn's property, Empire explained:

> On August 28, 1988 Empire Coal Company provided David Horsfall a map showing the needed relocation of a gas line on his mother's property * * *. The purpose of the line was to supply gas for heating from a gas well on the Horsfall property to the new location of the Horsfall house. The Horsfall house was moved from its original location inside the mining area to a new location outside the mining area. The map showed a location for the line to remove it from the area to be affected by mining. The actual relocation

> of the gas line was the responsibility of the Horsfalls and the work was performed by the Horsfalls. When the auger mining encroachment was determined it was discovered that the gas line cut across the corner of the Kuhn property.

(Empire Response at 1).

Section 521(a)(1) of SMCRA, 30 U.S.C. § 1271(a)(1) (1988), provides that the Secretary of the Interior shall order a Federal inspection of a surface coal mining operation where the Secretary has reason to believe a violation of any requirement of SMCRA or any permit condition has occurred and the State, acting as the regulatory authority, "fails within ten days after notification to take appropriate action to cause said violation to be corrected or to show good cause for such failure." OSM is required to conduct the inspection and "if the violation continues to exist, shall issue a notice of violation or cessation order, as appropriate." 30 CFR 843.12(a)(2).

When a state program is approved, the state concerned assumes responsibility for issuing mining permits and enforcing its regulatory program. In re Surface Mining Regulation Litigation, 627 F.2d 1346 (D.C. Cir. 1980). A state's jurisdiction for enforcement of an approved program is primary, but not exclusive. Turner Brothers, Inc. v. Office of Surface Mining Reclamation & Enforcement, 92 IBLA 320 (1986), appeal denied, Turner Brothers, Inc. v. Office of Surface Mining Reclamation & Enforcement, No. 86-380-C (E.D. Okla. Oct. 5, 1987); Shamrock Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 81 IBLA 374, 376 (1984), appeal

dismissed, Civ. No. 84-238 (E.D. Ky. May 13, 1987). Effective August 16, 1982, the Ohio State program was conditionally approved by the Secretary of the Interior. See 30 CFR 935.10. On that date, DOR became the regulatory authority in Ohio for all surface coal mining and reclamation operations. Id. Thus, at the time OSM issued the 10-day notice, the State of Ohio was operating under an approved State program, and the question presented by this appeal is, therefore, whether DOR's response was "appropriate action" within the meaning of section 521(a)(1).

While no definition of the phrase "appropriate action" has been provided by OSM, the preamble to 30 CFR 843.12 states: "The crucial response of a State is to take whatever enforcement action is necessary to secure abatement of the violation" (47 FR 35627-28 (Aug. 16, 1982)). Later rulemaking has delineated a "standard of review" for "appropriate action" as a "response by a State regulatory authority that is not arbitrary, capricious, or an abuse of discretion." 30 CFR 842.11(b)(1)(ii)(B)(2). 53 FR 26730 (July 14, 1988). As a practical matter, this standard has been implicit in Board rulings under section 521(a)(1). See W. E. Carter, 116 IBLA 262, 267 n.3 (1990).

A state's failure to affirmatively enforce statutory and regulatory requirements under SMCRA by issuance of an NOV or CO subsequent to receipt of a 10-day notice is "inappropriate." Dora Mining Co. v. Office of Surface Mining Reclamation & Enforcement, 100 IBLA 300 (1987); Office of Surface Mining Reclamation & Enforcement v. Calvert & Marsh Coal Co., 95 IBLA 182

(1987); Bannock Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 93 IBLA 225 (1986). If a state issues an NOV or a CO, but does not enforce abatement or reclamation requirements, OSM may, without notice to the state, reinspect and issue Federal enforcement sanctions. Turner Brothers, Inc., 92 IBLA at 320. Further, a primacy state may not extend an abatement time beyond that allowed by law or regulation, nor may it vacate NOV's or CO's, thus circumventing abatement. Peabody Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 95 IBLA 204, 94 I.D. 12 (1987).

Often, however, scrutiny of state actions leads to the conclusion that the state has acted appropriately, and that, therefore, OSM has no jurisdiction to assume enforcement authority. When evidence in a record shows an "ongoing effort" on the part of the state agency to rectify a violation, and that enforcement activities are proceeding "apace," Federal enforcement efforts will be deemed to be unjustified. Turner Brothers v. Office of Surface Mining Reclamation & Enforcement, 99 IBLA 87, 93 (1987). Where the record does not bear out allegations by a citizen that his land has not been restored to its approximate original contour, and that reclamation efforts left "excessive gullying and inadequate revegetation," a decision by Federal officials not to take enforcement action will be upheld. Kenneth Marsh, 82 IBLA 3 (1984).

Kuhn has not challenged the reclamation efforts of Empire insofar as Empire's encroachment upon his property is concerned, although he continues to challenge Empire's failure to reclaim his land in connection with placement of the Horsfall gas pipeline across his property. Kuhn's quarrel with

DOR is not that DOR failed to enforce reclamation requirements, but that it did not diligently investigate Empire's permit application, thereby leaving his property at risk from encroachment by permit D-217-2. Kuhn further alleges that even when DOR was put on notice of possible infractions on his property by permit
D-217-2, DOR refused to take appropriate action.

Kuhn alleges that DOR should have investigated and confirmed that the "right of entry" information submitted by Empire was correct, and that DOR's failure to verify Empire's documentation of permit boundaries "improperly shifts the burden of demonstrating right-of-entry from the permit applicant to the public" (SOR at 2). Kuhn further contends that, once DOR was aware of his complaint, the appropriate procedure for the state regulatory agency to follow was to suspend mining in the disputed area until the matter was resolved. Id. Last, Kuhn requests that this Board order DOR to "remediate" the damage done to his land and his coal by Empire's trespass. Thus, Kuhn alleges that SMCRA imposes the following duties upon DOR: (1) the duty to ensure accurate permit boundaries prior to permit issuance and to prevent trespass; and (2) the duty to suspend permission to mine where permit boundaries are called into question.

[1, 2] Generally, a permit is "[a] written license or warrant, issued by a person in authority, empowering the grantee to do some act not forbidden by law, but not allowable without such authority." Black's Law Dictionary 1298 (4th ed. 1968). Particularizing this general definition to permits issued under SMCRA, the issuance of a surface mining permit by a regulatory authority empowers the permittee to surface mine a designated

area under the conditions specified in the permit, without which permit such mining would not be allowable. While many decisions of this Board have addressed allegations that the permittee has expanded surface mining operations beyond permit limits, few cases have addressed allegations that the regulatory authority has issued a permit which erroneously expands upon the legal right to mine; that is, that the boundaries described in the permit encompass more land than the operator has legal authority to mine. While the distinction may seem minute, it is significant. In the first instance, an operator may have obtained legal right to conduct surface coal mining operations from adjacent landowners, but the activity is not allowed because he has not obtained regulatory permission. In the second instance, the regulatory agency has bestowed authority to mine upon the operator, but it allegedly lacks the legal right to do so. Compare Willowbrook Mining Co. v. Office of Surface Mining Reclamation & Enforcement, 108 IBLA 303 (1989), and Firchau Mining, Inc. v. Office of Surface Mining Reclamation & Enforcement, 101 IBLA 144 (1988), and Thomas J. Fitzgerald, 88 IBLA 24 (1985), with Samuel M. Mullinax, 96 IBLA 52 (1987), and W. E. Carter, supra.

In Samuel M. Mullinax, this Board upheld a decision by OSM finding state action to be appropriate where irregularities with respect to the issuance of surface mining permits were alleged, but it was established that the operator and state had complied with relevant provisions of the state's surface mining statute. Of particular relevance to this appeal is the Board's analysis distinguishing permitting issues from reclamation issues under section 521(a)(1):

> It is clear that section 521(a)(1) is primarily designed to address violations of performance standards or permit conditions that would be ascertainable by inspection of the surface coal mining operation. Thus, in Turner Brothers * * *

> [92 IBLA at 320], OSM conducted an investigation of a minesite pursuant to a citizen's complaint and issued a 10-day notice to Oklahoma's regulatory authority citing violations of the State's program. OSM determined, and this Board affirmed, that the State's issuance of a notice of violation (NOV), given that the State had issued an NOV a year before for the same violation, did not amount to "appropriate action" under section 521(a)(1).
>
> On the other hand, a citizen's complaint which sets forth allegations of irregularities in the issuance of permits by the State regulatory authority may involve different considerations and consequences than one which alleges violation of a performance standard, such as in Turner Brothers. * * * [I]n this case the State reviewed the permits * * * and uncovered none of the alleged irregularities. Under the circumstances, OSM acted properly in referring the complaint to the State. Our only other inquiry is whether the State's response was "appropriate * * *."

Id. at 58-59.

In that case at footnote 4, this Board noted that the legislative history of SMCRA indicates an intent by Congress to place primary control of permit issuance within state jurisdiction, even during interim Federal enforcement. Even so, where it is evident that a permit has been issued in violation of state regulatory requirements, this Board has declared such action inappropriate, and has ordered Federal enforcement. See W. E. Carter, supra.

Both Federal and state regulators issue permits within procedures set forth in the Act and accompanying regulations. An operator has a duty to prepare permit applications that are legally sound. See 30 CFR 778.15. Opportunity for public scrutiny of permit applications must be provided

prior to approval by appropriate state or Federal authorities. See 30 CFR 773.13. Under 30 CFR 773.13(a), a permit applicant must "place an advertisement in a local newspaper of general circulation in the locality of the proposed surface coal mining and reclamation operation at least once a week for four consecutive weeks." The advertisement must contain, among other information, "[a] map or description which clearly shows or describes the precise location and boundaries of the proposed permit area and is sufficient to enable local residents to readily identify the proposed permit area." Any citizen having an interest which is or may be adversely affected by the decision on the application may request an informal conference, which, unless otherwise agreed, shall be preserved on electronic or stenographic record. 30 CFR 773.13(c). Pursuant to section 503(a)(4) of SMCRA, Ohio law must provide citizens with similar safeguards. See 30 U.S.C. § 1253(a)(4) (1988).

Kuhn has not alleged that these procedural safeguards were not made available to him prior to issuance of permit D-217-2 to Empire. While this Board has jurisdiction under section 521(a)(1) to hear appeals where state action pertaining to permit issuance is inappropriate, no facts are brought before us here to establish that DOR did not follow appropriate procedures in issuing Empire's permit. See Samuel M. Mullinax, supra at 59. Kuhn would have us rule, however, that DOR alone is responsible to insure that mining permits correctly describe the area on which the applicant is authorized to mine. We find no authority for this proposition. Not only does the permitting scheme place significant responsibility on adjacent landowners to diligently defend their boundaries, DOR's position that it is

powerless to adjudicate property title or rights disputes is well-taken. See 30 U.S.C. § 1257(b)(9) (1988); 30 CFR 778.15(c). 7/

[3] Kuhn would further have us penalize Empire for actions taken in trespass (see note 6). This Board has no authority under SMCRA to award damages for any purpose. While section 520 of the Act permits a damage action by "[a]ny person who is injured in his person or property through the violation by any operator of any rule, regulation, order, or permit issued pursuant to this chapter" (30 U.S.C. § 1270(f) (1988)), those actions are to be brought in either the state or Federal courts in the jurisdiction in which the "surface coal mining operation complained of is located." Id. See Haydo v. Amerikohl Mining, Inc., 830 F.2d 494, 495-98 (3rd Cir. 1987). SMCRA provides that, in the event of operator error, malfeasance, or damage to a citizen's private property, the citizen's remedy is with the courts. 30 U.S.C. § 1270(f) (1988). Indeed, Kuhn has brought an action before the Ohio Court of Common Pleas. 8/

7/ 30 CFR 778.15(c), stating regulatory requirements for right-of-entry information, provides: "Nothing in this section shall be construed to provide the regulatory authority with the authority to adjudicate property rights disputes."
Section 507(b)(9) of the Act, 30 U.S.C. § 1257(b)(9) (1988) provides:
"[T]he applicant shall file with the regulatory authority on an accurate map or plan, to an appropriate scale, clearly showing the land to be affected as of the date of the application, the area of land within the permit area upon which the applicant has the legal right to enter and commence surface mining operations and shall provide to the regulatory authority a statement of those documents upon which the applicant bases his legal right to enter and commence surface mining operations on the area affected, and whether that right is the subject of pending court litigation: Provided, That nothing in this chapter shall be construed as vesting in the regulatory authority the jurisdiction to adjudicate property title disputes." (footnote omitted).
8/ According to Empire's response dated Nov. 15, 1990, this action was then still pending in the Court of Common Pleas.

[4-6] Nonetheless, we find that the Assistant Director erred when he reversed CFO's decision that DOR's failure to suspend mining in the disputed area was arbitrary and

capricious and therefore was "inappropriate action." 9/ Specifically, CFO had ruled that:

> OAC 1501:13-4-03(C) requires that the Chief [of DOR] review information to determine if the operator has the right to enter and to conduct surface mining operations. In this case a landowner has provided evidence * * * that * * * [the Chief's] initial decision may be in error as to whether the operator has the right to enter and mine an area that has been permitted. While the rule expressly states that the Chief does not have the authority to adjudicate property disputes, the Chief has to assure that the right to enter and mine is valid before an area is mined. [DOR's] * * * position that it will not assure that the operator has the right to enter has the de facto effect of adjudicating the dispute. The Division must take action to prevent surface coal mining operations from occurring on the questioned area until it is assured that the permit is correct or that the permit is corrected if necessary.

(CFO Decision dated Apr. 5, 1989, at 3).

CFO further supported the conclusion that DOR should have suspended mining on disputed land within the permit boundaries by citing two additional provisions of the Ohio Codes. CFO quoted OAC 1501:13-5-01(F)(1), which provides that "except to the extent that the Chief otherwise directs in the permit that specific actions be taken, the permittee shall conduct

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9/ Although neither OSM nor Empire has raised the question, it might be argued that the issue whether OSM should have suspended mining in the disputed permit area pending resolution of the boundary dispute is now moot, because Empire has conceded that its permit boundaries were in error and DOR has approved Empire's request for Negative Incidental Boundary Revision. We decline to dismiss this issue as moot, however, because we find it presents an issue "which is capable of repetition, yet evading review." See Southern Utah Wilderness Alliance, 114 IBLA 326, 329-30 (1990); Southern Utah Wilderness Alliance, 111 IBLA 207, 208-10 (1989).

all coal mining and reclamation operations as described in the complete application (emphasis added)"; and ORC 1513.09(B)(1)(e), which provides:

> For the purpose of administration and enforcement of any requirement of this chapter or in the administration and enforcement of any permit under this chapter or of determining whether any person is in violation of any requirement of this chapter. (1) The Chief shall require any permittee or operator to: . . . (e) Provide such other information relative to coal mining and reclamation operations as the chief considers reasonable and necessary.

Id. CFO concluded that

> These program requirements give the Chief authority to specifically direct that the permit be conditioned or suspended so that surface coal mining operations do not occur on the area in question until the Chief is assured that the operator has the right to enter and operate. It also gives the Chief authority to require the permittee to provide information to demonstrate that the permit map is accurate.
>
> The Division's rationale used in the response to this issue abuses the discretion provided to the Chief by the program and its interpretation of the program requirements is arbitrary and capricious as it applies to the concerns of the complainant. OSM[RE], therefore, has determined that the response to the TDN is inappropriate.

Id. at 3, 4. Reversing CFO, the Assistant Director, OSM, stated:

> While I agree that your agency does not adjudicate property disputes, it is appropriate for your agency under program provisions such as ORC 1513.09(B)(1)(e) to notify the permittee that his right to enter is subject to dispute and to require reasonable and necessary information to ensure that the permittees' basis for right of entry remains consistent with program requirements. In this regard, the record indicates that your agency has taken such action. Although the Ohio program may authorize a range of actions short of adjudicating a property dispute which

> could serve as a basis to restrict mining operations on the disputed area until there is a resolution, such actions are not mandatory. Therefore, I find that your agency's response does not constitute an abuse of discretion under the approved program and I hereby reverse the written determination of the Columbus Field Office Director.
> 132

(Decision at 1).

The decision of the Assistant Director was sustained by the Director on appeal by Kuhn. We are not able to uphold this determination. Under SMCRA, a permit applicant is required to file legal documentation of the right to mine an area under consideration and maps which accurately depict the area within which the applicant possesses the legal right to mine. 30 U.S.C. § 1257(b)(9) (1988). These requirements come within section 521(a)(1) of the Act, which provides that,

> [w]henever, on the basis of any information available to him, including receipt of information from any person, the Secretary has reason to believe that any person is in violation of any requirement of this chapter or any permit condition required by this chapter, the Secretary shall notify the State regulatory authority * * * [emphasis in original] [,]

and the State authority shall take "appropriate action." When a citizen alleges that the boundaries of an adjacent permit are inaccurate, a state is required by section 521(a)(1) to take any "appropriate action" short of adjudication of property rights disputes. See W. E. Carter, supra.

DOR eventually approved Empire's application for a Negative Incidental Boundary Revision which conceded the boundary error alleged by Kuhn. Consequently, DOR's failure to suspend mining in the disputed area within

the permit boundaries until resolution of the matter was arbitrary, and fell short of "appropriate action." While DOR alleged that, at the time of its inspection, "Empire * * * [was] not affecting any of the disputed area 80 feet east from its permit boundary running along the Paul and Jean Kuhn property; * * * [nor did] Empire propose to affect such disputed area," CFO correctly determined that "where a landowner provides evidence that an initial decision that an operator has a right to enter and mine an area that has been permitted may be in error, state authorities must assure that the right to enter and mine is valid before the area is mined." See 30 U.S.C. § 1257(b)(9) (1988); 30 U.S.C. § 1271(a)(1) (1988).

Of particular interest here is CFO's written summary of a telephone conference held on April 4, 1989, between CFO and DOR officials regarding DOR's 10-day notice response, in which CFO stated:

> It is the CFO's position that the DOR must require that all mining on the disputed area be postponed until it can be accurately determined whether the permit has or has not been approved to include a portion of Mr. Kuhn's property. The DOR disagreed with the CFO's position and opted not to initiate any action to prevent mining on the area in question. DOR felt they have no authority to do so. [C]FO suggested possible suspension or permit condition be imposed on the area in question. DOR indicated that there is no immediate threat to the questioned area since mining is not expected to progress into the area at least for a couple weeks. [C]FO indicated that Kuhn had indicated otherwise and he felt they in the area at this time [sic]. DOR felt he is protected by the court order he obtained, [C]FO indicated that the order according to Kuhn only required that he have a representative present during augering and did not prevent mining on the area. [C]FO has requested a copy of the order from Kuhn[.]

Under the circumstances, it was reasonable that CFO would question DOR's assumption that a 2-week hiatus in Empire's mining schedule would not

constitute an "immediate threat to the questioned area," and would determine DOR's conduct to be inappropriate. So long as the operator retained full authority to mine the disputed area under a validly issued permit, the intent and purpose of the Act stated in section 102(b) (30 U.S.C. § 1202(b) (1988)) to "assure that the rights of surface landowners and other persons with a legal interest in the land or appurtenances thereto are fully protected from such operations" was jeopardized.

[7, 8] Kuhn's allegations regarding a natural gas pipeline allegedly laid across his land in furtherance of Empire's surface coal mining operations remains to be considered. In his complaint filed with CFO on March 23, 1989, Kuhn alleged:

> During the time from 6/6/88 to the present Empire had the adjacent home and out-building relocated from the mining area to a bottom adjacent field. They relocated the natural gas line through my woods and out of their mining area. No request was made to me to go on my property by Empire nor was any permission granted.

DOR declined to investigate Kuhn's complaint regarding the gas pipeline, finding that "[t]he Division does not regulate private gas line relocation by a neighboring landowner. This is a private contractual matter between the parties involved" ([DOR] Addendum to 10-day Notice 89-07-117-003 Response). In an April 4, 1989, visit to CFO, Kuhn disputed the finding by DOR, claiming that "the gas line had been removed from the area of the permit and placed on his property to facilitate the mining operation" (CFO Telephone Record dated Apr. 4, 1989). Nevertheless, CFO

found DOR's response to this allegation appropriate, "since no surface area was affected, ie. disturbance to the actual ground surface" (Apr. 5 Decision at 2). CFO further stated: "It is our understanding that the gas line is a plastic line laid across the surface of the ground and could not be construed as a surface coal mining operation activity." Id.

In a personal communication with CFO officials on April 12, 1989, Kuhn "noted that the gas line placed on his property had resulted in the company cutting trees on his land in order to route the line around the mining operation" (CFO Telephone Record dated Apr. 12, 1989). According to this record, "[p]ictures were taken by Mr. Kuhn of the cut trees. Because of this disturbance he believes routing the gas line through his property is an operation to facilitate the mining and warrants a violation." The record notes, parenthetically: "(This information had not previously been provided to the CFO)." According to an OSM call-visit record dated April 14, 1989,

> Kuhn said the the company's representative had testified that they had moved the gas line to * * * mine the coal. He [Kuhn] was going to send the transcript so that we could see that the movement of the gas line was part of the mining operation. I told him that I would review it.

The record indicates that the transcript of the preliminary injunction proceeding was probably received by CFO on or about April 17, 1989, 10/ but

10/ On Mar. 27, 1989, at the hearing on Kuhn's motion for preliminary injunction in the Tuscarawas County Court of Common Pleas, Empire's chief engineer admitted that the relocation of the natural gas pipeline onto the Kuhn property furthered its coal mining activity. OSM's copy of this partial transcript of proceedings is not date-stamped as to receipt; it is

no follow-up on Kuhn's allegations occurred until CFO's May 9, 1989, letter to Kuhn, which stated:

> The relocation of a gas line is not considered as a surface coal mining operation, even though the line was moved to facilitate the removal of coal on the permit. The definition of a coal mining operation (Ohio regulation OAC 1501:13-1-01 S) specifies the activities which are to be regulated. The placement or relocation of a gas line is not specified as an activity to be regulated.
>
> Your concerns about a gas line being placed on your property without your permission, and the resultant loss of trees, are appreciated. However, this is an issue that is not within our purview, regardless of who the responsible party may be.

Id. at 2.

Pursuant to 30 CFR 842.15, Kuhn appealed this decision to the Assistant Director by letter dated May 17, 1989. On June 21, 1989, the Director issued a letter decision in response to Kuhn's allegation in his appeal that "Empire Coal Company in November of 1988 removed a natural gas line from their pit and ran it through my wood * * * destroying my forest" (emphasis in original), stating the following:

> OSMRE shared this information with DOR. DOR determined that relocation of this pipeline by a neighboring landowner was not incidental to a surface mining operation. This is neither an arbitrary or capricious decision nor an abuse of discretion under the Ohio State program. The evidence attached to your May 5, 1989 letter to Tim Dieringer, Chief of DOR, indicates

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fn.10 (continued)
therefore hard to tell when this transcript was received, or the source of its transmittal. The copy of the transcript appears to have been attached with a copy of the Miskimen letter, noted as received by CFO on Apr. 17, 1989.

that the pipeline was relocated onto your property by your neighbor, Frank Horsfall, not relocated by Empire Coal. Therefore, I have no reason to order a Federal inspection.

Id. at 2.

In response, Kuhn alleged that Empire's permit map D-0398, submitted to DOR on September 6, 1989, indicated that the plan for the natural gas line to be removed from the mining pit onto Kuhn's property was submitted by Empire to DOR and approved without Kuhn's notice or approval. On November 9, 1990, Empire responded in pertinent part to Kuhn's allegations as follows:

> On August 28, 1988 Empire Coal Company provided David Horsfall a map showing the needed relocation of a gas line on his mother's property * * *. The purpose of the line was to supply gas for heating from a gas well on the Horsfall property to the new location of the Horsfall house. The Horsfall house was moved from its original location inside the mining area to a new location outside the mining area. The map showed a location for the line to remove it from the area to be affected by mining. The actual relocation of the gas line was the responsibility of the Horsfalls and the work was performed by the Horsfalls. When the auger mining encroachment was determined it was discovered that the gas line cut across the corner of the Kuhn property. I informed David Horsfall of their error in locating the line and he had the line moved shortly thereafter. [Emphasis supplied.]

Section 701(28) of SMCRA, 30 U.S.C. § 1291(28) (1988), provides, in pertinent part:

> "[S]urface coal mining operations" means --
>
> (A) activities conducted on the surface of lands in connection with a surface coal mine * * *

> (B) the areas upon which such activities occur * * *. Such areas shall also include any adjacent land the use of which is incidental to any such activities, * * * and other areas upon which are sited structures, facilities, or other property or materials on the surface, resulting from or incident to such activities * * *. [Emphasis supplied.]

Pursuant to section 503(a)(1) of SMCRA, Ohio law must provide "a State law which provides for the * * * regulations of surface coal mining and reclamation operations in accordance with the requirements of this chapter." 30 U.S.C. § 1253(a)(4) (1988). Indeed, the pertinent language in the Ohio statute is nearly identical. See ORC 1513.01(G); see also OAC 1501:13-1-01 S, which states pertinently:

> (S) Coal mining operation means: (1) [a]ctivities conducted on the surface of lands in connection with a coal mine, * * * and (2) [t]he areas upon which such activities occur or where such activities disturb the natural land surface. Such areas include any adjacent land, the use of which is incidental to any such activities * * *. [Emphasis supplied.]

OSM is authorized to issue a 10-day notice when it has reason to believe that a person is conducting surface mining activity causing a surface disturbance in an area not covered by a permit in violation of the requirements of SMCRA. When, in response to this notice, the state agency refuses to take action because it does not consider the activity to be surface mining or a related activity and therefore finds no permit is required, and the interpretation of the statute advanced by the state is contrary to both the intent of SMCRA and a reasonable interpretation of state law, it is proper for OSM to order a Federal inspection. When,

after inspection, OSM determines that the activity is in violation of any requirement of SMCRA, OSM may issue a notice of violation or cessation order, as appropriate, to the operator, fixing a reasonable time for abatement. See Willowbrook Mining Co. v. Office of Surface Mining Reclamation & Enforcement, supra at 310-11.

Empire has admitted that "[t]he Horsfall house was moved from its original location inside the mining area to a new location outside the mining area"; and that "[t]he map showed a location for the line to remove it from the area to be affected by mining." There is no question but that this activity falls within the definition of "surface coal mining operations" set forth in section 701(28) of SMCRA, and companion Ohio law and regulations. The crucial factor is not who agreed to move the pipeline, but that the pipeline was ultimately moved onto Kuhn's property incidental to and in furtherance of Empire's surface coal mining activities. Under section 521(a) of SMCRA, a permittee of a minesite is a proper party to be cited for a violation of the Act notwithstanding the fact that the surface mining activity is conducted by a third party. See Clark Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 102 IBLA 93 (1988); Wilson Farms Coal Co., 2 IBSMA 118, 87 I.D. 245 (1980).

Ultimately, OSM's review of DOR's course of action pertaining to Kuhn's allegation that a gas pipeline was relocated upon his property in furtherance of Empire's surface mining activities and without a valid permit should have proceeded in the same course as the review of DOR's action

with respect to Kuhn's allegations that Empire was encroaching on his property. Appropriate action by DOR should have encompassed an inspection to determine whether there was a nexus between removal of the gas pipeline onto Kuhn's property and Empire's surface mining activities, whether Empire had obtained a valid permit to conduct such activities upon Kuhn's property and "whether the areas upon which such activities occurred disturbed the natural land surface," and, if so, whether the affected lands were reclaimed. We therefore reverse OSM's determination that DOR acted appropriately with respect to its refusal to inspect the relocation of the gas pipeline, and remand this issue to OSM for further action consistent with this opinion and the requirements of section 521(a)(1) of the Act.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision of the Assistant Director, OSM, is reversed and remanded.

Franklin D. Arness
Admininstrative Judge

I concur:

C. Randall Grant, Jr.
Administrative Judge

Exhibit 3

RECORD OF DECISION
Environmental Impact Statement for the North Hilight Field Coal Lease Application
WYW164812



BLM

Wyoming State Office - High Plains District Office

February 2012

The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

BLM/WY/PL-12/007+1320

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECORD OF DECISION

NORTH HILIGHT FIELD LEASE BY APPLICATION
WYW164812
CAMPBELL COUNTY, WYOMING

INTRODUCTION

On October 7, 2005, Ark Land Company (ALC), a wholly owned subsidiary of Arch Coal, Inc., filed an application with the BLM for Federal coal reserves in two separate tracts located north and southwest of and immediately adjacent to the Black Thunder Mine in Campbell County, Wyoming (Appendix 1, Figure 1). The mine is operated by Thunder Basin Coal Company (TBCC), a subsidiary of Arch Western Resources, LLC. The tracts are referred to as the North Hilight Field and South Hilight Field LBA tracts. The application was made pursuant to the Leasing on Application regulations found in the Code of Federal Regulations at 43 CFR Subpart 3425.1. BLM determined that the two tracts in the application would be processed separately and, if a decision is made to lease both of these tracts, a separate competitive lease sale would be held for each tract. The North Hilight Field lease by application (LBA) tract was assigned case file number WYW164812.

ALC has applied to lease Federal coal reserves in order to extend the life of the Black Thunder Mine. The BLM refers to these types of applications as maintenance tracts. A maintenance tract is a tract of Federal coal that is adjacent to, and can be mined by, an existing active coal mine. As applied for, the North Hilight Field LBA tract includes a total of approximately 2,613.50 acres (Appendix 1, Figure 2). ALC estimates that, as applied for, the tract includes approximately 263.4 million tons of recoverable Federal coal in Campbell County, Wyoming.

The North Hilight Field LBA tract was evaluated in the *Wright Area Coal Lease Applications Environmental Impact Statement* (EIS). The EIS analyzed the proposed leasing of six Federal coal tracts located in the Wright Area of the Wyoming portion of the Powder River Basin. The Proposed Action analyzed in the EIS is to hold one competitive sealed-bid lease sale and issue a lease for the Federal coal lands included in the North Hilight Field LBA tract as applied for by ALC. The Proposed Action assumes that the applicant would be the successful bidder on the tract, and that the tract would be mined as a maintenance lease for the existing mine. According to the applicant, the Black Thunder Mine needs the Federal coal included in the North Hilight Field coal lease area in order to extend the life of the mine. The applicant would recover the Federal coal using the same methodology, machinery, and facilities that are currently being used to recover the coal in the existing Black Thunder Mine coal leases. ALC anticipates that, if they acquire the lease for the North Hilight Field LBA tract as applied for, it would extend the life of the Black Thunder Mine by approximately two years.

The Black Thunder Mine has a permit to conduct mining operations approved by the Wyoming Department of Environmental Quality Land Quality Division (WDEQ/LQD) and a Mineral Leasing Act (MLA) of 1920, as amended, mining plan approved by the Secretary of the Interior

to conduct surface coal mining operations on their existing coal leases. The mine complies with the requirements of the Clean Air Act (CAA) through an air quality permit approved by the Air Quality Division of the Wyoming Department of Environmental Quality (WDEQ/AQD) which currently allows mining of up to 190 million tons of coal per year.

BLM administers the Federal Coal Leasing Program under the MLA as amended by the Federal Coal Leasing Amendments Act of 1976. If any proposed lease tract contains surface lands which are under the jurisdiction of any Federal agency other than the Department of Interior (USDI) or are occupied by a qualified surface owner, that agency or individual must consent to the issuance of the lease, and in the case of a Federal agency, may prescribe terms and conditions to be imposed on that lease (43 CFR 3400.3-1 and 3420.4-2). Thunder Basin Coal Company LLC, Ark Land Company, Mills Brothers Partnership, Guy W. Edwards Trust, Western Railroad Properties Inc. & Burlington Northern Railroad, and Foundation Coal West, Inc. owned the private lands contained within the North Hilight Field LBA tract as analyzed in the Wright Area EIS under Alternative 2. The Mills family has since transferred ownership of their surface lands to Ark Land Company. There are currently no qualified surface owners within the selected configuration for the North Hilight Field LBA tract.

The selected configuration for the North Hilight Field (Appendix 1, Figure 3) includes approximately 1,916.29 acres of additional lands from the BLM study area with approximately 80.7 acres, more or less, of National Forest System lands in the Thunder Basin National Grassland (TBNG) administered by the USDA-Forest Service (FS). As required by 43 CFR 3420.4-2, the FS has provided consent to BLM to lease the FS-administered lands that were included in the North Hilight Field tract. The FS signed their Record of Decision on November 23, 2011. Their prescribed terms and conditions for the North Hilight Field coal tract are included in Appendix 2. The FS ROD is subject to appeal under FS administrative procedures. In the event of a FS ROD appeal, BLM's decision would not be implemented until the FS appeal process is completed.

BACKGROUND

Lease by Application Process

In the Powder River Basin (PRB), maintenance tracts are generally nominated for leasing by companies operating adjacent existing mines. To process an LBA, the BLM must evaluate the quantity, quality, maximum economic recovery (MER), and fair market value (FMV) of the Federal coal. The BLM must also evaluate the environmental and socioeconomic impacts of leasing and mining the Federal coal in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA). BLM prepared the Wright Area Coal EIS to evaluate and disclose potential impacts of leasing the Federal coal in six Wright Area coal tracts, including the North Hilight Field tract. Although leasing the North Hilight Field would not authorize mining operations on the tract, the EIS evaluates the potential impacts of mining the North Hilight Field tract because mining is a logical consequence of issuing a lease for a maintenance tract of coal.

The Office of Surface Mining Reclamation and Enforcement (OSM) is a cooperating agency on the Wright Area EIS. OSM is the Federal agency with the primary responsibility to administer programs that regulate surface coal mining in accordance with Section 503 of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). OSM also recommends approval, approval with conditions, or disapproval of the MLA mining plan to the Assistant Secretary of the Interior, Lands and Minerals Management. The FS is a cooperating agency since a portion of the Wright Area proposed lands for leasing lie within the TBNG.

The WDEQ/LQD, WDEQ/AQD, Wyoming Department of Transportation (WYDOT), and the Converse County Board of Commissioners are also cooperating agencies on this EIS. WDEQ/LQD has a cooperative agreement with the Secretary of the Interior to regulate surface coal mining operations on Federal and non-Federal lands within the State of Wyoming. WDEQ/AQD regulates air borne emissions in Wyoming and administers the air quality standards developed by the Environmental Protection Agency (EPA). WYDOT's responsibilities include maintaining state roads and highways, planning and supervising road improvement work, and supporting airports and aviation in the state. The responsibilities of the Converse County Board of Commissioners include but are not limited to the management and oversight of county roads, facilities, and planning and zoning rules in the county.

By law and regulation, the LBA process is an open, public, competitive sealed-bid process. Bidding at any potential sale is not restricted to the applicant. In order for BLM to award and issue a coal lease, the highest bid received must meet or exceed fair market value of the coal as determined by BLM's economic evaluation.

ALC filed the LBA because the North Hilight Field, as applied for, is adjacent to their existing approved mining operations at the Black Thunder Mine and the Federal coal could be mined using their existing mine facilities, equipment, and employees (Appendix 1, Figure 1). In the Wright Area Coal EIS, the alternatives that are analyzed in detail assume that the applicant would be the successful bidder if a competitive coal lease sale is held.

History of Coal Leasing Activity in the Wyoming Portion of the Decertified Powder River Coal Region

Since decertification of the Powder River Federal Coal Region in 1990, 24 Federal coal leases have been issued in Wyoming's Campbell and Converse counties under the LBA process with competitive sealed-bid sales. These leases include approximately 56,614 acres and 6.5 billion tons of mineable coal. Twenty-two of these leases were issued to the following producing mines for the purpose of extending operations at those mines: Jacobs Ranch (2), Black Thunder (3), North Antelope Rochelle (4), Eagle Butte (2), Antelope (5), Caballo (1), Belle Ayr (1), Buckskin (1), Cordero/Rojo (2), and the former North Rochelle (1).

The remaining two leases, the West Rocky Butte and the West Roundup, were issued to companies intending to open new mines. The West Rocky Butte lease was issued to Northwestern Resources Company in 1992. They planned to start a new mine to recover the coal included in the Rocky Butte and West Rocky Butte leases but the new mine was never

developed. The Rocky Butte and West Rocky Butte leases are now held by Caballo Coal Company, a subsidiary of PEC, and are included in the Caballo Mine. The West Roundup lease was issued to West Roundup Resources, Inc., a subsidiary of PEC, and has been incorporated into the recently permitted School Creek Mine.

Pending Coal Leasing Applications and Other Proposed Projects in the Wyoming Powder River Basin

There are currently nine Wyoming PRB maintenance coal lease applications being processed by BLM including the North Hilight Field LBA tract and the recently completed South Porcupine and North Porcupine LBA Records of Decision. As applied for, the pending coal lease applications comprise of approximately 36,148 acres and 4.443 billion tons of Federal coal (Appendix 1, Figure 1). The coal lease applications and applicant mines include the following: Belle Ayr West (*Belle Ayr Mine*), Antelope Ridge *(North Antelope Rochelle Mine),* North Hilight Field (*Black Thunder Mine*), West Hilight Field (*Black Thunder Mine*), Hay Creek II *(Buckskin Mine)*, West Jacobs Ranch *(Jacobs Ranch Mine)*, Maysdorf II *(Cordero Rojo Mine)*, South Porcupine *(North Antelope Rochelle Mine)*, and North Porcupine *(North Antelope Rochelle Mine)*.

In addition to coal leasing and mining, oil and gas leasing and development have also occurred in the area. Both conventional and coalbed natural gas (CBNG) wells have been drilled in and around the Black Thunder Mine and the North Hilight Field LBA. Conventional and CBNG resources are currently being recovered from Federal and private oil and gas leases in the application area. Federal oil and gas lease ownership in the North Hilight Field LBA area is described in detail in the Final EIS. Federal oil and gas lessees and private interests identified by the applicant were included on the mailing list for the Wright Area Coal EIS.

The EIS discusses energy development in and around the North Hilight Field LBA. The discussion includes a summary of the results of an analysis of the conventional oil and gas drilling that has occurred in the area, prepared by the BLM Wyoming Reservoir Management Group (WSO-RMG). The analysis found that 37 oil wells have been drilled on lands included in the North Hilight Field BLM study area. Twenty of these were still producing; seven were shut in; and ten were plugged and abandoned.

The Wright Area Coal EIS includes a summary of the results of the BLM WSO-RMG analysis of the CBNG resources in the area. Most of the CBNG production in the area has occurred from the upper Fort Union Formation (Paleocene) Wyodak-Anderson coal seam, the same coal beds being mined by the surface coal operators. In the Wyoming portion of the PRB, CBNG has been produced from the Wyodak-Anderson zone since the late 1980s. According to data analyzed by the BLM WSO-RMG and the U.S. Geological Survey, measured gas content was minimal in all of the Wyodak-Anderson coal cores that were collected in the year 2000 at locations near the surface coal mines, indicating that the coal seams were already substantially depleted of CBNG in the vicinity of the mines. The EIS identifies 40 CBNG wells that have been drilled over time within the North Hilight Field BLM study area. Thirty-four of those wells have been producing

and six were shut in. CBNG wells that continue to produce in advance of coal mining assist in removing any remaining methane in the coal seams.

Several mechanisms can be used to facilitate recovery of the conventional oil and gas and CBNG resources prior to mining if the Federal coal in the tract is leased:

- BLM will attach a Multiple Mineral Development stipulation in the Federal coal lease which states that BLM has the authority to withhold approval of coal mining operations that would interfere with the development of mineral leases that were issued prior to the North Hilight Field coal tract being leased (Appendix 2).

- Conventional oil and gas wells must be abandoned while mining and reclamation operations are in progress. If the value of the remaining oil and gas reserves justifies the expense of reestablishing production, the wells could be recompleted or redrilled following mining.

- BLM has a policy in place regarding CBNG-coal development conflicts (BLM Washington Office Instruction Memorandum (IM) No. 2006-153). The IM directs BLM decision-makers to optimize the recovery of both CBNG and conventional resources and to ensure that the public receives a reasonable return. This policy offers royalty incentives to CBNG operators to accelerate production in order to recover the natural gas while simultaneously allowing uninterrupted coal mining operations. The IM also states that it is the policy of the BLM to encourage oil and gas and coal companies to resolve conflicts between themselves and, when requested, BLM will assist in facilitating agreements between the companies.

- Mining of the North Hilight Field LBA tract would not be authorized until: 1) the coal lessee obtains a permit approved by the WDEQ/LQD to mine the tract, and 2) the MLA mining plan is approved by the Secretary of the Interior. Before the MLA mining plan can be approved, BLM must approve a Resource Recovery and Protection Plan (R2P2). Prior to approving the R2P2, BLM can review the status of CBNG and conventional oil and gas development on the tract and the mining sequence proposed by the coal lessee. Because the permit approval process generally takes the coal lessee several years to complete, CBNG resources on the coal tract could continue to be recovered during that time.

- Prior to mining the Federal coal, the coal lessee can negotiate an agreement with the oil, gas, and pipeline owners and operators regarding the removal of their existing facilities on the North Hilight Field tract.

Other proposed projects in the Wyoming PRB that have advanced to the planning, permitting, or construction stages and that would reasonably be expected to be completed in the foreseeable future include: the Dry Fork Station coal-fired power plant constructed by Basin Electric Power Cooperative near the Dry Fork Mine north of Gillette (being tested); the Two Elk coal-fired Unit 1 and Unit 2 power plants proposed by the North American Power Group (NAPG) which would

be located east of the Black Thunder Mine; and a railroad line from the PRB to Minnesota proposed by the Dakota, Minnesota, and Eastern Railroad Corporation (DM&E). In September, 2007, Canadian Pacific Railway Ltd. announced acquisition of the DM&E and its subsidiaries. The transaction was reviewed and approved by the Surface Transportation Board in October, 2008.

Additionally, the newly constructed 100-megawatt Wygen III coal-fired power plant, located at the Black Hills Corporation energy complex near the Wyodak Mine in Gillette, Wyoming, has been completed. It is fully operational and is currently delivering electricity to approximately 70,000 residents in western South Dakota and parts of Wyoming and Montana.

Several coal conversion projects have also been proposed. Based on status and available information, only one, the KFx Coal Beneficiation Project, was considered to have a high enough likelihood of proceeding to include it in the PRB Coal Review. The KFx (now Evergreen Energy) coal beneficiation plant produced commercially viable product in 2007 until the plant was idled down in 2008. Since then, Evergreen Energy Inc. and its strategic partner, Bechtel Power Cooperation, have relocated their operations.

The proposed power plants, DM&E railroad line, coal conversion projects, and the ongoing and proposed oil, gas, and CBNG operations are separate projects being developed independently of leasing the North Hilight Field tract. If these projects are developed as proposed and the North Hilight Field area is leased and mined as proposed, there would potentially be some overlap between the environmental and socioeconomic impacts of constructing and operating some of the projects and the environmental and socioeconomic impacts of mining the North Hilight Field tract. The cumulative effects of these projects are described in Chapter 4 of the *Wright Area Coal Lease Applications EIS.* The cumulative impact discussion in the EIS is based on analyses completed for the PRB Coal Review. The PRB Coal Review can be accessed at the following BLM website:
http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/prbdocs.html.

DECISION

As the BLM Wyoming High Plains District Manager, my decision is that it is in the public interest to offer the North Hilight Field LBA tract as described below for competitive sale so that these reserves are available to compete for sale in the open coal market to meet the national coal demand that is expected to exist until at least 2035. The public interest is served by leasing the North Hilight Field LBA tract because doing so provides a reliable, continuous supply of stable and affordable energy for consumers throughout the country. Developing this coal also helps reduce our nation's dependence on foreign energy supplies and provides significant socioeconomic benefits for the United States, Wyoming, and local communities.

Under this decision, Alternative 2 for the North Hilight Field LBA tract has been selected from the *Wright Area Coal Lease Applications EIS.* Under Alternative 2, the Federal coal included in the North Hilight Field LBA tract, as modified by BLM, will be offered for lease at a competitive sealed-bid sale. Under Alternative 2, the North Hilight Field tract has been modified

by BLM to include additional lands from the BLM study area. The tract includes 4,529.79 acres, more or less, and the BLM estimates that the tract contains approximately 467,596,000 tons of mineable Federal coal resources in Campbell County, Wyoming.

If the highest bid received at the sale meets or exceeds the FMV as determined by the BLM and if all other leasing requirements are met, a lease will be issued to the successful qualified high bidder. The competitive lease sale will be held as described in Federal regulations found at 43 CFR Subpart 3422, Lease Sales. In the event that the highest bid submitted at the competitive lease sale of the North Hilight Field LBA tract does not meet or exceed the FMV as determined by BLM, the BLM may, but is not obligated to, re-offer the coal tract for leasing at a later date.

Under Alternative 2, it is assumed that the applicant would be the successful bidder on the North Hilight Field LBA tract and that the Federal coal would be mined to extend the life of the adjacent Black Thunder Mine. The tract would be mined and reclaimed in a logical sequence in concert with ongoing mining and reclamation operations at the adjacent existing mine. This would be consistent with the analysis of the impacts described in the EIS.

This decision incorporates by reference the standard coal lease stipulations which address compliance with the basic requirements of the environmental statutes and additional BLM special stipulations (Appendix 2).

This decision is in conformance with the *Approved Resource Management Plan for Public Lands Administered by the BLM Buffalo Field Office (RMP),* which was completed in 2001 and amended in 2003. This decision is also in conformance with the USDA-FS *Land and Resource Management Plan for the Thunder Basin National Grassland* which was completed in 2001.

For FS-administered lands, consent decision authority has been delegated to the Forest Supervisor level on the Medicine Bow-Routt National Forests and Thunder Basin National Grassland. The North Hilight Field LBA tract includes Federal coal lands located within the TBNG administered by FS. Therefore, FS must consent and prescribe terms and conditions in order for the tract to be leased. The FS provided BLM their consent to lease the lands in the North Hilight Field LBA tract in the FS Record of Decision signed on November 23, 2011. The FS consent decision is conditioned on application of the Notice for Lands of the National Forest System under Jurisdiction of the Department of Agriculture (FS Notice) on the North Hilight Field Federal coal lease tract (WYW164812), when and if the tract is leased (Appendix 2).

REASONS FOR DECISION

Denying this proposed coal leasing project is not likely to affect current or future coal consumption used for electric generation. Not offering the North Hilight Field Federal coal tract for lease is unlikely to affect changes in the national electric generation portfolio. The rationale for this conclusion is summarized below.

Various commenters on the Wright Area Coal EIS asserted that by not leasing this LBA, and, in a cumulative sense, by denying proposed federal coal leasing in the Wyoming portion of the

PRB, BLM would slow global climate change and would push the national electric generation portfolio to contain only non-carbon fuel alternatives. BLM has thoroughly considered this comment in our decision.

BLM agrees that movement toward electric generation capacity not reliant on carbon fuels is positive. Carbon fuels are a finite resource and may become more costly in the future. Having more non-carbon instead of carbon-based electric generation would assist in decreasing human-caused greenhouse gas (GHG) emissions. Reducing human-caused GHG emissions would help to lessen any harmful effects that they may be causing to global climate.

BLM reviewed two independent studies that determined the ability of the domestic electric generation industry to alter the present portfolio (mix of electric generation technologies) corresponding to the time period that the North Hilight Field reserves would be leased and produced. The first study was done by the Department of Energy (Annual Energy Outlook 2008 Report, Energy Information Administration, April 2008) and the second was by the domestic electric generation industry's research arm, the Electric Power Research Institute (Electricity Technology in a Carbon Constrained Future, authored by R. James, Carnegie-Mellon University, November 2007).

Both studies projected the electric generation portfolio to 2030 and both studies recognized the likelihood of carbon regulation. While there were differences in each study related to the mix of renewable sources, nuclear, and energy conservation, both studies were consistent in finding that coal-fired electric generation would represent 52-58 percent of the electric generation portfolio by 2030, as compared to the current 51 percent.

The Annual Energy Outlook 2010 Report (Energy Information Administration, December 2009) represents a forecast to the year 2035. This report incorporates the 2009 downturn in electric demand which resulted from lower electric demand for manufacturing in the depressed domestic economy of 2009. This forecast lowered the percentage of coal-fired electric generation in the domestic electric generation portfolio to 44 percent by 2035, based on a slowing in electric demand through 2035, and a doubling, to 17 percent, of renewable electric generation in the domestic electric generation portfolio by 2035.

Based on these studies, even with a considerably more optimistic projection for renewable sources, coal use continues to be projected as the largest portion of the domestic electric fuel mix. As described in the Final EIS, the key determinant of energy consumption is population. As human population and activities have increased over time, coal and other carbon-based fuels have been utilized to provide for these additional energy demands. As directly stated by the Department of Interior Secretary Salazar, “The fact remains that oil and gas and coal are a very important part of our energy portfolio now and they will continue to be an important part of our energy portfolio in the future . . . Fossil fuels and clean technology coal will have to be part of the mix if the U.S. is able to have enough energy in the future” (Great Plains Energy Address, November 9, 2009).

Thousands of mines worldwide extract and produce coal for the purpose of generating electricity. Other coal mines located outside of the PRB have the capacity to replace the coal production generated by the Black Thunder Mine.

The North Hilight Field coal reserves, if leased and approved for mining, would allow the coal mining operator to continue to compete for coal sales in a diverse open supply and demand market. Denying this lease offer would not cease currently approved mining operations. Rather, a denial would require the mine to cease operations only after the current lease reserves were depleted. This would deny the mine operator the ability to compete with other operators in an open market for a future coal demand that is projected to continue until at least 2035. The inability of the Black Thunder Mine, or any other existing PRB producer, to offer reserves in the coal market would not cause electric generators to stop burning coal. Utility companies will likely operate existing coal-burning facilities until either cost or regulatory requirements render them ineffective or they are replaced by other reliable large scale capacity electric generation technologies capable of consistently supporting the bulk electrical demands of the United States' people.

The effect of rejecting the North Hilight Field LBA would be that the existing mine would cease operations after the current reserves are depleted (approximately 9.3 years), and the Black Thunder Mine would not be competitive in the national coal market to meet the future coal demand in the U.S. that is expected to last until at least 2035. Other coal producers have the capacity to produce coal and replace the production from this existing mine.

Lastly, PRB coal has competed for an increasing share of coal sales in the market primarily because it is lower cost, environmentally compliant, and successful post-mining reclamation has been thoroughly demonstrated. For these reasons, over the past several decades, PRB coal has been replacing other domestic coals in the open market, and would be expected to compete similarly in the future.

Cumulatively, the effect of rejecting the coal leasing proposed throughout the PRB would be that many of the existing mines would cease operations once current reserves are depleted (ranging from 7 to 15 years). Those mines would then not be able to compete with other mines to meet the future coal demand that is expected to last until at least 2035. When current reserves are depleted at these mines, their production would likely be replaced by other domestic and, potentially, international coal producers with coal that is more costly, less environmentally compliant, and has greater residual environmental impact.

Many other factors including but not limited to those listed below were considered in the decision to lease the North Hilight Field LBA tract:

- The Federal Coal Program encourages the development of domestic coal reserves and the reduction of the United States' dependence on foreign sources of energy. BLM recognizes that coal extraction is currently necessary in order to meet the nation's energy needs. A primary goal of the National Energy Policy is to add energy supplies from diverse sources including domestic oil, gas, and coal. Private development of Federal

coal reserves is integral to the BLM Coal Leasing Program under the authorities of the Mineral Leasing Act of 1920, the Federal Land Policy and Management Act of 1976 (FLPMA), and the Federal Coal Leasing Amendments Act of 1976 (FCLAA).

- Ark Land Company applied for the North Hilight Field LBA coal tract in order to extend the life of the Black Thunder Mine. The tract, if leased and sold, would allow the mine to acquire access to a continuing supply of low sulfur compliance coal that would be sold to power plants for generating electricity. Continued leasing of low sulfur PRB coal assists coal-fired power plants in meeting the Clean Air Act requirements without constructing new power plants or revamping existing plants. Generally, the expenses associated with constructing new power plants, retrofitting or revamping existing plants, or substituting alternative fuels would increase overall energy costs to customers and consumers.

- The leasing and subsequent mining of Federal coal reserves provides the United States, the State of Wyoming, and its affected counties with income in the form of lease bonus payments, lease royalty payments, and tax payments. Production of Federal coal also provides the public with a supply of cost-efficient, low sulfur coal for power generation. The Governor of Wyoming and other state and local officials support Federal coal leasing.

- The BLM is the lead agency responsible for leasing Federal coal lands under the MLA as amended. When an application to lease Federal coal is submitted, the BLM is obligated to respond to the application in a timely manner. In order to process an LBA, BLM must fulfill the requirements of NEPA by preparing environmental analyses. In this case, an EIS was prepared to provide agency decision-makers and the public with a complete and objective evaluation of the environmental impacts of leasing and mining the Federal coal. BLM then makes a decision on whether or not to offer the Federal coal for lease. In either case, BLM must notify the applicant in a timely fashion of its decision.

- Offering the North Hilight Field LBA tract (totaling 4,529.79 acres containing approximately 467,596,000 tons of mineable Federal coal reserves as estimated by the BLM) is responsive to the coal lease application received on October 7, 2005.

- The decision to offer the North Hilight Field coal tract for leasing is in conformance with the BLM land use plan decisions covering this area (see section entitled "Conformance with Existing Land Use Plans").

- The *Wright Area Coal Lease Applications EIS* was prepared in response to applications BLM received to lease tracts of Federal coal adjacent to existing mines in Wyoming. The environmental impacts of this decision were fully disclosed in the EIS. Public comments were addressed throughout the NEPA process.

- The BLM's selected tract configuration under Alternative 2, as modified and described in this decision, provides for maximum economic recovery of the coal resource.

- The U.S. Fish and Wildlife Service has provided written concurrence for leasing the North Hilight Field coal tract pursuant to Section 7(a)(2) of the Endangered Species Act of 1973, as amended (Appendix 3). Multiple surveys have been conducted for Ute ladies'-tresses orchid during the known flowering periods. Two sage-grouse leks have been documented within the North Hilight Field general analysis area. The Butch Lek is an unoccupied/abandoned lek on the North Hilight Field LBA tract. The Hansen Lakes Lek, an occupied lek, is also located on the North Hilight Field tract. The North Hilight Field general analysis area is outside of the Governor of Wyoming's statewide designated greater sage-grouse core area. Two prairie dog colonies, approximately 3.4 acres and 19.5 acres in size, are located on the North Hilight Field tract. Twenty-three bird species on the "Coal Mine List of 40 Migratory Bird Species of Management Concern in Wyoming" have historically been observed at least once in the Wright EIS general analysis area. Wildlife mitigation measures will be prescribed in concert with USFWS during the permit for mining process of the North Hilight Field LBA.

- Consultation with the appropriate Native American tribes was initiated by the BLM Wyoming State Office on May 29, 2008. No tribes indicated concerns with the disturbance of cultural sites in the North Hilight Field general analysis area.

- Fifty-three archeological sites have been identified within the North Hilight Field general analysis area, all of which have been determined not eligible for the NRHP (48CA177, 48CA334, 48CA337, 48CA339, 48CA341, 48CA343, 48CA362, 48CA366, 48CA367, 48CA373, 48CA376, 48CA452, 48CA453, 48CA2117, 48CA2118, 48CA3375, 48CA3514, 48CA3542, 48CA3543, 48CA3544, 48CA3545, 48CA3546, 48CA3547, 48CA3560, 48CA3562, 48CA3845, 48CA3846, 48CA3849, 48CA3850, 48CA3851, 48CA3853, 48CA3854, 48CA3855, 48CA3856, 48CA3857, 48CA4245, 48CA5573, 48CA6733, 48CA6734, 48CA6735, 48CA6736, 48CA6737, 48CA6738, 48CA6739, 48CA6740, 48CA6741, 48CA6742, 48CA6743, 48CA6744, 48CA6745, 48CA6746, 48CA6755, and 48CA6841).

- The BLM consulted SHPO in relation to determinations of eligibility and impacts for these sites and has determined that leasing the coal would result in no effect to historic properties. No further consultation or resolution of effects is required. On June 29, 2011, BLM notified SHPO that the undertaking would result in no effect to historic properties. Any further National Historic Preservation Act consultation with the Wyoming State Historic Preservation Office will be completed as required during the mine permitting process by OSM and WDEQ prior to any surface disturbance of the tract.

- Issuing a Federal coal lease for the North Hilight Field tract would not result in the creation of new sources of human-caused GHG or mercury emissions. The Black Thunder Mine would produce the North Hilight Field coal at currently permitted levels using existing production and transportation facilities. If the North Hilight Field tract is leased and mined, site-specific GHG emission rates from the Black Thunder Mine are anticipated to increase slightly compared to current emission rates due to increased strip ratios and added hauling distances.

- If the coal reserves contained within the North Hilight Field tract are leased and mined at production levels of approximately 135 million tons per year and the coal is used to generate electricity by coal-fired power plants, the emissions of GHG and mercury attributable to the coal produced at the Black Thunder Mine would be extended for approximately two years. The rate of human-caused CO_2 and mercury emissions would depend upon the permitted levels at the coal combustion facilities where the coal is burned and the potential emission limits that may be applied to those facilities in the future by regulation or legislation.

- The potential for regulation of GHG emissions as an air pollutant is recognized in this decision. Should such regulation be put in place, there may be an effect on coal demand, depending on how the regulatory actions affect the demand for electric power and the mix of methods used to produce electricity. Effects to coal demand would be reflected through the coal market, coal pricing, and supply. If demand decreases, it is expected that less efficient coal producers, or those with reserves having less desirable coal characteristics, may lose customers. Based on review of past performance, Black Thunder Mine has competed very well in the national coal market.

PUBLIC INVOLVEMENT

BLM received the North Hilight Field coal lease application on October 7, 2005. BLM announced the receipt of the LBA and published a Notice of Public Meeting in the Federal Register on February 9, 2006. At the public meeting held in Casper, Wyoming on April 19, 2006, the Powder River Regional Coal Team (PRRCT) reviewed the North Hilight Field coal lease application and ALC presented information about their existing mine and the pending lease application. The PRRCT recommended that BLM process the application. On April 27, 2006, BLM notified the Governor of Wyoming that ALC had made application for the North Hilight Field Federal coal lands.

BLM published a Notice of Intent to Prepare an EIS and Notice of Public Meeting in the Federal Register on July 3, 2007, in the Gillette News-Record on July 6, 2007, and in the Douglas Budget on July 11, 2007. Scoping notices were also mailed to Federal, state, and local government agencies, conservation groups, commodity groups, and individuals who could be impacted by this LBA. BLM and the applicant jointly developed the distribution list. On July 24, 2007, a public scoping meeting was held in Gillette, Wyoming. The scoping period extended from July 3 through September 3, 2007, during which time BLM received nine comment letters.

A notice announcing the availability of the *Wright Area Coal Lease Applications Draft EIS* was published in the Federal Register by the EPA on June 26, 2009. Parties on the distribution list were sent copies of the Draft EIS at that time. A 60-day comment period on the Draft EIS commenced with publication of the EPA's Notice of Availability and ended on August 25, 2009.

The BLM published a Notice of Availability/Notice of Public Hearing for the Draft EIS in the Federal Register on July 8, 2009. The BLM's Federal Register notice announced the date and

time of the formal public hearing, which was held on July 29, 2009, in Gillette, Wyoming. The purpose of the public hearing was to solicit public comment on the Draft EIS, fair market value, maximum economic recovery, and the proposed competitive sale of Federal coal from the Wright Area LBAs. BLM also published a Notice of Public Hearing in both the Douglas Budget and Gillette News-Record newspapers on July 8, 2009. Two individuals presented statements on the Draft EIS during the hearing. BLM received written comments from 17 individuals, agencies, businesses, and organizations as well as over 500 comment e-mails from other interested parties. Comments that BLM received on the Draft EIS and how BLM considered these comments during the preparation of the Final EIS were included in Appendix I of the Final EIS. Written comments and the transcript of the formal public hearing are also available for review at the BLM Wyoming High Plains District Office in Casper.

A notice announcing the availability of the *Wright Area Coal Lease Applications Final EIS* was published in the Federal Register by the EPA on July 30, 2010. Parties on the distribution list were sent copies of the Final EIS at that time. The comment period for the Final EIS ended on August 30, 2010. As explained on the first page of the Final EIS, the public review period was open for 30 days after EPA's Notice of Availability published in the Federal Register.

BLM received written comments on the Final EIS from Michael J. Strawn, Powder River Basin Resource Council/Sierra Club/Center for Biological Diversity, Leslie Glustrom, WildEarth Guardians/Sierra Club/Defenders of Wildlife, Dorsey & Whitney LLP/Ark Land Company, and the Campbell County Board of Commissioners. BLM has reviewed, evaluated, and considered these comments. The comment letters and BLM's responses are available at http://www.blm.gov/wy/st/en/info/NEPA/HighPlains/Wright-Coal.html. All comments that were received in a timely manner were considered in the preparation of this Record of Decision (ROD).

SUMMARY OF THE PROPOSED ACTION AND ALTERNATIVES

The EIS analyzed the proposed action and two alternatives in detail for the North Hilight Field LBA tract. Chapter 2 of the EIS contains a full description of each. Summarized descriptions are presented below.

Proposed Action: Hold a competitive lease sale for the Federal coal lands as applied for and issue a maintenance lease to the successful bidder.

Under the Proposed Action, the as applied for lands in the North Hilight Field application as submitted by ALC would have been offered for lease at a competitive sealed-bid sale. As applied for, the tract included approximately 2,613.50 acres (Appendix 1, Figure 2). The applicant estimated that the lands contained approximately 263.4 million tons of recoverable Federal coal. This alternative assumed that the applicant would be the successful bidder and that the coal would be mined, processed, and sold by the Black Thunder Mine.

Alternative 1 (Environmentally Preferable Alternative): Reject the application.

Under this alternative, ALC's application to lease the Federal coal lands included in the North Hilight Field LBA tract would be rejected and the tract would not be offered for competitive sale at this time. This is the No Action Alternative.

The applicant is presently mining existing leases that were previously acquired. Previously approved and permitted mining activity at the adjacent Black Thunder Mine would continue with or without leasing the North Hilight Field LBA tract. Assuming that the North Hilight Field LBA tract would never be leased and coal removal and the associated disturbance would never occur, this alternative would be the environmentally preferable alternative. However, selection of this alternative would not preclude future applications to lease all or part of the Federal coal included in the North Hilight Field LBA tract.

Rejection of the application would not cause mining operations to immediately cease at the Black Thunder Mine, nor would it immediately reduce production from this mine. Coal is mined in 27 states and is mostly used for generating electricity to support the country's demand for energy. If the North Hilight Field application was rejected and, in the long term, the Black Thunder Mine was to close, other regional and national mining companies would replace the coal production that would have been lost due to the Black Thunder Mine's closure.

Alternative 2 (Selected Alternative): Reconfigure the tract, hold one competitive sale for Federal coal lands included in the tract as modified by BLM, and issue a lease to the successful bidder.

Along with the Federal coal lands that were applied for by ALC, BLM identified and evaluated an additional area comprised of approximately 4,525.87 acres of unleased Federal coal adjacent to the northern and eastern edges of the application lands (Appendix 1, Figure 2). These additional lands and the as applied for tract were referred to as the BLM study area. The study area enabled BLM to evaluate and explore the potential of increasing competitive interest in the tract, allowing for more efficient recovery of Federal coal in the area, and reducing the likelihood of bypassed Federal coal.

After analyzing the additional lands included in the BLM study area for the North Hilight Field, BLM selected the tract configuration as described below. BLM's selected tract configuration includes approximately 1,916.29 acres of additional lands from the BLM study area. The final configuration (Appendix 1, Figure 3) was selected because it allows for more efficient recovery of the Federal coal, decreases the amount of bypassed Federal coal in the area, and best serves the public interest. Under the selected configuration, the North Hilight Field tract includes approximately 4,529.79 acres and BLM estimates that it contains approximately 467,596,000 tons of mineable Federal coal resources.

The legal description of the lands to be offered for competitive lease sale under Alternative 2, BLM's selected tract configuration, for the North Hilight Field tract is as follows:

North Hilight Field Tract (WYW164812):

T. 44 N., R. 70 W., 6th P.M., Campbell County, Wyoming	
Section 19: Lots 5 through 20 (aka All);	656.88 acres
Section 20: Lots 1 through 16 (aka All);	651.07 acres
Section 21: Lots 1 through 16 (aka All);	658.37 acres
Section 22: Lots 1 through 15 (aka W½NE¼, SE¼NE¼, W½, SE¼);	606.85 acres
T. 44 N., R. 71 W., 6th P.M., Campbell County, Wyoming	
Section 23: Lots 1 through 16 (aka All);	653.11 acres
Section 24: Lots 1 through 16 (aka All);	653.44 acres
Section 26: Lots 1 through 16 (aka All);	650.07 acres
North Hilight Field Tract Total:	4,529.79 acres

The land descriptions and acreages are based on the BLM Status of Public Domain Land and Mineral Titles Approved Master Title Plats as of August 30, 2005 and September 7, 2007 and Coal Plats as of September 7, 2007. The coal estate in the tract described above is Federally-owned. Surface ownership consists of privately owned lands and Federal lands administered by the USDA-Forest Service (FS). The selected configuration for the North Hilight Field tract (Appendix 1, Figure 3) includes approximately 80.7 acres of National Forest System lands in the Thunder Basin National Grassland (TBNG) administered by the FS.

ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

Further descriptions of these alternatives may be found in Chapter 2 of the Final EIS.

New Mine Start

Under this alternative, as under the Proposed Action, Alternative 1, and Alternative 2, BLM would have held a competitive coal lease sale and issued a lease for the lands included in the North Hilight Field tract. This alternative assumed, however, that the successful qualified bidder would have been someone other than the applicant and that this bidder would have planned to open a new mine to develop the Federal coal resources. In BLM's current estimation, for a new mine to open in the Wyoming PRB, the first lease would need to contain approximately 500 to 600 million tons of coal.

This alternative was considered but was not analyzed in detail because it was unlikely that a new mine would start up and lease this tract. The North Hilight Field selected configuration may include enough coal resources to initially support opening a new mine. However, the sufficient quality future coal reserves that are required in order to support a sustainable, active mining operation may potentially be limited in this area. A new mine start would require considerable initial capital expenses, development of new mining and reclamation plans, and a large number of new employees. A new mine start would additionally create a new source of air quality

impacts. The potential difficulty in obtaining an air quality permit is another issue that could discourage new mine starts in the PRB. In view of these issues, the development of a new mine start on any of the LBA tracts included in the Wright Area EIS is considered unlikely.

Delaying the Sale

Under this alternative, the BLM would have delayed the sale of the North Hilight Field tract as applied for. This alternative assumed that the tract could be developed later as either a maintenance tract or a new mine start, depending on how long the sale would have been delayed. The environmental impacts of mining this Federal coal at a later time as a maintenance tract would be expected to be similar to the Proposed Action and Alternative 2. If a new mine start was required to mine the coal in this tract, the environmental impacts would be expected to be greater than if it were mined as an extension of an existing mine.

In general, delaying the sale may have allowed CBNG resources in the Wright general analysis area to be more completely recovered prior to mining. If market prices increased in the future, bonus and royalty payments to the government would have been higher if the tract was offered for sale at a later date.

This alternative was considered but was not analyzed in detail because it would not produce substantially different impacts than other alternatives that were analyzed in detail. First, rental and royalty provisions in the proposed lease provide for the United States to benefit if coal prices increase by the time of mining. Royalty and tax payments are collected at the time the coal is sold. They increase as coal prices increase, which allows the United States to benefit if coal prices have increased by the time of mining. Second, as described in Chapter 2 of the EIS, several mechanisms are already in place to facilitate continued CBNG recovery prior to mining the lands included in the Wright general analysis area.

CONFORMANCE WITH EXISTING LAND USE PLANS

Under the requirements of FCLAA, lands that are being considered for Federal coal leasing must be included in a comprehensive land use plan and leasing decisions must be compatible with that plan. The *Approved Resource Management Plan (RMP) for Public Lands Administered by the Bureau of Land Management Buffalo Field Office,* completed in 2001 and amended in 2003, governs and addresses the leasing of Federal coal in Campbell County. The USDA-FS *Land and Resource Management Plan for the Thunder Basin National Grassland (TBNG), Medicine Bow-Routt National Forest, Rocky Mountain Region*, completed in 2001, guides resource management activities on the TBNG.

The major land use planning decision that BLM must make concerning Federal coal resources is a determination of which Federal coal lands are acceptable for further consideration for leasing. There are four coal screening procedures that BLM uses to identify these coal lands. The screening procedures require BLM to: 1) estimate development potential of the coal lands, 2) apply the unsuitability criteria listed in the regulations at 43 CFR 3461, 3) make multiple land use decisions that eliminate Federal coal deposits from consideration for leasing to protect other

resource values, and 4) consult with surface owners who meet the criteria defined in the regulations at 43 CFR 3400.0-5 (gg) (1) and (2). The coal screens were developed for Federal decision-making and are utilized in environmental analyses associated with BLM RMPs, EISs, USDA-FS TBNG planning documents, evaluations, and other resource management activities.

Under the first coal screening procedure, a coal tract must be located within an area that has been determined to have coal development potential in order to receive further consideration for leasing [43 CFR 3420.1-4(e)(1)]. The North Hilight Field tract is within the area identified by BLM as having coal development potential.

The second coal screening procedure requires the application of the coal mining unsuitability criteria which are listed in the Federal coal management regulations at 43 CFR 3461. These criteria have been applied to high to moderate coal development potential lands in the Wyoming PRB, including the North Hilight Field tract and surrounding lands.

Biological surveys have been conducted throughout the North Hilight Field general analysis area. The USFWS has provided written concurrence for leasing the North Hilight Field LBA tract pursuant to Section 7(a)(2) of the Endangered Species Act of 1973, as amended (Appendix 3). In coordination with WDEQ, the USFWS will develop and prescribe wildlife mitigation measures as a component of the mining permit authorization process.

A portion of the Burlington Northern Santa Fe & Union Pacific (BNSF & UP) railroad right-of-way (ROW) borders the west side of the North Hilight Field tract. Lands within the rail line right-of-way (ROW) and associated 100-foot buffer zone were found to be unsuitable for mining under Unsuitability Criterion 2. Although the lands within the railroad ROW and buffer zone have been determined to be unsuitable for mining, they are included in the tract lease to allow for efficient recovery of all mineable coal adjacent to and outside of the ROW and its associated buffer zone. This determination also complies with coal leasing regulations which do not allow leasing in less than 10-acre aliquot parts. The lease will include a stipulation stating that no mining activity may be conducted in the portion of the lease within the railroad ROW or associated 100-foot buffer zone. This stipulation honors the finding of unsuitability for mining under Criterion 2.

Unsuitability Criterion Number 3 states that lands within 100 feet of the outside line of the ROW of a public road shall be considered unsuitable for surface coal mining. SMCRA Section 522(e)(4) and 30 CFR 761.11(d) prohibit surface mining operations on lands within 100 feet of the outside line of the ROW for a public road. A portion of the ROW of Shroyer Road (Campbell County Road 116), Hilight Road (Campbell County Road 52), Small Road (Campbell County Road 89), and Jacobs Road are located within BLM's selected configuration for the North Hilight Field tract (Appendix 1, Figure 3). Without further action, these roads, their associated ROWs, and the 100-foot buffer zones extending on either side of the ROWs would be considered unsuitable for mining at this time under Criterion Number 3.

There is an exception to the public road ROW prohibition in the regulations at SMCRA Section 522(e)(4) and 30 CFR 761.11(d) which can be applied if the appropriate road authority (Campbell County Board of Commissioners) allows the public road to be relocated or closed.

Surface coal mining could potentially occur within a public road ROW and buffer zone if the regulatory authority, or the appropriate public road authority designated by the regulatory authority, allows the public road to be relocated or closed after providing public notice and opportunity for a public hearing. A finding must be reached, and stated in writing, that the interests of the affected public and landowners will be protected [30 CFR 761.11(d) and 43 CFR 3461.5(c)(iii)]. Both the Small Road and the Jacobs Road have been closed and vacated by the Campbell County Commissioners.

For public roads granted approval for closure and relocation, the exception to the prohibition on mining within the public road ROW and associated buffer zone could be applied and the unsuitability determination could be reconsidered. A mining company could recover the coal underlying those segments of the public road ROWs and buffer zones that are approved for closure and relocation. If approval is not obtained to relocate or close a public road, the coal underlying the ROW and buffer zone would remain unsuitable for mining and would not be recovered.

The Small Road and the Jacobs Road have been closed and vacated by the Campbell County Commissioners. The Hilight Road and Shroyer Road remain open. Although a portion of the lands within the Hilight Road, Shroyer Road, Small Road, and Jacobs Road ROWs and buffer zones have been determined to be unsuitable for mining, they are included in the tract lease to allow for efficient recovery of all mineable coal adjacent to and outside of the ROWs and buffer zones. This determination also complies with coal leasing regulations which do not allow leasing in less than 10-acre aliquot parts. If a lease is issued for this tract, stipulations will be attached stating that no mining activity may be conducted within the public road ROWs and associated buffer zones unless permits to close or relocate the roads are approved by the Campbell County Board of Commissioners. This stipulation honors the finding of unsuitability for mining under Criterion 3.

No other lands included in the North Hilight Field tract were found to be unsuitable for mining during the application of the unsuitability criteria for BLM's 2001 Buffalo RMP update. Site-specific unsuitability determinations for some criteria were deferred until an application to lease was filed. These findings are included in Appendix B of the Wright Area Coal Final EIS.

The third coal screening procedure, a multiple land use conflict analysis, must be completed to identify and "eliminate additional coal deposits from further consideration for leasing to protect resource values of a locally important or unique nature not included in the unsuitability criteria," in accordance with 43 CFR 3420.1-4(e)(3). The 2001 Buffalo RMP update addresses two types of multiple land use conflicts: municipal/residential conflicts and multiple mineral development (coal versus oil and gas) conflicts.

The municipal/residential multiple land use conflict was addressed by applying buffers around the municipal planning boundaries for the major municipalities within the BLM Buffalo Field Office area including Gillette and Wright. BLM's selected North Hilight Field tract configuration does not extend into any of the municipal buffer zones.

BLM's evaluation of the multiple mineral development conflicts related to issuing a lease for the North Hilight Field tract is discussed above in the "Pending Coal Leasing Applications and Other Proposed Projects in the Wyoming Powder River Basin" section of this record of decision.

The fourth coal screening procedure requires consultation with surface owners who meet the criteria defined in the regulations at 43 CFR 3400.0-5(gg)(1) and (2). Under BLM's selected tract configuration for the North Hilight Field, surface ownership consists of Federal lands administered by the USDA-FS and privately owned lands held by various entities. Ark Land Company, Thunder Basin Coal Company LLC, Foundation Coal West, Inc., and Western Railroad Properties, Inc. and Burlington Northern Railroad currently own the private lands contained within the selected North Hilight Field LBA tract. If private surface owners are determined to be qualified under this CFR citation, then qualified surface owner consent is required before those lands can be included in a Federal coal lease. There are currently no qualified surface owners within the selected configuration for the North Hilight Field LBA tract.

In summary, the lands in the North Hilight Field coal tract have been subjected to the four coal planning screens and are determined to be acceptable for further consideration for leasing. Thus, a decision to lease the North Hilight Field Federal coal lands is in conformance with the current BLM Buffalo RMP and the Thunder Basin National Grassland LRMP.

MITIGATION, COMPLIANCE, AND MONITORING

If the North Hilight Field tract is leased, the lease will contain standard coal lease stipulations and also BLM Special Stipulations. BLM has applied special stipulations (Appendix 2) to avoid environmental damage or mitigate potential conflicts affiliated with cultural resources, paleontological resources, threatened and endangered species, multiple mineral development of oil and/or gas and coal resources, resource recovery and protection, and/or public land survey. Special coal lease stipulations were identified in Appendix D of the Final EIS. The final special stipulations are attached (Appendix 2) to this decision and will become part of the Federal coal lease records and pertain to all lands as described in the Federal coal lease tract.

After Federal coal leases are issued, SMCRA gives the OSM authority to administer programs that regulate surface coal mining operations. The WDEQ regulates surface coal mining activities in Wyoming. If ALC is the successful, qualified high bidder for the Federal coal included in the North Hilight Field coal tract, a permit revision must then be approved by the WDEQ/LQD. An MLA mining plan revision must also be approved by the Assistant Secretary of the Interior before the coal in the tract could be mined. The existing mitigation measures specific to the currently approved mine plan for the adjacent mine would then be revised to include the new mitigation measures specific to the North Hilight Field tract. The mining permit would be amended to include the new mitigation requirements.

If the successful bidder on the North Hilight Field coal lease sale does not currently operate a mine that is adjacent to WYW164812, then the bidder would likely propose to construct a new mine in order to recover these Federal coal reserves. Because this would be a new mine start, the proponent would then submit a new permit application package to WDEQ/LQD for approval. A new MLA mining plan would also need to be submitted and approved by the Assistant Secretary of the Interior before the tract could be mined. The approved permit would include mitigation measures and monitoring plans specific to mining the newly leased tract.

Prior to mining a coal lease area, the lease must be permitted for mining by OSM and WDEQ. If a lease is permitted for mining, additional conditions and stipulations may be assigned by OSM and WDEQ. Please see Section 1.3 of the Final EIS for additional information regarding regulatory authority and responsibility in relation to coal mining in Wyoming.

To ensure that the revised plan is in compliance with the leasing stipulations, BLM has a responsibility to review the R2P2 prior to approval of the mining plan. Before any mining operations can begin on the North Hilight Field tract (WYW164812), the appropriate R2P2 must be approved by the BLM, a permit or permit revision must be approved by WDEQ/LQD, and an MLA mining plan or plan revision must be approved by the Assistant Secretary of the Interior.

RECOMMENDATION

I recommend that, after a competitive lease sale is held, Federal coal tract WYW164812, with its associated 4,529 acres, more or less, be issued to the successful, qualified high bidder, provided it is determined that the highest bid at the sale meets or exceeds the FMV of the tract as determined by the BLM and that all other leasing requirements are met.

This is Alternative 2 for the North Hilight Field LBA coal tract, as modified by BLM, and as described in this record of decision. The competitive lease sale will be held in accordance with the requirements at 43 CFR Subpart 3422. The lease will be subject to the attached BLM special lease stipulations (Appendix 2).

Assistant District Manager for Solid Minerals
Wyoming High Plains District Office

1-Feb-2012
Date

APPROVAL

I agree with the recommendation of the Assistant District Manager for Solid Minerals, and I approve the decision to offer Federal coal tract WYW164812 for competitive lease sale.

Stephanie Connolly
BLM Wyoming High Plains District Manager

2/1/2012
Date

APPEAL OF DISTRICT MANAGER DECISION

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR Subpart 4 and the enclosed form 1842-1 (Appendix 4). If an appeal is filed, your notice of appeal must be filed in this office (BLM Wyoming High Plains District Office, 2987 Prospector Drive, Casper, WY 82604) within thirty (30) days from the date BLM published the Notice of Availability (NOA) of this Record of Decision in the Federal Register. The appellant has the burden of showing that the decision appealed is in error.

If you wish to file a petition (request) pursuant to regulations 43 CFR 4.21(a)(2) for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standard for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1) The relative harm to the parties if a stay is granted or denied;
2) The likelihood of the appellant's success on the merits;
3) The likelihood of the immediate and irreparable harm if the stay is not granted; and,
4) Whether the public interest favors granting a stay.

Appendix 1. Figures 1, 2, and 3

Appendix 2. BLM Special Coal Lease Stipulations (WYW164812), Notice for Lands of the National Forest System under Jurisdiction of the Department of Agriculture (WYW164812), and BLM Coal Lease Form 3400-12

Appendix 3. U.S. Fish and Wildlife Service Concurrence Letter

Appendix 4. Appeal Procedures

APPENDIX 1

FIGURES

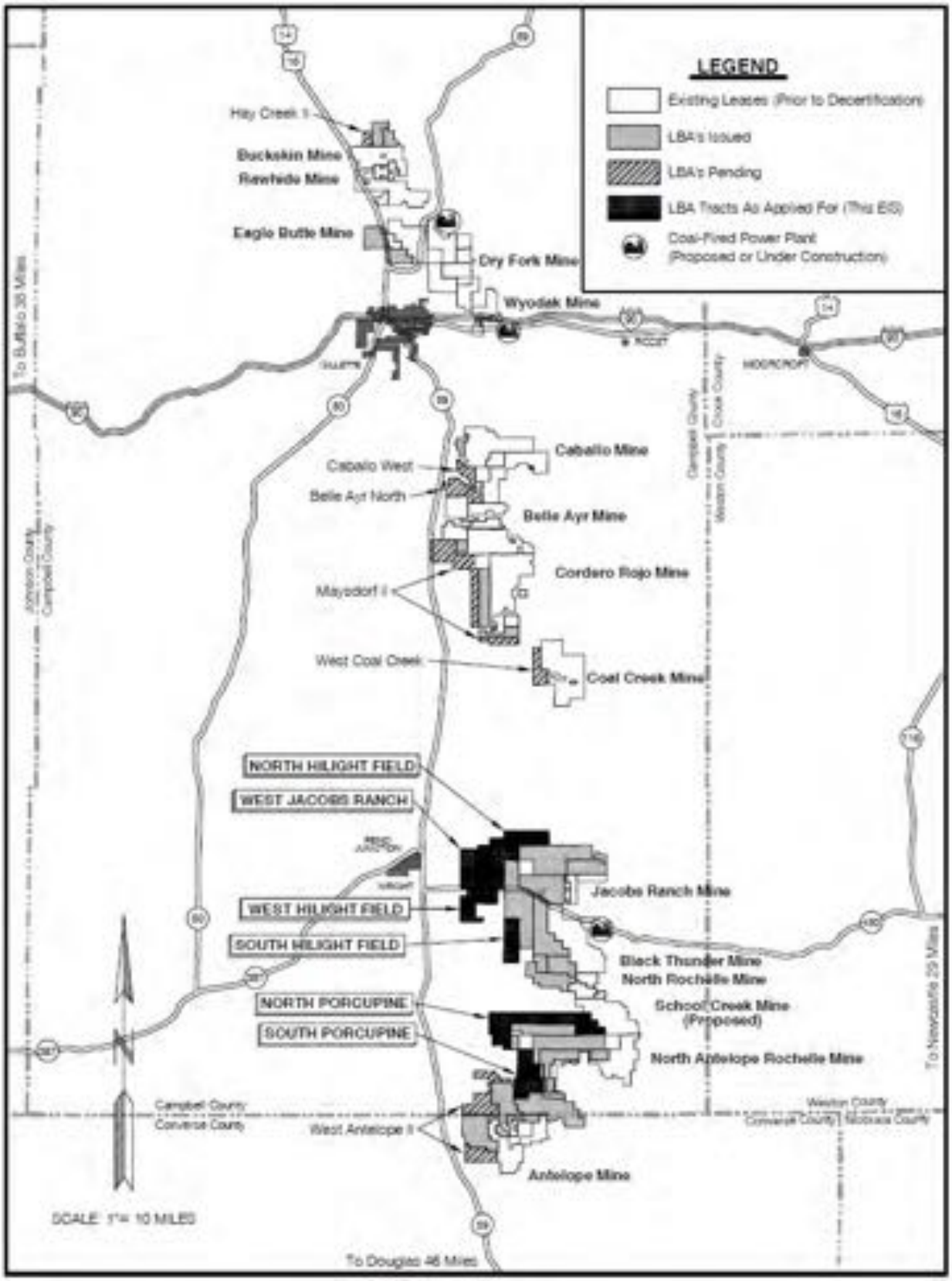

Figure 1. General Location Map with Federal Coal Leases and LBA Tracts

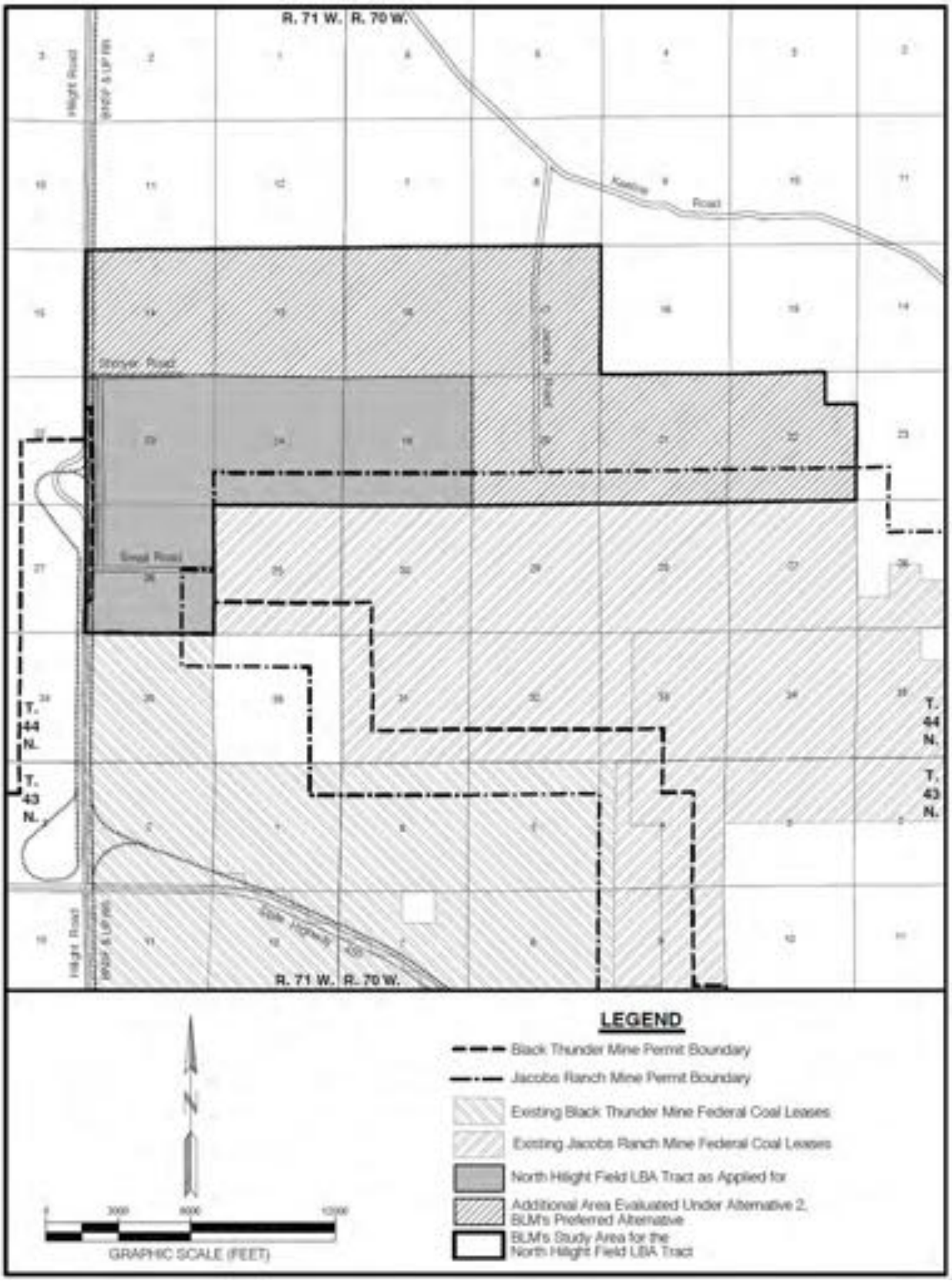

Figure 2. North Hilight Field LBA Tract Alternatives

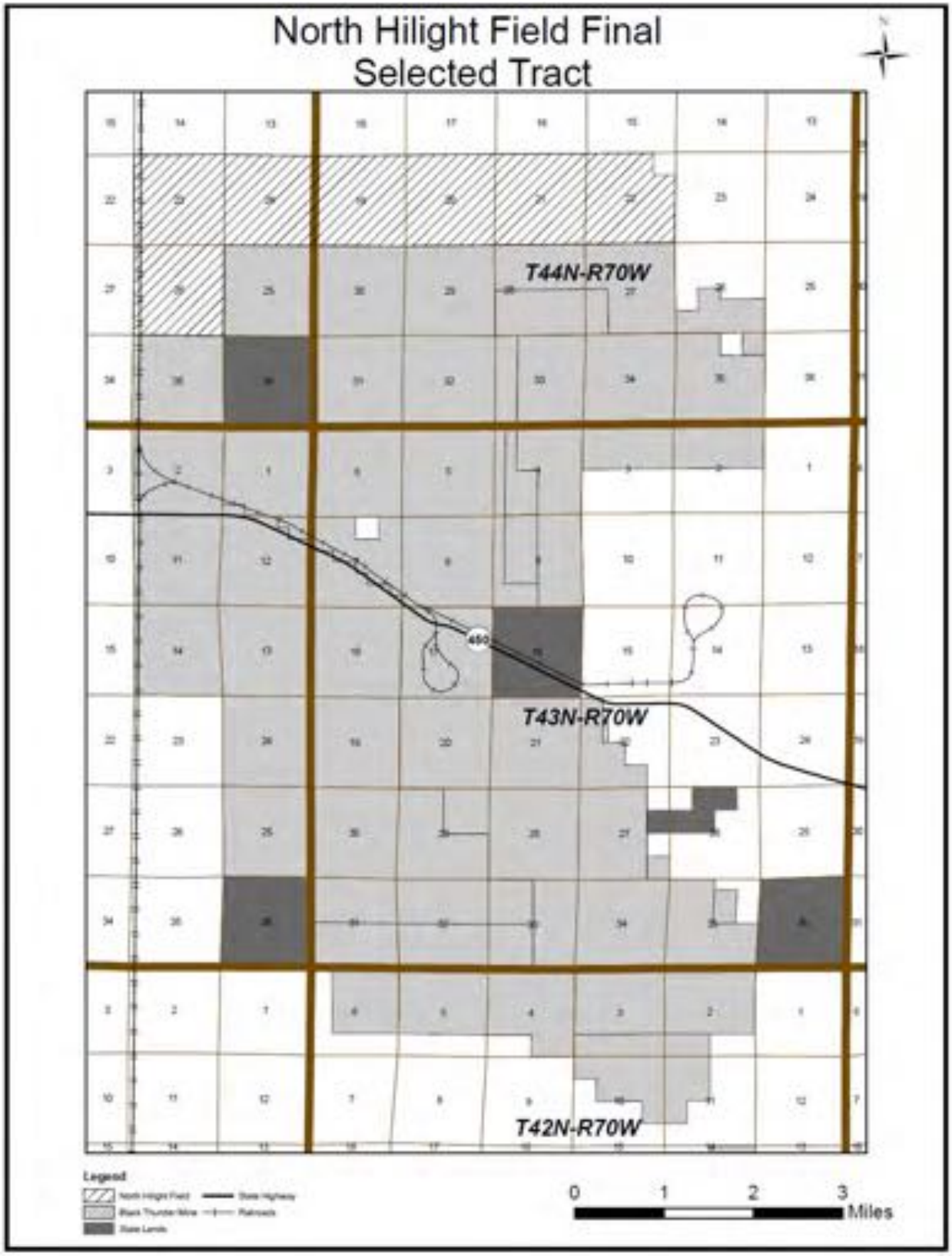

Figure 3. North Hilight Field Tract Selected Configuration

APPENDIX 2

BLM SPECIAL COAL LEASE STIPULATIONS,

NOTICE FOR LANDS OF THE
NATIONAL FOREST SYSTEM UNDER JURISDICTION
OF THE DEPARTMENT OF AGRICULTURE,

AND BLM COAL LEASE FORM 3400-12

SPECIAL STIPULATIONS FOR THE
NORTH HILIGHT FIELD LBA COAL TRACT:
WYW164812

In addition to observing the general obligations and standards of performance set out in the current regulations, the lessee shall comply with and be bound by the following special stipulations.

These stipulations are also imposed upon the lessee's agents and employees. The failure or refusal of any of these persons to comply with these stipulations shall be deemed a failure of the lessee to comply with the terms of the lease. The lessee shall require his agents, contractors, and subcontractors involved in activities concerning this lease to include these stipulations in the contracts between and among them. These stipulations may be revised or amended, in writing, by the mutual consent of the lessor and the lessee at any time to adjust to changed conditions or to correct an oversight.

(a) ***CULTURAL RESOURCES***

(1) Before undertaking any activities that may disturb the surface of the leased lands, the lessee shall conduct a cultural resource intensive field inventory in a manner specified by the Authorized Officer of the BLM or of the surface managing agency, if different, on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archeologist, historian, historical architect, as appropriate), approved by the Authorized Officer of the surface managing agency (BLM, if the surface is privately owned), and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Regional Director of the Western Region of the Office of Surface Mining (the Western Regional Director), the Authorized Officer of the BLM, if activities are associated with coal exploration outside an approved mining permit area (hereinafter called Authorized Officer), and the Authorized Officer of the surface managing agency, if different. The lessee shall undertake measures, in accordance with instructions from the Western Regional Director, or Authorized Officer, to protect cultural resources on the leased lands. The lessee shall not commence the surface disturbing activities until permission to proceed is given by the Western Regional Director or Authorized Officer.

2) Any existing Class III inventory report covering the lease area that has not received federal agency review must be reviewed and accepted by the agency, site NRHP eligibility determinations made, and consultation with the State Historic Preservation Officer completed before any surface disturbing activities take place.

(3) The lessee shall protect all cultural resource properties that have been determined eligible or unevaluated to the National Register of Historic Places within the lease area from lease-related activities until the cultural resource mitigation measures or site evaluations can be implemented as part of an approved mining and reclamation or exploration plan unless modified by mutual agreement in consultation with the State Historic Preservation Officer.

(4) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the lessee.

(5) If cultural resources are discovered during operations under this lease, the lessee shall immediately bring them to the attention of the Western Regional Director or Authorized Officer, or the Authorized Officer of the surface managing agency if the Western Regional Director is not available. The lessee shall not disturb such resources except as may be subsequently authorized by the Western Regional Director or Authorized Officer. Within two (2) working days of notification, the Western Regional Director or Authorized Officer will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries. The cost of data recovery for cultural resources discovered during lease operations shall be borne by the lessee unless otherwise specified by the Authorized Officer of the BLM or of the surface managing agency, if different.

(6) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

(b) ***PALEONTOLOGICAL RESOURCES***

If paleontological resources, either large and conspicuous, and/or of significant scientific value, are discovered during mining operations, the find will be reported to the Authorized Officer immediately. Mining operations will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM-approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological value. Operations within 250 feet of such discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The lessee will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operations.

(c) ***THREATENED, ENDANGERED, CANDIDATE, OR OTHER SPECIAL STATUS PLANT AND ANIMAL SPECIES***

(1) The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened or endangered under the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq*., or that have other special status. The Authorized Officer may recommend modifications to exploration and development proposals to further conservation and management objectives or to avoid activity that will contribute to a need to list such species or their habitat or to comply with any biological opinion issued by the U.S. Fish and Wildlife Service for the Proposed Action. The Authorized Officer will not approve any ground disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act. The Authorized Officer may require modifications to, or disapprove a proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or

endangered species, or result in the destruction or adverse modification of designated or proposed critical habitat.

(2) The lessee shall comply with instructions from the Authorized Officer of the surface managing agency (BLM, if the surface is private) for ground disturbing activities associated with coal exploration on federal coal leases prior to approval of a mining and reclamation permit or outside an approved mining and reclamation permit area. The lessee shall comply with instructions from the Authorized Officer of the Office of Surface Mining Reclamation and Enforcement, or his designated representative, for all ground disturbing activities taking place within an approved mining and reclamation permit area or associated with such a permit.

(3) Any potential habitat that has not already been surveyed for Ute ladies'-tresses within the project area shall be identified and surveyed prior to surface mining activities.

(d) ***MULTIPLE MINERAL DEVELOPMENT***

Operations will not be approved which, in the opinion of the Authorized Officer, would unreasonably interfere with the orderly development and/or production from a valid existing mineral lease issued prior to this one for the same lands.

(e) ***OIL AND GAS/COAL RESOURCES***

The BLM realizes that coal mining operations conducted on Federal coal leases issued within producing oil and gas fields may interfere with the economic recovery of oil and gas, just as Federal oil and gas leases issued in a Federal coal lease area may inhibit coal recovery. BLM retains the authority to alter and/or modify the resource recovery and protection plans for coal operations and/or oil and gas operations on those lands covered by Federal mineral leases so as to obtain maximum resource recovery.

(f) ***RESOURCE RECOVERY AND PROTECTION***

Notwithstanding the approval of a resource recovery and protection plan (R2P2) by the BLM, the lessor reserves the right to seek damages against the operator/lessee in the event (i) the operator/lessee fails to achieve maximum economic recovery (MER) (as defined at 43 CFR 3480.0-5(21)) of the recoverable coal reserves or (ii) the operator/lessee is determined to have caused a wasting of recoverable coal reserves. Damages shall be measured on the basis of the royalty that would have been payable on the wasted or unrecovered coal.

The parties recognize that under an approved R2P2, conditions may require a modification by the operator/lessee of that plan. In the event a coal bed or portion thereof is not to be mined or is rendered unmineable by the operation, the operator/lessee shall submit appropriate justification to obtain approval by the Authorized Officer to leave such reserves unmined. Upon approval by the Authorized Officer, such coal beds or portions thereof shall not be subject to damages as described above. Further, nothing in this section shall prevent the operator/lessee from exercising its right to relinquish all or a portion of the lease as authorized by statute and regulation.

In the event the Authorized Officer determines that the R2P2, as approved, will not attain MER as the result of changed conditions, the Authorized Officer will give proper notice to the operator/lessee as required under applicable regulations. The Authorized Officer will order a modification if necessary, identifying additional reserves to be mined in order to attain MER. Upon a final administrative or judicial ruling upholding such an ordered modification, any reserves left unmined (wasted) under that plan will be subject to damages as described in the first paragraph under this section.

Subject to the right to appeal hereinafter set forth, payment of the value of the royalty on such unmined recoverable coal reserves shall become due and payable upon determination by the Authorized Officer that the coal reserves have been rendered unmineable or at such time that the operator/lessee has demonstrated an unwillingness to extract the coal.

The BLM may enforce this provision either by issuing a written decision requiring payment of the Office of Natural Resources Revenue (formerly known as Mineral Management Service) demand for such royalties, or by issuing a notice of non-compliance. A decision or notice of non-compliance issued by the lessor that payment is due under this stipulation is appealable as allowed by law.

(g) ***PUBLIC LAND SURVEY PROTECTION***

The lessee will protect all survey monuments, witness corners, reference monuments, and bearing trees against destruction, obliteration, or damage during operations on the lease areas. If any monuments, corners or accessories are destroyed, obliterated, or damaged by this operation, the lessee will hire an appropriate county surveyor or registered land surveyor to reestablish or restore the monuments, corners, or accessories at the same location, using surveying procedures in accordance with the "Manual of Surveying Instructions for the Survey of the Public Lands of the United States." The survey will be recorded in the appropriate county records, with a copy sent to the Authorized Officer.

ADDITIONAL SPECIAL STIPULATIONS FOR THE NORTH HILIGHT FIELD COAL TRACT (WYW164812)

(h) ***PUBLIC ROAD RIGHT-OF-WAY AND BUFFER ZONE***

No mining activity of any kind may be conducted within the Shroyer Road (Campbell County Road 116), Hilight Road (Campbell County Road 52), Small Road (Campbell County Road 89), or Jacobs Road rights-of-way and associated 100-foot buffer zones while these public roads remain in their recent (2009) locations. The lessee shall recover all legally and economically recoverable coal from all leased lands not within the foregoing rights-of-way and associated buffer zones. If permits are obtained to relocate these roads and are approved by the appropriate authority, the lessee shall recover all legally and economically recoverable coal from all leased lands within the foregoing rights-of-way and associated buffer zones. The lessee shall pay all royalties on any legally and economically recoverable coal which it fails to mine without the written permission of the Authorized Officer.

(i) ***RAILROAD RIGHT-OF-WAY AND BUFFER ZONE***

No mining activity of any kind may be conducted within the Burlington Northern Santa Fe & Union Pacific railroad right-of-way and associated 100-foot buffer zone. The lessee shall recover all legally and economically recoverable coal from all leased lands not within the foregoing right-of-way. The lessee shall pay all royalties on any legally and economically recoverable coal which it fails to mine without the written permission of the Authorized Officer.

NOTICE FOR LANDS OF THE NATIONAL FOREST SYSTEM UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE

R2-FS-2820-13 (92) Serial No. WYW164812

The permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of Interior in the permit. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of an exploration plan by the Secretary of the Interior, (2) uses of all existing improvements, such as forest development roads, within and outside the area permitted by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by an exploration plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed to:

Forest Supervisor
Medicine Bow-Routt National Forests & Thunder Basin National Grassland
2468 Jackson Street
Laramie, WY 82070
307-745-2300

who is the authorized representative of the Secretary of Agriculture.

NOTICE

CULTURAL AND PALEONTOLOGICAL RESOURCES - The FS is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the FS, shall:

1. Contact the FS to determine if a site specific cultural resource inventory is required. If a survey is required, then:

2. Engage the services of a cultural resource specialist acceptable to the FS to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the FS for review and approval at the time a surface disturbing plan of operation is submitted.

3. Implement mitigation measures required by the FS and BLM to preserve or avoid destruction of cultural resource values. Mitigation may include relocation of proposed facilities, testing, salvage, and recordation or other protective measures. All costs of the inventory and mitigation will be borne by the lessee or operator, and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

The lessee or operator shall immediately bring to the attention of the FS and BLM any cultural or paleontological resources or any other objects of scientific interest discovered as a result of surface operations under this lease, and shall leave such discoveries intact until directed to proceed by FS and BLM.

ENDANGERED OR THREATENED SPECIES - The FS is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.

The lessee/operator may, unless notified by the FS that the examination is not necessary, conduct the examination on the leased lands at his discretion and cost. This examination must be done by or under the supervision of a qualified resource specialist approved by the FS. An acceptable report must be provided to the FS identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats.

_____

Signature of Licensee/Permittee/Lessee

Form 3400-12
(September 2010)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

COAL LEASE

FORM APPROVED
OMB NO. 1004-0073
Expires: June 30, 2013

Serial Number

PART 1. LEASE RIGHTS GRANTED

This lease, entered into by and between the UNITED STATES OF AMERICA, hereinafter called lessor, through the Bureau of Land Management (BLM), and *(Name and Address)*

hereinafter called lessee, is effective *(date)* / / , for a period of 20 years and for so long thereafter as coal is produced in commercial quantities from the leased lands, subject to readjustment of lease terms at the end of the 20th lease year and each 10-year period thereafter.

Sec. 1.This lease is issued pursuant and subject to the terms and provisions of the:

☐ The Mineral Leasing Act of 1920, as amended, 30 U.S.C. 181 - 287; or
☐ The Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351 - 359;
and to the regulations and formal orders of the Secretary of the Interior which are now or hereafter in force, when not inconsistent with the express and specific provisions herein.

Sec. 2. Lessor, in consideration of any bonuses, rents, and royalties to be paid, and the conditions and covenants to be observed as herein set forth, hereby grants and leases to lessee the exclusive right and privilege to drill for, mine, extract, remove, or otherwise process and dispose of the coal deposits in, upon, or under the following described lands:

containing acres, more or less, together with the right to construct such works, buildings, plants, structures, equipment and appliances and the right to use such on-lease rights-of-way which may be necessary and convenient in the exercise of the rights and privileges granted, subject to the conditions herein provided.

PART II. TERMS AND CONDITIONS

Sec. 1. (a) RENTAL RATE - Lessee must pay lessor rental annually and in advance for each acre or fraction thereof during the continuance of the lease at the rate of $ for each lease year.

(b) RENTAL CREDITS - Rental will not be credited against either production or advance royalties for any year.

Sec. 2. (a) PRODUCTION ROYALTIES - The royalty will be percent of the value of the coal as set forth in the regulations. Royalties are due to lessor the final day of the month succeeding the calendar month in which the royalty obligation accrues.

(b) ADVANCE ROYALTIES - Upon request by the lessee, the BLM may accept, for a total of not more than 20 years, the payment of advance royalties in lieu of continued operation, consistent with the regulations. The advance royalty will be based on a percent of the value of a minimum number of tons determined in the manner established by the advance royalty regulations in effect at the time the lessee requests approval to pay advance royalties in lieu of continued operation.

Sec. 3. BONDS - Lessee must maintain in the proper office a lease bond in the amount of $. The BLM may require an increase in this amount when additional coverage is determined appropriate.

Sec. 4. DILIGENCE - This lease is subject to the conditions of diligent development and continued operation, except that these conditions are excused when operations under the lease are interrupted by strikes, the elements, or casualties not attributable to the lessee. The lessor, in the public interest, may suspend the condition of continued operation upon payment of advance royalties in accordance with the regulations in existence at the time of the suspension. Lessee's failure to produce coal in commercial quantities at the end of 10 years will terminate the lease. Lessee must submit an operation and reclamation plan for the BLM's approval pursuant to 30 U.S.C. 207(c) prior to conducting any development or mining operations or taking any other action on a leasehold which might cause a significant disturbance of the environment.

The lessor reserves the power to assent to or order the suspension of the terms and conditions of this lease in accordance with, inter alia, Section 39 of the Mineral Leasing Act, 30 U.S.C. 209.

5. LOGICAL MINING UNIT (LMU) - Either upon approval by the lessor of the lessee's application or at the direction of the lessor, this lease will become an LMU or part of an LMU, subject to the provisions set forth in the regulations.

The stipulations established in an LMU approval in effect at the time of LMU approval will supersede the relevant inconsistent terms of this lease so long as the lease remains committed to the LMU. If the LMU of which this lease is a part is dissolved, the lease will then be subject to the lease terms which would have been applied if the lease had not been included in an LMU.

(Continued on page 2)

Sec. 6. DOCUMENTS, EVIDENCE AND INSPECTION - At such times and in such form as lessor may prescribe, lessee must furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost.

Lessee must keep open at all reasonable times for the inspection by BLM the leased premises and all surface and underground improvements, works, machinery, ore stockpiles, equipment, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or under the leased lands.

Lessee must allow lessor access to and copying of documents reasonably necessary to verify lessee compliance with terms and conditions of the lease.

While this lease remains in effect, information obtained under this section will be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 7. DAMAGES TO PROPERTY AND CONDUCT OF OPERATIONS - Lessee must comply at its own expense with all reasonable orders of the Secretary, respecting diligent operations, prevention of waste, and protection of other resources.

Lessee must not conduct exploration operations, other than casual use, without an approved exploration plan. All exploration plans prior to the commencement of mining operations within an approved mining permit area must be submitted to the BLM.

Lessee must carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health, or property, and prevention of waste, damage or degradation to any land, air, water, cultural, biological, visual, and other resources, including mineral deposits and formations of mineral deposits not leased hereunder, and to other land uses or users. Lessee must take measures deemed necessary by lessor to accomplish the intent of this lease term. Such measures may include, but are not limited to, modification to proposed siting or design of facilities, timing of operations, and specification of interim and final reclamation procedures. Lessor reserves to itself the right to lease, sell, or otherwise dispose of the surface or other mineral deposits in the lands and the right to continue existing uses and to authorize future uses upon or in the leased lands, including issuing leases for mineral deposits not covered hereunder and approving easements or rights-of-way. Lessor must condition such uses to prevent unnecessary or unreasonable interference with rights of lessee as may be consistent with concepts of multiple use and multiple mineral development.

Sec. 8. PROTECTION OF DIVERSE INTERESTS, AND EQUAL OPPORTUNITY - Lessee must: pay when due all taxes legally assessed and levied under the laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; restrict the workday to not more than 8 hours in any one day for underground workers, except in emergencies; and take measures necessary to protect the health and safety of the public. No person under the age of 16 years should be employed in any mine below the surface. To the extent that laws of the State in which the lands are situated are more restrictive than the provisions in this paragraph, then the State laws apply.

Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither lessee nor lessee's subcontractors should maintain segregated facilities.

Sec. 9. (a) TRANSFERS -

This lease may be transferred in whole or in part to any person, association or corporation qualified to hold such lease interest.

This lease may be transferred in whole or in part to another public body or to a person who will mine coal on behalf of, and for the use of, the public body or to a person who for the limited purpose of creating a security interest in favor of a lender agrees to be obligated to mine the coal on behalf of the public body.

This lease may only be transferred in whole or in part to another small business qualified under 13 CFR 121.

Transfers of record title, working or royalty interest must be approved in accordance with the regulations.

(b) RELINQUISHMENT - The lessee may relinquish in writing at any time all rights under this lease or any portion thereof as provided in the regulations. Upon lessor's acceptance of the relinquishment, lessee will be relieved of all future obligations under the lease or the relinquished portion thereof, whichever is applicable.

Sec. 10. DELIVERY OF PREMISES, REMOVAL OF MACHINERY, EQUIPMENT, ETC. - At such time as all portions of this lease are returned to lessor, lessee must deliver up to lessor the land leased, underground timbering, and such other supports and structures necessary for the preservation of the mine workings on the leased premises or deposits and place all workings in condition for suspension or abandonment. Within 180 days thereof, lessee must remove from the premises all other structures, machinery, equipment, tools, and materials that it elects to or as required by the BLM. Any such structures, machinery, equipment, tools, and materials remaining on the leased lands beyond 180 days, or approved extension thereof, will become the property of the lessor, but lessee may either remove any or all such property or continue to be liable for the cost of removal and disposal in the amount actually incurred by the lessor. If the surface is owned by third parties, lessor will waive the requirement for removal, provided the third parties do not object to such waiver. Lessee must, prior to the termination of bond liability or at any other time when required and in accordance with all applicable laws and regulations, reclaim all lands the surface of which has been disturbed, dispose of all debris or solid waste, repair the offsite and onsite damage caused by lessee's activity or activities incidental thereto, and reclaim access roads or trails.

Sec. 11. PROCEEDINGS IN CASE OF DEFAULT - If lessee fails to comply with applicable laws, existing regulations, or the terms, conditions and stipulations of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease will be subject to cancellation by the lessor only by judicial proceedings. This provision will not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver will not prevent later cancellation for the same default occurring at any other time.

Sec. 12. HEIRS AND SUCCESSORS-IN-INTEREST - Each obligation of this lease will extend to and be binding upon, and every benefit hereof will inure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

Sec. 13. INDEMNIFICATION - Lessee must indemnify and hold harmless the United States from any and all claims arising out of the lessee's activities and operations under this lease.

Sec. 14. SPECIAL STATUTES - This lease is subject to the Clean Water Act (33 U.S.C. 1252 et seq.), the Clean Air Act (42 U.S.C. 4274 et seq.), and to all other applicable laws pertaining to exploration activities, mining operations and reclamation, including the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.).

Sec. 15. SPECIAL STIPULATIONS -

(Continued on page 3)

Sec. 15. SPECIAL STIPULATIONS (Cont'd.) -

THE UNITED STATES OF AMERICA

_____ (Company or Lessee Name)	By _____
_____ (Signature of Lessee)	_____ (BLM)
_____ (Title)	_____ (Title)
_____ (Date)	_____ (Date)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 4)

NOTICES

The Privacy Act and 43 CFR 2.48(d) require that you be furnished with the following information in connection with the information requested by this form.
AUTHORITY: 30 U.S.C. 181 - 287 and 30 U.S.C. 351 - 359 permit collection of the information requested by this form.
PRINCIPAL PURPOSE: The BLM will use the information you provide to process your application and determine if you are eligible to hold a coal lease on public lands.
ROUTINE USES: The BLM will only disclose this information in accordance with the provisions at 43 CFR 2.56(b) and (c).
EFFECT OF NOT PROVIDING INFORMATION: Submission of the requested information is necessary to obtain or retain a benefit. Failure to submit all of the requested information or to complete this form may result in delay or preclude the BLM's acceptance of your application for a coal lease.

The Paperwork Reduction Act requires us to inform you that:
The BLM collects this information to evaluate and authorize proposed exploration and mining operations on public lands.
Submission of the requested information is necessary to obtain or retain a benefit.
You do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: The public reporting burden for this form is estimated to average 25 hours per response when the form is used under the authority of 43 subpart 3422 (Lease Sales), or 800 hours per response when the form is used under the authority of 43 subpart 3430 (Preference Right Leases). The estimated burdens include the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. You may submit comments regarding the burden estimate or any other aspect of this form to: U.S. Department of the Interior, Bureau of Land Management (1004-0073), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, Mail Stop 401 LS, Washington, DC 20240.

APPENDIX 3

U.S. FISH AND WILDLIFE SERVICE
CONCURRENCE LETTER

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
5353 Yellowstone Road, Suite 308A
Cheyenne, Wyoming 82009

DEC 15 2010

In Reply Refer To:
ES-61411/WY1110018

Memorandum

To: District Manager, Solid Minerals, Bureau of Land Management, Wyoming High Plains District, Casper, Wyoming

From: Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office, Cheyenne, Wyoming

Subject: Concurrence for the North Hilight, South Hilight, and West Hilight Coal Lease-By-Application Tracts

Thank you for your letter and attached biological assessment for the North Hilight, South Hilight and West Hilight Coal Lease-By-Application (LBA) Tracts, dated October 13, 2010, received in our office October 14. Under the Bureau of Land Management's (Bureau) preferred alternative (Alternative 2) in the Wright Area Coal Lease Applications Final Environmental Impact Statement for the North Hilight, South Hilight, and West Hilight Field LBA Tracts (FEIS), the Bureau will hold a sealed-bid, competitive coal lease sale for the lands included in the above LBA tracts, and issue the leases to the successful bidder. The legal descriptions for the Bureau's preferred configuration (Alternative 2), for the North Hilight, South Hilight, and West Hilight LBA Tracts can be found in Appendix G, pages G-9, G-13, G-17 of the FEIS.

Your letter requested the U.S. Fish and Wildlife Service (Service) consider Appendix G of the FEIS and errata to serve as the biological assessment for the above three Federal actions. You have also requested the Service concur with the Bureau's determinations contained in your October 13, 2010, letter pursuant to section 7(a)(2) of the Endangered Species Act of 1973 (Act), as amended, 50 CFR § 402.13.

We were unable to complete this consultation until additional information was provided, which was received on November 22 and 25, 2010. That information consisted of the following:

1. An errata to the Wright Area Coal Lease Applications FEIS posted at http://www.blm.gov/wy/st/en/info/NEPA/HighPlains/Wright-Coal.html.

2. Threatened & Endangered Plant Species Survey Report for Thunder Basin Coal Company North Highlight LBA Tract, South Highlight LBA Tract, West Highlight LBA Tract, prepared by Scott Benson of Habitat Management Incorporated, November 8, 2010.

Based on the information provided in (1) the biological assessment (Appendix G of the Wright Area Coal Lease Applications FEIS and errata), (2) the conservation measures identified in Appendix D of the FEIS, and (3) the survey methods and results reported in the above referenced Threatened & Endangered Plant Species Survey Report, the Service concurs with the Bureau's determination that leasing the North Hilight, South Hilight, and West Hilight LBA tracts, may affect, but is not likely to adversely affect the Ute ladies'-tresses orchid (*Spiranthes diluvialis*). Appropriately timed surveys of all suitable habitat within the above LBA tracts conducted in 2008, 2009, and 2010 found no evidence of Ute ladies'-tresses orchids.

The Bureau has determined leasing the North Hilight, South Hilight, and West Hilight LBA tracts is not likely to jeopardize the continued existence of the mountain plover (*Charadrius montanus*). We encourage project planners to develop and implement protective measures should mountain plovers occur within project areas. Measures to protect the mountain plover from further decline may include: (1) avoidance of suitable habitat during the plover nesting season (April 10 through July 10), (2) prohibition of ground disturbing activities in prairie dog towns, and (3) prohibition of any permanent above ground structures that may provide perches for avian predators or deter plovers from using preferred habitat. Suitable habitat for nesting mountain plovers includes grasslands, mixed grassland areas and short-grass prairie, shrub-steppe, plains, alkali flats, agricultural lands, cultivated lands, sod farms, and prairie dog towns. We strongly encourage you to develop protective measures with an assurance of implementation should mountain plovers be found within the project areas.

The Bureau has determined that leasing the North Hilight, South Hilight, and West Hilight LBA tracts will have no effect to the black-footed ferret (*Mustela nigripes*) or blowout penstemon (*Penstemon haydenii*). When the Bureau makes a no effect determination, concurrence from the Service is not required although we do appreciate receiving the information used to make that determination.

This concludes informal consultation and coordination pursuant to the regulations implementing the Act. This project should be re-analyzed if new information reveals effects of the action that may affect listed species or designated or proposed critical habitat (1) in a manner or to an extent not considered in this letter, (2) if the action is subsequently modified in a manner that causes an effect to a listed species or designated or proposed critical habitat that was not considered in this letter, and/or (3) if a new species is listed or critical habitat is designated that may be affected by this project.

For our internal tracking purposes, the Service would appreciate notification of any decision made on this project (such as issuance of a permit or signing of a Record of Decision or Decision Memo). Notification can be sent in writing to the letterhead address or by electronic mail to FW6_Federal_Activities_Cheyenne@fws.gov.

Thank you for your efforts to ensure the conservation of threatened and endangered species in Wyoming. If you have any questions regarding this letter or your responsibilities under the Act, please contact Bradley Rogers at (307) 684-1046.

cc: BLM, Field Manager, Buffalo Field Office, Buffalo, WY, (D. Spencer)
BLM-State Office, T&E Coordinator, Cheyenne, WY (T. Abbott)
FWS, Federal Activities Specialist, Denver, CO (D. Carlson)
WGFD, Statewide Habitat Protection Coordinator, Cheyenne, WY (M. Flanderka)
WGFD, Non-Game Coordinator, Lander, WY (B. Oakleaf)

APPENDIX 4

APPEAL PROCEDURES

Form 1842-1
(September 2006)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS
1. This decision is adverse to you,
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

1. NOTICE OF APPEAL

A person who wishes to appeal to the Interior Board of Land Appeals must file in the office of the officer who made the decision (not the Interior Board of Land Appeals) a notice that he wishes to appeal. A person served with the decision being appealed must transmit the *Notice of Appeal* in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a *Notice of Appeal* in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).

2. WHERE TO FILE

NOTICE OF APPEAL.....
Bureau of Land Mangement, Wyoming High Plains District
2987 Prospector Drive, Casper, WY 82604

WITH COPY TO SOLICITOR...
U.S. Department of the Interior, Office of the Solicitor, Rocky Mountain Region
755 Parfet Street, Suite 151, Lakewood, CO 80215

3. STATEMENT OF REASONS

Within 30 days after filing the *Notice of Appeal*, file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the *Notice of Appeal*, no additional statement is necessary (43 CFR 4.412 and 4.413).

WITH COPY TO SOLICITOR.....
U.S. Department of the Interior, Office of the Solicitor, Rocky Mountain Region, 755 Parfet Street, #151, Lakewood, CO 80215

4. ADVERSE PARTIES.....

Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the *Notice of Appeal*, (b) the Statement of Reasons, and (c) any other documents filed (43 CFR 4.413).

5. PROOF OF SERVICE.....

Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (43 CFR 4.401(c)).

6. REQUEST FOR STAY.....

Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a *Notice of Appeal* (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your *Notice of Appeal* (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the *Notice of Appeal* and Petition for a Stay **must** also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay. Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay.

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that **all** communications are identified by serial number of the case being appealed.

NOTE: A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, Subpart B for general rules relating to procedures and practice involving appeals.

(Continued on page 2)

43 CFR SUBPART 1821--GENERAL INFORMATION

Sec. 1821.10 Where are BLM offices located? (a) In addition to the Headquarters Office in Washington, D.C. and seven national level support and service centers, BLM operates 12 State Offices each having several subsidiary offices called Field Offices. The addresses of the State Offices can be found in the most recent edition of 43 CFR 1821.10. The State Office geographical areas of jurisdiction are as follows:

STATE OFFICES AND AREAS OF JURISDICTION:

Alaska State Office ---------- Alaska
Arizona State Office --------- Arizona
California State Office ------- California
Colorado State Office -------- Colorado
Eastern States Office --------- Arkansas, Iowa, Louisiana, Minnesota, Missouri
and, all States east of the Mississippi River
Idaho State Office ------------ Idaho
Montana State Office --------- Montana, North Dakota and South Dakota
Nevada State Office ---------- Nevada
New Mexico State Office ---- New Mexico, Kansas, Oklahoma and Texas
Oregon State Office ---------- Oregon and Washington
Utah State Office ------------- Utah
Wyoming State Office -------- Wyoming and Nebraska

(b) A list of the names, addresses, and geographical areas of jurisdiction of all Field Offices of the Bureau of Land Management can be obtained at the above addresses or any office of the Bureau of Land Management, including the Washington Office, Bureau of Land Management, 1849 C Street, NW, Washington, DC 20240.

Exhibit 4

RECORD OF DECISION
Environmental Impact Statement for the South Porcupine Coal Lease Application
WYW176095



BLM

Wyoming State Office - High Plains District Office

August 2011

The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

BLM/WY/PL-11/039+1320

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECORD OF DECISION

SOUTH PORCUPINE LEASE BY APPLICATION
WYW176095
CAMPBELL COUNTY, WYOMING

INTRODUCTION

On September 29, 2006, BTU Western Resources, Inc. (BTU), a subsidiary of Peabody Energy Corporation (PEC), filed an application with the Bureau of Land Management (BLM) for Federal coal reserves in three maintenance tracts encompassing approximately 5,116.65 acres and 598 million tons of coal as estimated by the applicant. The tracts are located west, northwest, and north of and immediately adjacent to the North Antelope Rochelle Mine in Campbell County, Wyoming (Appendix 1, Figure 1). The mine is operated by Powder River Coal, LLC (PRC), a subsidiary of PEC. The application was made pursuant to the Leasing on Application regulations found in the Code of Federal Regulations at 43 CFR Subpart 3425.1.

On October 12, 2007, BTU filed a request with the BLM to modify its application and increase the lease area and coal volume to approximately 8,981.74 acres and 1,179.1 million tons of coal. BLM reviewed the modified tract configuration and notified the company that their application had been modified. BLM determined that the application would be processed as two separate maintenance tracts and, if decisions were made to lease the tracts, a separate competitive lease sale would be held for each tract. Located approximately 12 miles southeast of Wright, the two nominated tracts on the north side of the mine were combined and are referred to as the North Porcupine Lease By Application (LBA) tract with assigned case file number WYW173408. Located approximately 14 miles southeast of Wright, the remaining nominated tract on the west side of the mine is referred to as the South Porcupine LBA tract with assigned case file number WYW176095.

BTU has applied to lease Federal coal reserves in order to extend the life of the North Antelope Rochelle Mine. The BLM refers to these types of applications as maintenance tracts. A maintenance tract is a tract of Federal coal that is adjacent to, and can be mined by, an existing active coal mine. As applied for, the South Porcupine LBA tract includes a total of approximately 3,185.96 acres (Appendix 1, Figure 2). BTU estimates that, as applied for, the tract includes approximately 309.7 million tons of recoverable coal reserves in Campbell County, Wyoming.

The South Porcupine LBA tract was evaluated in the *Wright Area Coal Lease Applications Environmental Impact Statement* (EIS). The EIS analyzed the proposed leasing of six Federal coal tracts located in the Wright Area of the Wyoming portion of the Powder River Basin. The Proposed Action analyzed in the EIS is to hold one competitive sealed-bid lease sale and issue a lease for the Federal coal lands included in the South Porcupine LBA tract as applied for by BTU. The Proposed Action assumes that the applicant would be the successful bidder on the tract, and that the tract would be mined as a maintenance lease for the existing mine. According

to the applicant, the North Antelope Rochelle Mine needs the Federal coal included in the South Porcupine coal lease area in order to extend the life of the mine. The applicant would recover the Federal coal using the same methodology, machinery, and facilities that are currently being used to recover the coal in the existing North Antelope Rochelle Mine coal leases. If the lease for the South Porcupine LBA tract is acquired as it was applied for, PRC anticipates that it would extend the life of the North Antelope Rochelle Mine by approximately 3.3 years.

The North Antelope Rochelle Mine has a permit to conduct mining operations approved by the Wyoming Department of Environmental Quality Land Quality Division (WDEQ/LQD) and a Mineral Leasing Act (MLA) of 1920, as amended, mining plan approved by the Secretary of the Interior to conduct surface coal mining operations on their existing coal leases. The mine complies with the requirements of the Clean Air Act (CAA) through an air quality permit approved by the Air Quality Division of the Wyoming Department of Environmental Quality (WDEQ/AQD) which currently allows mining of up to 140 million tons of coal per year.

BLM administers the Federal Coal Leasing Program under the MLA as amended by the Federal Coal Leasing Amendments Act of 1976. If any proposed lease tract contains surface lands which are under the jurisdiction of any Federal agency other than the Department of Interior (USDI) or are occupied by a qualified surface owner, that agency or individual must consent to the issuance of the lease, and in the case of a Federal agency, may prescribe terms and conditions to be imposed on that lease (43 CFR 3400.3-1 and 3420.4-2). Within the selected configuration for the South Porcupine LBA tract, the private lands are currently owned by the following entities: Powder River Coal, LLC, West Roundup Resources, Inc., Bridle Bit Ranch Company, Jerry J. Dilts Family LP II, Barbara H. Dilts Living Trust, and Western Railroad Properties, Inc. Qualified surface owners include the Jerry J. Dilts Family LP II and Bridle Bit Ranch Company. For the lands described in the selected configuration for the South Porcupine tract, the BLM has received consent from the qualified surface owners.

The selected configuration for the South Porcupine tract (Appendix 1, Figure 3) also includes approximately 1,638 acres of National Forest System lands in the Thunder Basin National Grassland (TBNG) administered by the USDA-Forest Service (FS). As required by 43 CFR 3420.4-2, the FS has provided consent to BLM to lease the FS-administered lands that were included in the South Porcupine tract. The FS signed their Record of Decision on July 14, 2011. Their prescribed terms and conditions for the South Porcupine coal tract are included in Appendix 2. The FS ROD is subject to appeal under FS administrative procedures. In the event of a FS ROD appeal, BLM's decision would not be implemented until the FS appeal process is completed.

BACKGROUND

Lease by Application Process

In the Powder River Basin (PRB), maintenance tracts are generally nominated for leasing by companies operating adjacent existing mines. To process an LBA, the BLM must evaluate the quantity, quality, maximum economic recovery (MER), and fair market value (FMV) of the

Federal coal. The BLM must also evaluate the environmental and socioeconomic impacts of leasing and mining the Federal coal in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA). BLM prepared the Wright Area Coal EIS to evaluate and disclose potential impacts of leasing the Federal coal in six Wright Area coal tracts, including the South Porcupine tract. Although leasing the South Porcupine would not authorize mining operations on the tract, the EIS evaluates the potential impacts of mining the South Porcupine tract because mining is a logical consequence of issuing a lease for a maintenance tract of coal.

The Office of Surface Mining Reclamation and Enforcement (OSM) is a cooperating agency on the Wright Area EIS. OSM is the Federal agency with the primary responsibility to administer programs that regulate surface coal mining in accordance with Section 503 of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). OSM also recommends approval, approval with conditions, or disapproval of the MLA mining plan to the Assistant Secretary of the Interior, Lands and Minerals Management. The FS is a cooperating agency since a portion of the Wright Area proposed lands for leasing lie within the TBNG.

The WDEQ/LQD, WDEQ/AQD, Wyoming Department of Transportation (WYDOT), and the Converse County Board of Commissioners are also cooperating agencies on this EIS. WDEQ/LQD has a cooperative agreement with the Secretary of the Interior to regulate surface coal mining operations on Federal and non-Federal lands within the State of Wyoming. WDEQ/AQD regulates air borne emissions in Wyoming and administers the air quality standards developed by the Environmental Protection Agency (EPA). WYDOT's responsibilities include maintaining state roads and highways, planning and supervising road improvement work, and supporting airports and aviation in the state. The responsibilities of the Converse County Board of Commissioners include but are not limited to the management and oversight of county roads, facilities, and planning and zoning rules in the county.

By law and regulation, the LBA process is an open, public, competitive sealed-bid process. Bidding at any potential sale is not restricted to the applicant. In order for BLM to award and issue a coal lease, the highest bid received must meet or exceed fair market value of the coal as determined by BLM's economic evaluation.

BTU filed the LBA because the South Porcupine, as applied for, is adjacent to their existing approved mining operations at the North Antelope Rochelle Mine and the Federal coal can be mined using their existing mine facilities, equipment, and employees (Appendix 1, Figure 1). In the Wright Area Coal EIS, the alternatives that are analyzed in detail assume that the applicant would be the successful bidder if a competitive coal lease sale is held.

History of Coal Leasing Activity in the Wyoming Portion of the Decertified Powder River Coal Region

Since decertification of the Powder River Federal Coal Region in 1990, 20 Federal coal leases in Campbell and Converse counties, Wyoming, have been issued under the LBA process with competitive sealed-bid sales. These leases include approximately 49,172 acres and 5.793 billion

tons of mineable coal. Eighteen of these leases were issued to the following producing mines for the purpose of extending operations at those mines: Jacobs Ranch (2), Black Thunder (3), North Antelope Rochelle (4), Eagle Butte (2), Antelope (3), Buckskin (1), Cordero/Rojo (2), and the former North Rochelle (1).

The remaining two leases, the West Rocky Butte and the West Roundup, were issued to companies intending to open new mines. The West Rocky Butte lease was issued to Northwestern Resources Company in 1992. They planned to start a new mine to recover the coal included in the Rocky Butte and West Rocky Butte leases but the new mine was never developed. The Rocky Butte and West Rocky Butte leases are now held by Caballo Coal Company, a subsidiary of PEC, and are included in the Caballo Mine. The West Roundup lease was issued to West Roundup Resources, Inc., a subsidiary of PEC, and has been incorporated into the recently permitted School Creek Mine.

Pending Coal Leasing Applications and Other Proposed Projects in the Wyoming Powder River Basin

There are currently 12 Wyoming PRB maintenance coal lease applications being processed by BLM including the South Porcupine LBA tract and the recently completed West Antelope II, Caballo West, Belle Ayr North, South Hilight Field, and West Coal Creek LBA Records of Decision. As applied for, the pending coal lease applications comprise of approximately 34,571 acres and 3.722 billion tons of Federal coal (Appendix 1, Figure 1). The coal lease applications and applicant mines include the following: Belle Ayr North (*Belle Ayr Mine*), North Hilight Field (*Black Thunder Mine*), South Hilight Field (*Black Thunder Mine*), West Hilight Field (*Black Thunder Mine*), West Coal Creek (*Coal Creek Mine*), Caballo West (*Caballo Mine)*, Hay Creek II *(Buckskin Mine)*, West Jacobs Ranch *(Jacobs Ranch Mine)*, Maysdorf II *(Cordero Rojo Mine)*, South Porcupine *(North Antelope Rochelle Mine)*, North Porcupine *(North Antelope Rochelle Mine)*, and the West Antelope II (*Antelope Mine)*.

In addition to coal leasing and mining, oil and gas leasing and development have also occurred in the area. Both conventional and coalbed natural gas (CBNG) wells have been drilled in and around the North Antelope Rochelle Mine and the South Porcupine LBA. Conventional and CBNG resources are currently being recovered from Federal and private oil and gas leases in the application area. Federal oil and gas lease ownership in the South Porcupine LBA area is described in detail in the Final EIS. Federal oil and gas lessees and private interests identified by the applicant were included on the mailing list for the Wright Area Coal EIS.

The EIS discusses energy development in and around the South Porcupine LBA. The discussion includes a summary of the results of an analysis of the conventional oil and gas drilling that has occurred in the area, prepared by the BLM Wyoming Reservoir Management Group (WSO-RMG). The analysis found that three conventional oil and gas wells were permitted and drilled on lands included in the South Porcupine BLM study area. The conventional gas well is still producing and the two oil wells were plugged and abandoned.

The Wright Area Coal EIS includes a summary of the results of the BLM WSO-RMG analysis of the CBNG resources in the area. Most of the CBNG production in the area has occurred from the upper Fort Union Formation (Paleocene) Wyodak-Anderson coal seam, the same coal beds being mined by the surface coal operators. In the Wyoming portion of the PRB, CBNG has been produced from the Wyodak-Anderson zone since the late 1980s. According to data analyzed by the BLM WSO-RMG and the U.S. Geological Survey, measured gas content was minimal in all of the Wyodak-Anderson coal cores that were collected in the year 2000 at locations near the surface coal mines, indicating that the coal seams were already substantially depleted of CBNG in the vicinity of the mines. The EIS identifies 12 CBNG wells that have been drilled over time within the South Porcupine BLM study area. Ten of those wells have been producing, though at reduced levels as the original reserves have been depleted over the years. CBNG wells that continue to produce in advance of coal mining assist in removing any remaining methane in the coal seams.

Several mechanisms can be used to facilitate recovery of the conventional oil and gas and CBNG resources prior to mining if the Federal coal in the tract is leased:

- BLM will attach a Multiple Mineral Development stipulation in the Federal coal lease which states that BLM has the authority to withhold approval of coal mining operations that would interfere with the development of mineral leases that were issued prior to the South Porcupine coal tract being leased (Appendix 2).

- Conventional oil and gas wells must be abandoned while mining and reclamation operations are in progress. If the value of the remaining oil and gas reserves justifies the expense of reestablishing production, the wells could be recompleted or redrilled following mining.

- BLM has a policy in place regarding CBNG-coal development conflicts (BLM Washington Office Instruction Memorandum (IM) No. 2006-153). The IM directs BLM decision-makers to optimize the recovery of both CBNG and conventional resources and to ensure that the public receives a reasonable return. This policy offers royalty incentives to CBNG operators to accelerate production in order to recover the natural gas while simultaneously allowing uninterrupted coal mining operations. The IM also states that it is the policy of the BLM to encourage oil and gas and coal companies to resolve conflicts between themselves and, when requested, BLM will assist in facilitating agreements between the companies.

- Mining of the South Porcupine LBA tract would not be authorized until: 1) the coal lessee obtains a permit approved by the WDEQ/LQD to mine the tract, and 2) the MLA mining plan is approved by the Secretary of the Interior. Before the MLA mining plan can be approved, BLM must approve a Resource Recovery and Protection Plan (R2P2). Prior to approving the R2P2, BLM can review the status of CBNG and conventional oil and gas development on the tract and the mining sequence proposed by the coal lessee. Because the permit approval process generally takes the coal lessee several years to complete, CBNG resources on the tract could continue to be recovered during that time.

- Prior to mining the Federal coal, the coal lessee can negotiate an agreement with the oil, gas, and pipeline owners and operators regarding the removal of their existing facilities on the South Porcupine tract.

Other proposed projects in the Wyoming PRB that have advanced to the planning, permitting, or construction stages and that would reasonably be expected to be completed in the foreseeable future include: the Wygen III coal-fired power plant at the Black Hills Corporation energy complex near the Wyodak Mine site in Gillette, Wyoming (being constructed); the Dry Fork Station coal-fired power plant constructed by Basin Electric Power Cooperative near the Dry Fork Mine north of Gillette (being tested); the Two Elk coal-fired Unit 1 and Unit 2 power plants proposed by the North American Power Group (NAPG) which would be located east of the Black Thunder Mine; and a railroad line from the PRB to Minnesota proposed by the Dakota, Minnesota, and Eastern Railroad Corporation (DM&E). In September, 2007, Canadian Pacific Railway Ltd. announced acquisition of the DM&E and its subsidiaries. The transaction was reviewed and approved by the Surface Transportation Board in October, 2008.

In addition, several coal conversion projects have been proposed. Based on status and available information, only one, the KFx Coal Beneficiation Project, was considered to have a high enough likelihood of proceeding to include it in the PRB Coal Review. The KFx (now Evergreen Energy) coal beneficiation plant produced commercially viable product in 2007 until the plant was idled down in 2008. Since then, Evergreen Energy Inc. and its strategic partner, Bechtel Power Cooperation, decided to relocate operations to a different location.
The proposed power plants, the DM&E railroad line, coal conversion projects, and the ongoing and proposed oil, gas, and CBNG operations are separate projects being developed independently of leasing the South Porcupine tract. If these projects are developed as proposed and the South Porcupine area is leased and mined as proposed, there would potentially be some overlap between the environmental and socioeconomic impacts of constructing and operating some of the projects and the environmental and socioeconomic impacts of mining the South Porcupine tract. The cumulative effects of these projects are described in Chapter 4 of the *Wright Area Coal Lease Applications EIS*. The cumulative impact discussion in the EIS is based on analyses completed for the PRB Coal Review. The PRB Coal Review can be accessed at the following BLM website:
http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/prbdocs.html.

DECISION

As the BLM Wyoming High Plains District Manager, my decision is that it is in the public interest to offer the South Porcupine LBA tract as described below for competitive sale so that these reserves are available to compete for sale in the open coal market to meet the national coal demand that is expected to exist until at least 2035. The public interest is served by leasing the South Porcupine LBA tract because doing so provides a reliable, continuous supply of stable and affordable energy for consumers throughout the country. Developing this coal also helps reduce our nation's dependence on foreign energy supplies and provides significant socioeconomic benefits for the United States, Wyoming, and local communities.

Under this decision, Alternative 2 for the South Porcupine LBA tract has been selected from the *Wright Area Coal Lease Applications EIS*. Under Alternative 2, the Federal coal included in the South Porcupine LBA tract, as modified by BLM, will be offered for lease at a competitive sealed-bid sale. Under Alternative 2, the South Porcupine tract has been modified by BLM to include additional lands from the BLM study area. The tract includes 3,243.015 acres, more or less, and the BLM estimates that the tract contains approximately 401,830,508 tons of mineable Federal coal resources in Campbell County, Wyoming.

If the highest bid received at the sale meets or exceeds the FMV as determined by the BLM and if all other leasing requirements are met, a lease will be issued to the successful qualified high bidder. The competitive lease sale will be held as described in Federal regulations found at 43 CFR Subpart 3422, Lease Sales. In the event that the highest bid submitted at the competitive lease sale of the South Porcupine LBA tract does not meet or exceed the FMV as determined by BLM, the BLM may, but is not obligated to, re-offer the coal tract for leasing at a later date.

Under Alternative 2, it is assumed that the applicant would be the successful bidder on the South Porcupine LBA tract and that the Federal coal would be mined to extend the life of the adjacent North Antelope Rochelle Mine. The tract would be mined and reclaimed in a logical sequence in concert with ongoing mining and reclamation operations at the adjacent existing mine. This would be consistent with the analysis of the impacts described in the EIS.

This decision incorporates by reference the standard coal lease stipulations which address compliance with the basic requirements of the environmental statutes and additional BLM special stipulations (Appendix 2).

This decision is in conformance with the *Approved Resource Management Plan for Public Lands Administered by the BLM Buffalo Field Office (RMP),* which was completed in 2001 and amended in 2003. This decision is also in conformance with the USDA-FS *Land and Resource Management Plan for the Thunder Basin National Grassland* which was completed in 2001.

For FS-administered lands, consent decision authority has been delegated to the Forest Supervisor level on the Medicine Bow-Routt National Forests and Thunder Basin National Grassland. The South Porcupine LBA tract includes Federal coal lands located within the TBNG administered by FS. Therefore, FS must consent and prescribe terms and conditions in order for the tract to be leased. The FS provided BLM their consent to lease the lands in the South Porcupine LBA tract in the FS Record of Decision signed on July 14, 2011. The FS consent decision is conditioned on application of the Notice for Lands of the National Forest System under Jurisdiction of the Department of Agriculture (FS Notice) on the South Porcupine Federal coal lease tract (WYW176095), when and if the tract is leased (Appendix 2).

REASONS FOR DECISION

Denying this proposed coal leasing is not likely to affect current or future domestic coal consumption used for electric generation. Not offering the South Porcupine Federal coal tract

for lease is unlikely to affect changes in the national electric generation portfolio. The rationale for this conclusion is summarized below.

Various commenters on the Wright Area Coal EIS asserted that by not leasing this LBA, and, in a cumulative sense, by denying proposed coal leasing in the Wyoming portion of the PRB, BLM would slow global climate change and would push the national electric generation portfolio to contain only non-carbon fuel alternatives. BLM has thoroughly considered this comment in our decision.

BLM agrees that movement toward electric generation capacity not reliant on carbon fuels is positive. Carbon fuels are a finite resource and will likely become more costly and rare. Having more non-carbon instead of carbon-based electric generation would assist in decreasing human-caused greenhouse gas (GHG) emissions. Reducing human-caused GHG emissions would help to lessen any harmful effects that they may be causing to global climate.

BLM reviewed two independent studies that determined the ability of the domestic electric generation industry to alter the present portfolio (mix of electric generation technologies) corresponding to the time period that the South Porcupine reserves would be leased and produced. The first study was done by the Department of Energy (Annual Energy Outlook 2008 Report, Energy Information Administration, April 2008) and the second was by the domestic electric generation industry's research arm, the Electric Power Research Institute (Electricity Technology in a Carbon Constrained Future, authored by R. James, Carnegie-Mellon University, November 2007).

Both studies projected the electric generation portfolio to 2030 and both studies recognized the likelihood of carbon regulation. While there were differences in each study related to the mix of renewable sources, nuclear, and energy conservation, both studies were consistent in finding that coal-fired electric generation would represent 52-58 percent of the electric generation portfolio by 2030, as compared to the current 51 percent.

The Annual Energy Outlook 2010 Report (Energy Information Administration, December 2009) represents a forecast to the year 2035. This most recent report incorporates the 2009 downturn in electric demand which resulted from lower electric demand for manufacturing in the depressed domestic economy of 2009. This forecast lowered the percentage of coal-fired electric generation in the domestic electric generation portfolio to 44 percent by 2035, based on a slowing in electric demand through 2035, and a doubling, to 17 percent, of renewable electric generation in the domestic electric generation portfolio by 2035.

Based on these studies, even with a considerably more optimistic projection for renewable sources, coal use continues to be projected as the largest portion of the domestic electric fuel mix. As described in the Final EIS, the key determinant of energy consumption is population. As human population and activities have increased over time, coal and other carbon-based fuels have been utilized to provide for these additional energy demands. As directly stated by the Department of Interior Secretary Salazar, “The fact remains that oil and gas and coal are a very important part of our energy portfolio now and they will continue to be an important part of our

energy portfolio in the future . . . Fossil fuels and clean technology coal will have to be part of the mix if the U.S. is able to have enough energy in the future" (Great Plains Energy address, November 9, 2009).

Further, BLM disagrees with the comment that denying the proposed Federal coal leasing application would consequentially reduce the overall rate of national coal consumption by electric generators. Numerous mines located outside of the PRB extract and produce coal in the United States. In order to supply reliable power for the country's electrical demands, many mines outside of the PRB have the capacity to replace the coal production generated by the North Antelope Rochelle Mine.

The South Porcupine coal reserves, if leased and approved for mining, would allow the coal mining operator to continue to compete for coal sales in a diverse open supply and demand market. Denying this lease offer would not cease currently approved mining operations. Rather, a denial would require the mine to cease operations only after the current lease reserves were depleted. This would deny the mine operator the ability to compete with other operators in an open market for a future coal demand that is projected to continue until at least 2035. The inability of the North Antelope Rochelle Mine, or any other existing PRB producer, to offer reserves in the coal market would not cause electric generators to stop burning coal. Utility companies will likely operate existing coal-burning facilities until either cost or regulatory requirements render them ineffective or they are replaced by other reliable large scale capacity electric generation technologies capable of consistently supporting the bulk electrical demands of the United States' people.

The effect of rejecting the South Porcupine LBA would be that the existing mine would cease operations after the current reserves are depleted (approximately 9.9 years), and the North Antelope Rochelle Mine would not be competitive in the national coal market to meet the future coal demand in the U.S. that is expected to last until at least 2035. Other national coal producers have the capacity to produce coal and replace the production from this existing mine.

Lastly, PRB coal has competed for an increasing share of coal sales in the market primarily because it is lower cost, environmentally compliant, and successful post-mining reclamation has been thoroughly demonstrated. For these reasons, over the past several decades, PRB coal has been replacing other domestic coals in the open market, and would be expected to compete similarly in the future.

Cumulatively, the effect of rejecting the coal leasing proposed throughout the PRB would be that many of the existing mines would cease operations once current reserves are depleted (ranging from 7 to 15 years). Those mines would then not be able to compete with other mines to meet the future coal demand that is expected to last until at least 2035. When current reserves are depleted at these mines, their production would likely be replaced by other domestic and, potentially, international coal producers with coal that is more costly, less environmentally compliant, and has greater residual environmental impact.

Many other factors including but not limited to those listed below were considered in the decision to lease the South Porcupine LBA tract:

- The Federal Coal Program encourages the development of domestic coal reserves and the reduction of the United States' dependence on foreign sources of energy. BLM recognizes that coal extraction is currently necessary in order to meet the nation's energy needs. A primary goal of the National Energy Policy is to add energy supplies from diverse sources including domestic oil, gas, and coal. Private development of Federal coal reserves is integral to the BLM Coal Leasing Program under the authorities of the Mineral Leasing Act of 1920, the Federal Land Policy and Management Act of 1976 (FLPMA), and the Federal Coal Leasing Amendments Act of 1976 (FCLAA).

- BTU Western Resources, Inc. applied for the South Porcupine LBA coal tract in order to extend the life of the North Antelope Rochelle Mine. The tract, if leased and sold, would allow the mine to acquire access to a continuing supply of low sulfur compliance coal that would be sold to power plants for generating electricity. Continued leasing of low sulfur PRB coal assists coal-fired power plants in meeting the Clean Air Act requirements without constructing new power plants or revamping existing plants. Generally, the expenses associated with constructing new power plants, retrofitting or revamping existing plants, or substituting alternative fuels would increase overall energy costs to customers and consumers.

- The leasing and subsequent mining of Federal coal reserves provides the United States, the State of Wyoming, and its affected counties with income in the form of lease bonus payments, lease royalty payments, and tax payments. Production of Federal coal also provides the public with a supply of cost-efficient, low sulfur coal for power generation. The Governor of Wyoming and other state and local officials support Federal coal leasing.

- The BLM is the lead agency responsible for leasing Federal coal lands under the MLA as amended. When an application to lease Federal coal is submitted, the BLM is obligated to respond to the application in a timely manner. In order to process an LBA, BLM must fulfill the requirements of NEPA by preparing environmental analyses. In this case, an EIS was prepared to provide agency decision-makers and the public with a complete and objective evaluation of the environmental impacts of leasing and mining the Federal coal. BLM then makes a decision on whether or not to offer the Federal coal for lease. In either case, BLM must notify the applicant in a timely fashion of its decision.

- Offering the South Porcupine LBA tract (totaling 3,243.015 acres containing approximately 401,830,508 tons of mineable Federal coal reserves as estimated by the BLM) is responsive to the coal lease application received on September 29, 2006.

- The decision to offer the South Porcupine coal tract for leasing is in conformance with the BLM land use plan decisions covering this area (see section entitled "Conformance with Existing Land Use Plans").

- The *Wright Area Coal Lease Applications EIS* was prepared in response to applications BLM received to lease tracts of Federal coal adjacent to existing mines in Wyoming. The environmental impacts of this decision were fully disclosed in the EIS. Public comments were addressed throughout the NEPA process.

- The BLM's selected tract configuration under Alternative 2, as modified and described in this decision, provides for maximum economic recovery of the coal resource.

- The U.S. Fish and Wildlife Service has provided written concurrence for leasing the South Porcupine coal tract pursuant to Section 7(a)(2) of the Endangered Species Act of 1973, as amended (Appendix 3). Multiple surveys have been conducted for Ute ladies'-tresses during the known flowering periods. No sage-grouse leks have been documented within the South Porcupine's general analysis area. The South Porcupine tract is located outside of the Governor of Wyoming's statewide designated greater sage-grouse core area. No prairie dog colonies are located within the South Porcupine tract. Two nests located within the South Porcupine tract have been utilized by multiple raptor species with intermittent use by golden eagles. Twenty-three bird species on the "Coal Mine List of 40 Migratory Bird Species of Management Concern in Wyoming" have historically been observed at least once in the Wright EIS general analysis area. Wildlife mitigation measures will be prescribed in concert with USFWS during the permit for mining process of the South Porcupine LBA.

- Consultation with the appropriate Native American tribes was initiated by the BLM Wyoming State Office on May 29, 2008. No tribes indicated concerns with the disturbance of cultural sites in the South Porcupine general analysis area.

- Twenty-two archaeological sites have been identified within the South Porcupine general analysis area. One site has previously been determined NRHP eligible (48CA132). The other 21 sites have been determined to be not eligible to the NRHP (48CA694, 48CA949, 48CA1276, 48CA1623, 48CA2867, 48CA2789, 48CA2790, 48CA2793, 48CA2868, 48CA2869, 48CA3100, 48CA3101, 48CA3582, 48CA3583, 48CA3585, 48CA3586, 48CA4785, 48CA5011, 48CA5012, 48CA5013, and 48CA5014).

- The BLM consulted SHPO in relation to determinations of eligibility and impacts for these sites and has determined that leasing the coal would result in an adverse effect to site 48CA132. However, adverse impacts to 48CA132 have been mitigated by a previously approved adjoining lease action. Therefore, no further consultation or resolution of adverse effects is required. On March 1, 2011, BLM notified SHPO that the undertaking will result in an adverse effect to historic properties. Any further National Historic Preservation Act mitigation consultation with the Wyoming State Historic Preservation Office will be completed as required during the mine permitting process by OSM and WDEQ prior to any surface disturbance of the tract.

- Issuing a Federal coal lease for the South Porcupine tract would not result in the creation of new sources of human-caused GHG or mercury emissions. The North Antelope

Rochelle Mine would produce the South Porcupine coal at currently permitted levels using existing production and transportation facilities. If the South Porcupine tract is leased and mined, site-specific GHG emission rates from the North Antelope Rochelle Mine are anticipated to increase slightly compared to current emission rates due to increased strip ratios and added hauling distances.

- If the coal reserves contained within the South Porcupine tract are leased and mined at the currently permitted levels and the coal is used to generate electricity by coal-fired power plants, the emissions of GHG and mercury attributable to the coal produced at the North Antelope Rochelle Mine would be extended for approximately 3.6 years. The rate of human-caused CO_2 and mercury emissions would depend upon the permitted levels at the coal combustion facilities where the coal is burned and the potential emission limits that may be applied to those facilities in the future by regulation or legislation.

- The potential for regulation of GHG emissions as an air pollutant is recognized in this decision. Should such regulation be put in place, there may be an effect on coal demand, depending on how the regulatory actions affect the demand for electric power and the mix of methods used to produce electricity. Effects to coal demand would be reflected through the coal market, coal pricing, and supply. If demand decreases, it is expected that less efficient coal producers, or those with reserves having less desirable coal characteristics, may lose customers. Based on review of past performance, North Antelope Rochelle Mine has competed very well in the national coal market.

PUBLIC INVOLVEMENT

BLM received the Porcupine coal lease application on September 29, 2006. BLM announced the receipt of the LBA and published a Notice of Public Meeting in the Federal Register on December 12, 2006. At the public meeting held in Casper, Wyoming on January 18, 2007, the Powder River Regional Coal Team (PRRCT) reviewed the Porcupine coal lease application and BTU presented information about their existing mine and the pending lease application. The PRRCT recommended that BLM process the application. On March 14, 2007, BLM notified the Governor of Wyoming that BTU had made application for the North and South Porcupine Federal coal lands.

BLM published a Notice of Intent to Prepare an EIS and Notice of Public Meeting in the Federal Register on July 3, 2007, in the Gillette News-Record on July 6, 2007, and in the Douglas Budget on July 11, 2007. Scoping notices were also mailed to Federal, state, and local government agencies, conservation groups, commodity groups, and individuals who could be impacted by this LBA. BLM and the applicant jointly developed the distribution list. On July 24, 2007, a public scoping meeting was held in Gillette, Wyoming. The scoping period extended from July 3 through September 3, 2007, during which time BLM received nine comment letters.

A notice announcing the availability of the *Wright Area Coal Lease Applications Draft EIS* was published in the Federal Register by the EPA on June 26, 2009. Parties on the distribution list were sent copies of the Draft EIS at that time. A 60-day comment period on the Draft EIS

commenced with publication of the EPA's Notice of Availability and ended on August 25, 2009. The BLM published a Notice of Availability/Notice of Public Hearing for the Draft EIS in the Federal Register on July 8, 2009. The BLM's Federal Register notice announced the date and time of the formal public hearing, which was held on July 29, 2009, in Gillette, Wyoming. The purpose of the public hearing was to solicit public comment on the Draft EIS, fair market value, maximum economic recovery, and the proposed competitive sale of Federal coal from the Wright Area LBAs. BLM also published a Notice of Public Hearing in both the Douglas Budget and Gillette News-Record newspapers on July 8, 2009. Two individuals presented statements on the Draft EIS during the hearing. BLM received written comments from 17 individuals, agencies, businesses, and organizations as well as over 500 comment e-mails from other interested parties. Comments that BLM received on the Draft EIS and how BLM considered these comments during the preparation of the Final EIS were included in Appendix I of the Final EIS. Written comments and the transcript of the formal public hearing are also available for review at the BLM Wyoming High Plains District Office in Casper.

A notice announcing the availability of the *Wright Area Coal Lease Applications Final EIS* was published in the Federal Register by the EPA on July 30, 2010. Parties on the distribution list were sent copies of the Final EIS at that time. The comment period for the Final EIS ended on August 30, 2010. As explained on the first page of the Final EIS, the public review period was open for 30 days after EPA's Notice of Availability published in the Federal Register.

BLM received written comments on the Final EIS from Michael J. Strawn, Powder River Basin Resource Council/Sierra Club/Center for Biological Diversity, Leslie Glustrom, WildEarth Guardians/Sierra Club/Defenders of Wildlife, Dorsey & Whitney LLP/Ark Land Company, and the Campbell County Board of Commissioners. BLM has reviewed, evaluated, and considered these comments. The comment letters and BLM's responses are available at http://www.blm.gov/wy/st/en/info/NEPA/HighPlains/Wright-Coal.html. All comments that were received in a timely manner were considered in the preparation of this Record of Decision (ROD).

SUMMARY OF THE PROPOSED ACTION AND ALTERNATIVES

The EIS analyzed the proposed action and two alternatives in detail for the South Porcupine LBA tract. Chapter 2 of the EIS contains a full description of each. Summarized descriptions are presented below.

Proposed Action: Hold a competitive lease sale for the Federal coal lands as applied for and issue a maintenance lease to the successful bidder.

Under the Proposed Action, the as applied for lands in the South Porcupine application as submitted by BTU, would have been offered for lease at a competitive sealed-bid sale. As applied for, the tract included approximately 3,185.96 acres (Appendix 1, Figure 2). The applicant estimated that the lands contained approximately 422.2 million tons of in-place Federal coal. This alternative assumed that the applicant would be the successful bidder and that the coal would be mined, processed, and sold by the North Antelope Rochelle Mine.

Alternative 1 (Environmentally Preferable Alternative): Reject the application.

Under this alternative, BTU's application to lease the Federal coal lands included in the South Porcupine LBA tract would be rejected and the tract would not be offered for competitive sale at this time. This is the No Action Alternative.

The applicant is presently mining existing leases that were previously acquired. Previously approved and permitted mining activity at the adjacent North Antelope Rochelle Mine would continue with or without leasing the South Porcupine LBA tract. Assuming that the South Porcupine LBA tract would never be leased and coal removal and the associated disturbance would never occur, this alternative would be the environmentally preferable alternative. However, selection of this alternative would not preclude future applications to lease all or part of the Federal coal included in the South Porcupine LBA tract.

Rejection of the application would not cause mining operations to immediately cease at the North Antelope Rochelle Mine, nor would it immediately reduce production from this mine. Coal is mined in 27 states and is mostly used for generating electricity to support the country's demand for energy. If the South Porcupine application was rejected and, in the long term, the North Antelope Rochelle Mine was to close, other regional and national mining companies would replace the coal production that would have been lost due to the North Antelope Rochelle Mine's closure.

Alternative 2 (Selected Alternative): Reconfigure the tract and hold one competitive sale for Federal coal lands in the tract as modified by BLM and issue a lease to the successful bidder.

Along with the Federal coal lands that were applied for by BTU, BLM identified and evaluated an additional area comprised of approximately 382.07 acres of unleased Federal coal adjacent to the western edge of the application lands (Appendix 1, Figure 2). These additional lands and the as applied for tract were referred to as the BLM study area. The study area enabled BLM to evaluate and explore the potential of increasing competitive interest in the tract, allowing for more efficient recovery of Federal coal in the area, and reducing the likelihood of bypassed Federal coal.

After analyzing the additional lands included in the BLM study area for the South Porcupine, BLM selected the tract configuration as described below. BLM's selected tract configuration includes approximately 57.065 acres of additional lands from the BLM study area. The final configuration (Appendix 1, Figure 3) was selected because it allows for more efficient recovery of the Federal coal and increases competitive interest in the tract. Under the selected configuration, the South Porcupine tract includes approximately 3,243.015 acres and BLM estimates that it contains approximately 401,830,508 tons of mineable Federal coal resources.

The legal description of the lands to be offered for competitive lease sale under Alternative 2, BLM's selected tract configuration, for the South Porcupine tract is as follows:

South Porcupine Tract (WYW176095):

T.41N., R.70W., 6th P.M., Campbell County, Wyoming	
Section 7: Lots 7 through 10, 15 through 18;	320.94 acres
Section 18: Lots 6 through 11, 14 through 19;	479.71 acres
T.41N., R.71W., 6th P.M., Campbell County, Wyoming	
Section 1: Lots 5 through 20;	638.15 acres
Section 12: Lots 1 through 16;	678.52 acres
Section 13: Lots 1 through 16;	668.93 acres
Section 14: Lots 1, 2, 7 ($E^1/_2$), 8, 9, 16;	211.685 acres
Section 23: Lots 1, 8 ($N^1/_2$);	59.805 acres
Section 24: Lots 2 through 4, 5 ($N^1/_2$), 6 ($N^1/_2$), 7 ($N^1/_2$).	185.275 acres
South Porcupine Tract Total:	3,243.015 acres

The land descriptions and acreages are based on the BLM Status of Public Domain Land and Mineral Titles Approved Master Title Plats as of September 6, 2007 and Coal Plats as of September 6, 2007. The coal estate in the tract described above is Federally-owned. Surface ownership consists of privately owned lands and Federal lands administered by the USDA-Forest Service (FS). The selected configuration for the South Porcupine tract (Appendix 1, Figure 3) includes approximately 1,638 acres of National Forest System lands in the Thunder Basin National Grassland (TBNG) administered by the FS.

ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

Further descriptions of these alternatives may be found in Chapter 2 of the Final EIS.

New Mine Start

Under this alternative, as under the Proposed Action, Alternative 1, and Alternative 2, BLM would have held a competitive coal lease sale and issued a lease for the lands included in the South Porcupine tract. This alternative assumed, however, that the successful qualified bidder would have been someone other than the applicant and that this bidder would have planned to open a new mine to develop the Federal coal resources. In BLM's current estimation, for a new mine to open in the Wyoming PRB, the first lease would need to contain approximately 500 to 600 million tons of coal.

This alternative was considered but was not analyzed in detail because it was unlikely that a new mine would start up solely using this lease tract. The total amount of coal included in this tract is not sufficient to consider opening a new mine. A new mine would also create a new source of air quality impacts. The potential difficulty in obtaining an air quality permit is another issue that could discourage new mine starts in the PRB.

Delaying the Sale

Under this alternative, the BLM would have delayed the sale of the South Porcupine tract as applied for. This alternative assumed that the tract could be developed later as either a maintenance tract or a new mine start, depending on how long the sale would have been delayed. The environmental impacts of mining this Federal coal at a later time as a maintenance tract would be expected to be similar to the Proposed Action and Alternative 2. If a new mine start was required to mine the coal in this tract, the environmental impacts would be expected to be greater than if it were mined as an extension of an existing mine.

In general, delaying the sale may have allowed CBNG resources in the Wright general analysis area to be more completely recovered prior to mining. If market prices increased in the future, bonus and royalty payments to the government would have been higher if the tract was offered for sale at a later date.

This alternative was considered but was not analyzed in detail because it would not produce substantially different impacts than other alternatives that were analyzed in detail. First, rental and royalty provisions in the proposed lease provide for the United States to benefit if coal prices increase by the time of mining. Royalty and tax payments are collected at the time the coal is sold. They increase as coal prices increase, which allows the United States to benefit if coal prices have increased by the time of mining. Second, as described in Chapter 2 of the EIS, several mechanisms are already in place to facilitate continued CBNG recovery prior to mining the lands included in the Wright general analysis area.

CONFORMANCE WITH EXISTING LAND USE PLANS

Under the requirements of FCLAA, lands that are being considered for Federal coal leasing must be included in a comprehensive land use plan and leasing decisions must be compatible with that plan. The *Approved Resource Management Plan (RMP) for Public Lands Administered by the Bureau of Land Management Buffalo Field Office*, completed in 2001 and amended in 2003, governs and addresses the leasing of Federal coal in Campbell County. The USDA-FS *Land and Resource Management Plan for the Thunder Basin National Grassland (TBNG), Medicine Bow-Routt National Forest, Rocky Mountain Region*, completed in 2001, guides resource management activities on the TBNG.

The major land use planning decision that BLM must make concerning Federal coal resources is a determination of which Federal coal lands are acceptable for further consideration for leasing. There are four coal screening procedures that BLM uses to identify these coal lands. The screening procedures require BLM to: 1) estimate development potential of the coal lands, 2) apply the unsuitability criteria listed in the regulations at 43 CFR 3461, 3) make multiple land use decisions that eliminate Federal coal deposits from consideration for leasing to protect other resource values, and 4) consult with surface owners who meet the criteria defined in the regulations at 43 CFR 3400.0-5 (gg) (1) and (2). The coal screens were developed for Federal decision-making and are utilized in environmental analyses associated with BLM RMPs, EISs, USDA-FS TBNG planning documents, evaluations, and other resource management activities.

Under the first coal screening procedure, a coal tract must be located within an area that has been determined to have coal development potential in order to receive further consideration for leasing [43 CFR 3420.1-4(e)(1)]. The South Porcupine tract is within the area identified by BLM as having coal development potential.

The second coal screening procedure requires the application of the coal mining unsuitability criteria which are listed in the Federal coal management regulations at 43 CFR 3461. These criteria have been applied to high to moderate coal development potential lands in the Wyoming PRB, including the South Porcupine tract and surrounding lands.

Biological surveys have been conducted throughout the South Porcupine general analysis area. The USFWS has provided written concurrence for leasing the South Porcupine LBA tract pursuant to Section 7(a)(2) of the Endangered Species Act of 1973, as amended (Appendix 3). In coordination with WDEQ, the USFWS will develop and prescribe wildlife mitigation measures as a component of the mining permit authorization process.

A portion of the Burlington Northern Santa Fe & Union Pacific (BNSF & UP) railroad right-of-way (ROW) lies west of and adjacent to the South Porcupine tract. Lands within the rail line right-of-way (ROW) and associated 100-foot buffer zone were found to be unsuitable for mining under Unsuitability Criterion 2. Although the lands within the railroad ROW and buffer zone have been determined to be unsuitable for mining, they are included in the tract lease to allow for efficient recovery of all mineable coal adjacent to and outside of the ROW and its associated buffer zone. This determination also complies with coal leasing regulations which do not allow leasing in less than 10-acre aliquot parts. The lease will include a stipulation stating that no mining activity may be conducted in the portion of the lease within the railroad ROW or associated 100-foot buffer zone. This stipulation honors the finding of unsuitability for mining under Criterion 2.

Unsuitability Criterion Number 3 states that lands within 100 feet of the outside line of the ROW of a public road shall be considered unsuitable for surface coal mining. SMCRA Section 522(e)(4) and 30 CFR 761.11(d) prohibit surface mining operations on lands within 100 feet of the outside line of the ROW for a public road. A portion of the ROW of Antelope Road (Campbell County Road 4) is located within BLM's selected configuration for the South Porcupine tract (Appendix 1, Figure 3). BLM has determined that the portion of the South Porcupine tract that includes part of Antelope Road, its ROW, and the 100-foot buffer zone on both sides of the ROW must be considered unsuitable for mining at this time under Criterion Number 3.

There is an exception to the public road ROW prohibition in the regulations at SMCRA Section 522(e)(4) and 30 CFR 761.11(d) which can be applied if the appropriate road authority (Campbell County Board of Commissioners) allows the road to be relocated or closed. Surface coal mining could potentially occur within a public road ROW and buffer zone if the regulatory authority, or the appropriate public road authority designated by the regulatory authority, allows the public road to be relocated or closed after providing public notice and opportunity for a

public hearing. A finding must be reached, and stated in writing, that the interests of the affected public and landowners will be protected [30 CFR 761.11(d) and 43 CFR 3461.5(c)(iii)].

PRC obtained approval from the Campbell County Board of Commissioners to close and relocate approximately 1.25 miles of the northern portion of the Antelope Road that crosses the South Porcupine tract (T41N, R71W, between sections 1 and 2; 11 and 12). PRC plans to submit a request to the Campbell County Board of Commissioners for approval to close and relocate the remaining length of the southern portion of Antelope Road (approximately 2.25 miles) that crosses the South Porcupine tract in order to recover the coal reserves underlying the existing Antelope Road ROW.

If PRC obtains approval to close and relocate the portion of Antelope Road that crosses the South Porcupine tract, the exception to the prohibition on mining within the public road ROW and associated buffer zone could be applied and the unsuitability determination could be reconsidered. If the relocation or closure of the road is approved, PRC could recover the coal underlying the 2.25-mile section of the Antelope Road ROW and buffer zone as well as the northern 1.25-mile portion of Antelope Road that has already been approved for closure and relocation. If PRC does not obtain approval to relocate or close Antelope Road, the coal underlying the ROW and buffer zone would remain unsuitable for mining, without recovery.

Although a portion of the lands within the Antelope Road ROW and buffer zone have been determined to be unsuitable for mining, they are included in the tract lease to allow for efficient recovery of all mineable coal adjacent to and outside of the ROW and buffer zone. This determination also complies with coal leasing regulations which do not allow leasing in less than 10-acre aliquot parts. The lease will include a stipulation stating that no mining activity may be conducted in the Antelope Road ROW and its associated 100-foot buffer zone unless a permit to close or relocate the road is approved by the Campbell County Board of Commissioners. This stipulation honors the finding of unsuitability for mining under Criterion 3.

No other lands included in the South Porcupine tract were found to be unsuitable for mining during the application of the unsuitability criteria for BLM's 2001 Buffalo RMP update. Site-specific unsuitability determinations for some criteria were deferred until an application to lease was filed. These findings are included in Appendix B of the Wright Area Coal Final EIS.

The third coal screening procedure, a multiple land use conflict analysis, must be completed to identify and "eliminate additional coal deposits from further consideration for leasing to protect resource values of a locally important or unique nature not included in the unsuitability criteria," in accordance with 43 CFR 3420.1-4(e)(3). The 2001 Buffalo RMP update addresses two types of multiple land use conflicts: municipal/residential conflicts and multiple mineral development (coal versus oil and gas) conflicts.

The municipal/residential multiple land use conflict was addressed by applying buffers around the municipal planning boundaries for the major municipalities within the BLM Buffalo Field Office area including Gillette and Wright. BLM's selected South Porcupine tract configuration does not extend into any of the municipal buffer zones.

BLM's evaluation of the multiple mineral development conflicts related to issuing a lease for the South Porcupine tract is discussed above in the "Pending Coal Leasing Applications and Other Proposed Projects in the Wyoming Powder River Basin" section of this record of decision.

The fourth coal screening procedure requires consultation with surface owners who meet the criteria defined in the regulations at 43 CFR 3400.0-5(gg)(1) and (2). Under BLM's selected alternative, surface ownership consists of privately owned lands and Federal lands administered by the USDA-FS. If private surface owners are determined to be qualified under this CFR citation, then qualified surface owner consent is required before those lands can be included in a Federal coal lease. The Jerry J. Dilts Family LP II and Bridle Bit Ranch Company have been determined to be qualified surface owners. For the lands described in the selected configuration for the South Porcupine tract, the BLM has received consent from the qualified surface owners.

In summary, the lands in the South Porcupine coal tract have been subjected to the four coal planning screens and are determined to be acceptable for further consideration for leasing. Thus, a decision to lease the South Porcupine Federal coal lands is in conformance with the current BLM Buffalo RMP and the Thunder Basin National Grassland LRMP.

MITIGATION, COMPLIANCE, AND MONITORING

If the South Porcupine tract is leased, the lease will contain standard coal lease stipulations and also BLM Special Stipulations. BLM has applied special stipulations (Appendix 2) to avoid environmental damage or mitigate potential conflicts affiliated with cultural resources, paleontological resources, threatened and endangered species, multiple mineral development of oil and/or gas and coal resources, resource recovery and protection, and/or public land survey. Special coal lease stipulations were identified in Appendix D of the Final EIS. The final special stipulations are attached (Appendix 2) to this decision and will become part of the Federal coal lease records and pertain to all lands as described in the Federal coal lease tract.

After Federal coal leases are issued, SMCRA gives the OSM authority to administer programs that regulate surface coal mining operations. The WDEQ regulates surface coal mining activities in Wyoming. If BTU is the successful, qualified high bidder for the Federal coal included in the South Porcupine coal tract, a permit revision must then be approved by the WDEQ/LQD. An MLA mining plan revision must also be approved by the Assistant Secretary of the Interior before the coal in the tract could be mined. The existing mitigation measures specific to the currently approved mine plan for the adjacent mine would then be revised to include the new mitigation measures specific to the South Porcupine tract. The mining permit would be amended to include the new mitigation requirements.

If the successful bidder on the South Porcupine coal lease sale does not currently operate a mine that is adjacent to WYW176095, then the bidder would likely propose to construct a new mine in order to recover these Federal coal reserves. Because this would be a new mine start, the proponent would then submit a new permit application package to WDEQ/LQD for approval. A new MLA mining plan would also need to be submitted and approved by the Assistant Secretary

of the Interior before the tract could be mined. The approved permit would include mitigation measures and monitoring plans specific to mining the newly leased tract.

Prior to mining a coal lease area, the lease must be permitted for mining by OSM and WDEQ. If a lease is permitted for mining, additional conditions and stipulations may be assigned by OSM and WDEQ. Please see Section 1.3 of the Final EIS for additional information regarding regulatory authority and responsibility in relation to coal mining in Wyoming.

To ensure that the revised plan is in compliance with the leasing stipulations, BLM has a responsibility to review the R2P2 prior to approval of the mining plan. Before any mining operations can begin on the South Porcupine tract (WYW176095), the appropriate R2P2 must be approved by the BLM, a permit or permit revision must be approved by WDEQ/LQD, and an MLA mining plan or plan revision must be approved by the Assistant Secretary of the Interior.

RECOMMENDATION

I recommend that, after a competitive lease sale is held, Federal coal tract WYW176095, with its associated 3,243 acres more or less, be issued to the successful, qualified high bidder, provided it is determined that the highest bid at the sale meets or exceeds the FMV of the tract as determined by the BLM and that all other leasing requirements are met.

This is Alternative 2 for the South Porcupine LBA coal tract, as modified by BLM, and as described in this record of decision. The competitive lease sale will be held in accordance with the requirements at 43 CFR Subpart 3422. The lease will be subject to the attached BLM special lease stipulations (Appendix 2).

Assistant District Manager for Solid Minerals
Wyoming High Plains District Office

8/10/2011
Date

APPROVAL

I agree with the recommendation of the Assistant District Manager for Solid Minerals, and I approve the decision to offer Federal coal tract WYW176095 for competitive lease sale.

Stephanie Connally
BLM Wyoming High Plains District Manager

Aug. 10, 2011
Date

APPEAL OF DISTRICT MANAGER DECISION

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR Subpart 4 and the enclosed form 1842-1 (Appendix 4). If an appeal is filed, your notice of appeal must be filed in this office (BLM Wyoming High Plains District Office, 2987 Prospecter Drive, Casper, WY 82604) within thirty (30) days from the date BLM published the Notice of Availability (NOA) of this Record of Decision in the Federal Register. The appellant has the burden of showing that the decision appealed is in error.

If you wish to file a petition (request) pursuant to regulations 43 CFR 4.21(a)(2) for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standard for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1) The relative harm to the parties if a stay is granted or denied;
2) The likelihood of the appellant's success on the merits;
3) The likelihood of the immediate and irreparable harm if the stay is not granted; and,
4) Whether the public interest favors granting a stay.

Appendix 1. Figures 1, 2, and 3

Appendix 2. BLM Special Coal Lease Stipulations (WYW176095), Notice for Lands of the National Forest System under Jurisdiction of the Department of Agriculture (WYW176095), and BLM Coal Lease Form 3400-12

Appendix 3. U.S. Fish and Wildlife Service Concurrence Letter

Appendix 4. Appeal Procedures

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Appendix
1. Delegations of Authority Index

.01 Purpose. This Section Provides:

A. BLM Policy for Delegation of Authority.

B. Criteria for Determining Appropriate Level of Delegations of Authority.

C. Procedures for Re-delegating Authorities.

D. Procedures for Revoking Authorities.

E. Procedures for Designating Acting Officials.

F. An Index of all BLM Authorities through the State Director Level.

.02 Objectives. The objectives are to specify the level at which decisionmaking authority is held for BLM activities. This provides for implementation of clear, manageable, and efficient procedures for re-delegating authorities, facilitating management control over delegations of authority, assuring that authority is delegated to the lowest practical level and providing a single, authoritative source of the organizational location of authority for use by all BLM officials. This Manual Section is not intended to serve as a substitute for the other BLM Manual Sections but should be used to supplement, if necessary, other Manual Sections and the Code of Federal Regulations after those references have been thoroughly reviewed. While this Manual Section is intended to serve as an authoritative source for delegations in the BLM, the absence of authorities in it does not preclude the exercise of those authorities provided they have appropriate legal basis. Therefore, authorities need not necessarily appear in this Manual Section in order to have proper legal or administrative basis. In the absence of other specific delegations in the form of BLM Manuals, regulations, Federal Register publications or written delegations, this Manual Section, and attached Index shall constitute formal delegation of the listed authorities.

.03 Authority. Departmental Manual Parts 135, 200, 205, 235, and 757.

.04 Responsibility.

A. The Director and Deputy Director(s) are responsible for assuring that authorities delegated to them are re-delegated to the most appropriate organizational level.

B. Assistant Directors, Deputy Assistant Directors, and Washington Office Division Chiefs are responsible for assuring that material concerning authorities in their respective areas of jurisdiction is accurate. This includes responding to District/Field office suggestions for amendments to material in this Manual Section.

C. The Division Chief, Division of Evaluations and Management Services is responsible for reviewing all delegations of authority changes from the BLM Director, Deputy Director(s), Assistant Directors, State Directors, Center Directors, Office of Fire and Aviation, Office of National Landscape Conservation System, and the Office of Law Enforcement and Security.

D. The Division Chief, Division of Evaluations and Management Services is responsible for recommending to the BLM Director, Deputy Director(s), Assistant Directors, State Directors, Center Directors, Office of Law Enforcement and Security, Office of the National Landscape Conservation System, and the Office of Fire and Aviation, in the course of studies and/or evaluations, specific authorities which should be re-delegated or revoked from the organizational level(s) or position(s) exercising those authorities.

E. The Division Chief, Division of Regulatory Affairs is responsible for developing and overseeing procedures for publication of re-delegations of authority in the Federal Register when publication is necessary.

F. All BLM Management Officials are responsible for:

1. Assuring that authorities delegated to them are exercised within legally stated limits.

2. Recommending to the Director appropriate levels for specific authorities resulting in more efficient management and improved service to the public.

3. Re-delegating authorities to the appropriate level of the organization with full documentation in the appropriate BLM Manual Sections and Manual Supplements and, if necessary, providing a notice in the Federal Register (see .13).

.05 References

A. Part 200 of the Departmental Manual (200 DM) is the official statement of the Departmental delegation of authority policy. It states general policy, notes several authorities specifically withheld by the Secretary or Assistant Secretaries, and provides background information on required delegation policies and procedures for clearance of delegation.

B. Part 205 of the Departmental Manual (205 DM) contains information regarding general delegations.

C. Part 235 of the Departmental Manual (235 DM) is the official statement of delegations from the Secretary or Assistant Secretaries to the Director, Bureau of Land Management. This reference also notes relevant specific authorities reserved at the Departmental level.

D. Part 290 of the Departmental Manual (290 DM) provides guidance and responsibilities for the establishment and recording of emergency succession to key management positions.

E. Part 295 of the Departmental Manual (295 DM) provides for delegations of authority for disaster assistance activities.

F. Part 296 of the Departmental Manual (296 DM) is divided into two chapters:

1. Chapter I provides for delegation of authority with respect to reciprocal agreements with fire organizations for the rendering of emergency assistance in extinguishing fires and preserving life and property from fire.

2. Chapter II provides for delegations of authority for response to discharges of oil and releases of hazardous substances.

G. Part 757 of the Departmental Manual (757DM) provides guidance and responsibilities for administration of surveying activities and its assigned responsibilities for coordinating Federal Surveying activities.

H. Other Agency Manuals. Numerous delegations to heads of agencies. These include the Office of Personnel Management (Federal Personnel Manual), General Services Administration (Federal Acquisition Regulations), and Department of Treasury and General Accountability Office directives.

I. Code of Federal Regulations. Implementations of procedural requirements for Federal laws are published in the Federal Register and the Code of Federal Regulations. These include formal delegations of authority required to administer the laws.

.06 Policy. It is the policy of the BLM that all authorities be delegated to the lowest organizational levels possible, consistent with efficient program management.

.07 File and Records Maintenance.

A. Permanent Files. Under the General Records Schedule/BLM Combined Records Schedule 16/1b(2), long-term delegations of authority are included as mission-related directives case files and are permanent. Cutoff is the end of fiscal year (EOFY). Transfer to the Federal Records Center (FRC) is 10 years after cutoff.

B. Temporary Files. The FRC transfers to National Archives and Records Administration is 30 years after cutoff. Temporary delegations of authority to specific positions (including Forms 1203-1 and 1203-2) are disposed of under GRS/BLM Combined Records Schedule 23/1a. The disposition is temporary. Cutoff is the EOFY. Records are destroyed three years after cutoff.

.1 Provisions for Delegations or Re-delegations.

.11 Authority to Delegate or Re-delegate.

A. Derivation of Authority. Most BLM authorities are derived from the Secretary, through the Assistant Secretary, to the Director. All BLM authorities, for purposes of re-delegation within the BLM, are generally derived from the Director.

1. For the purposes of BLM Manual Section 1203, all authorities held by a particular line manager position are also held by positions organizationally titled "Associate" attached to that particular position (for example, Associate State Directors share all authorities held by State Directors).

2. In most cases, authorities held by the Director may be exercised by Washington Office Deputy Director(s), who are line officials, within their areas of functional jurisdiction (for example, Deputy Assistant Directors share authorities delegated to Assistant Directors). Exceptions to this general rule are individually noted in the Index of this Manual Section.

B. Positions Holding Authority. Any official to whom authority is delegated in BLM Manual Section 1203, or to whom authority has been delegated by other appropriate means, may, in writing, re-delegate or authorize re-delegation of such authority, unless re-delegation of authority is specifically prohibited or is limited.

1. An official who delegates an authority does not divest himself/herself of the power to exercise that authority.

2. Delegation of an authority does not preclude that management official from later revoking that authority from the lower level. The delegation or re-delegation may be revoked at any time upon proper notice (see .22).

3. Delegation of an authority does not relieve that individual of the responsibility for action taken pursuant to the delegation at the organizational level receiving the authority.

4. An official or employee to whom an authority is delegated must exercise this authority in conformance with any overriding requirements that govern its use—as the person making the delegation would be called upon to observe. Such overriding requirements and restrictions are found in the Departmental Manual, Council on Environmental Quality Regulations, Code of Federal Regulations, and/or Executive Orders.

5. Delegated authority must be exercised in accordance with relevant policies, standards, programs, organization and budgetary limitations and administrative instructions prescribed by officials of the Department and the BLM.

6. Any delegation to a position may in turn be re-delegated unless re-delegation is prohibited.

7. All delegations and re-delegations must conform to the provisions of this BLM Manual Section.

.12 Level of Re-delegation.

A. General Rule for Level of Re-delegation. It is the policy of the BLM that all authorities are delegated to the lowest organizational level possible, consistent with efficient program management.

B. Criteria for Determining Level of Authority. To determine which level in the BLM constitutes the "lowest organizational level possible" in re-delegating a specific authority, the following criteria are used:

1. The position to which re-delegation is being considered has access to, on a regular basis, the knowledge and skills necessary to judiciously exercise the authority.

2. There are no legal restrictions or reservations of authority precluding the re-delegation.

3. There are, or will be provided, adequate guidelines accompanying the re-delegation.

4. There is, or will be provided, adequate staff and funding at the level of re-delegation to carry out the responsibilities inherent in the re-delegation.

5. The organizational structure and geographic location of the position receiving the authority is such that the incumbent will be able to exercise that authority effectively.

6. There is, or will be provided, access to all necessary data/information/records needed to carry out the delegated authorities.

.13 Publication of Delegations or Re-delegations.

A. Departmental Requirements. Departmental Manual Part 200 DM 1.10 provides basic guidance on requirements for publication of delegation of authority in the Federal Register. The sub-chapter states that any re-delegation of the Secretary's authority will follow the policy that if the re-delegation "has a direct impact on some sector of the public, it will be published in the Federal Register." The sub-chapter further states that officials should use "judgment" in determining the point at which the re-delegation directly affects the public and therefore should be published in the Federal Register.

1. Re-delegations of authority of a purely internal nature (contracts, personnel, some Cadastral Survey matters, etc.) do not require publication.

2. The purpose of publishing delegations of authority in the Federal Register is to officially notify the public of the organizational location where the BLM will act on specific matters. Therefore, it is not necessary to publish a re-delegation of authority if the authority will in turn be re-delegated to a lower organizational level. Only the last delegation need be published.

3. Most BLM authorities do not need to be published in the Federal Register. It is emphasized that only instances of direct impact on the public require publication.

B. Publishing Method. To save paperwork and time in the State Offices, plenary delegations of authority to State Directors that will in turn be re-delegated to all District/Field office personnel will be published in one announcement in the Federal Register rather than having each State Office publish an announcement. This one announcement delegating authority directly to District/Field office personnel must be published under the Director's (or appropriate Assistant Director's) signature. Such delegation does not in any way restrict State Directors' prerogatives or responsibilities under .2.

.2 Delegating, Re-delegating, or Revoking Authority.

.21 Notification of Position Receiving Authority. Delegations of authority must, in all instances, be made by written notice to the position receiving the authority. This is a minimum requirement for all delegations of authority. This written notice must be made on Form 1203-2, Delegation of Authority, signed by the official delegating the authority and sent to the positions receiving the authority, or a similar form used as part of a State Manual Supplement to the BLM Manual Section 1203, such as an Information Bulletin or Instruction Memorandum.

.22 Recordation and Documentation. Written documentation of a delegation of authority must be in the form of an amendment to the Index to this Manual Section (see Appendix 1), or to the Index of a State Manual Supplement to the BLM Manual Section 1203.

A. Amendments to BLM Manual.

1. Washington Office organizational units (Offices, Divisions and Staffs) are responsible for assuring that delegations of authority that fall within their areas of functional responsibility are accurate, current, clear and complete.

2. Issues, questions, comments (including identification of apparent inconsistencies between this Manual and other documents)—along with recommendations for amendments that concern delegations of authority cited in the Index to this Manual Section—are to be directed to the Washington Office organizational unit functionally responsible for delegation of authority.

3. Amendments to the Index to this Manual Section (see Appendix 1) must be submitted by the responsible Washington Office organizational unit to the Division Chief, Division of Evaluations and Management Services (WO-830), in final form (typed on Form 1203-2 or its electronic equivalent).

B. Revisions to Position Description. Amendments to the BLM Manual Section 1203 that delegate authorities may often require revisions in the Employee Performance Appraisal Plan (EPAP) (Form 1400-90), as well as position description of the position or positions receiving the authority. Authorities must not be delegated without review and if necessary (in instances of major changes in authority), revision of the EPAPs and position descriptions to reflect the addition of the delegated authorities.

.23 Revoking Authorities. Revocation of a delegated authority follows a similar process as delegation of an authority, described in .1 through .2.

.24 Designating Acting Officials.

A. Rotating Schedules.

1. Only one individual may be designated as acting for a specified period of time. ***Exception. If a designated acting official is telecommuting and his/her physical presence is required to sign a document or attend an emergency meeting, then the next person in line of designees can assume that role.**

2. Form 1203-1 or its electronic equivalent, Delegation and Certification of Acting Authority, should be used to record standard acting rotation schedules within offices and to officially record the specific periods individuals serve in an acting capacity. Designation of acting individuals in unique situations, or not in accord with established schedules, should be made by memorandum to the supervisor or the acting position.

B. Unique Situations. Individuals serving in an acting capacity assume all the authorities of that position unless authorities are withheld. Individuals serving in that capacity must use judgment in exercising these authorities. This includes considering the relative importance of an issue, whether the issue could or should be deferred and the known preference of the individual for whom that person is acting.

.3 Re-delegations of Authority to State Directors. The BLM State Directors are authorized to perform in their respective States—and in accordance with existing policies, regulations and procedures of the Department and the BLM—the functions of the Director, BLM, as listed in the Delegations of Authority Index (see Appendix 1). This includes all types of actions in the activities listed, unless specifically limited.

.31 Jurisdictional Authority. The Center Directors are responsible for programs under the control of their respective center. The State Directors have jurisdiction of BLM programs in the various States as listed below:

BLM State Director	Jurisdiction
State Director, Alaska	Alaska
State Director, Arizona	Arizona
State Director, California	California, Hawaii*
State Director, Colorado	Colorado
State Director, Eastern States	All States east of and contiguous to the Mississippi River
State Director, Idaho	Idaho
State Director, Montana	Montana, North Dakota, South Dakota
State Director, Nevada	Nevada
State Director, New Mexico	New Mexico, Kansas, Oklahoma, Texas
State Director, Oregon	Oregon, Washington
State Director, Utah	Utah
State Director, Wyoming	Wyoming, Nebraska

* For matters of Cadastral Survey executed for the National Park Service or other Federal interest lands within the State of Hawaii.

.32 Cooperation among State Directors. Where State Office boundaries include land in two or more States and a memorandum of understanding has been signed by the State Directors involved, delegations of authority from the responsible State Director are enforced on all lands within the agreed area of jurisdiction.

.4 Current Delegations of Authority Affecting BLM. Appendix 1 provides an Index to current delegations of authority concerning BLM programs and operations. Except where qualified, limited, restricted, or withheld, all of the authorities of the Director, BLM, to exercise the program authority of the Secretary of the Interior with respect to the management of the public lands and acquired lands, including all associated functions related to such management operations, are hereby delegated to the individual BLM official(s) specified in Appendix 1. For purposes of this Manual Section, the term BLM, as used in Departmental or BLM regulations, Manual Sections, or other instructional directives, includes the individual BLM official(s) designated in Appendix 1. Re-delegation of the authority delegated to the individual BLM official(s) specified in Appendix 1 may be made by Authorized Officers under the provisions described in .1 through .2.

Glossary of Terms

-A-

Authority. The ability to make the final, binding decision or to take specific action, or both, as an official representing the United States Government. Such authorities have a legal basis in statute or regulation.

-D-

Delegation of Authority. Written notice from the official who holds the particular authority to an official or officials who do not hold the authority, which gives the power to take actions or make decisions of legal standing in regard to the particular authority. (Authority to make a decision or take an action is different from having responsibility. For example, the ability to sign a grazing permit as provided in the Taylor Grazing Act is an authority that can be delegated. The daily administration of procedures related to the grazing program is an assigned responsibility. Assigned responsibilities are listed in BLM Manual Sections at .04.

Instructions for Use

Column 1, Subject Code. This column lists the BLM's Subject Codes for the activities described in Column 2. In the majority of cases, these codes serve as cross-references to the BLM Manual Sections where the activities are discussed. In cases where BLM Manual Sections have not yet been written for codes listed, the references may also refer to the Departmental Manual, Code of Federal Regulations, or the United States Code. If additional sources contain the legislation delegating the described authority listed in column three, this will be identified as a "Source" within column 2.

Column 2, Activity. This column contains descriptions of specific activities or divisions of activities concerning a related subject. All the activities to which a legal authority is attached are not listed individually. If a division of activities is related and held in one position, it is summarized in one descriptive statement.

Column 3, Authority Delegated To. This column lists delegations of authority to Department officials and BLM Washington Office officials (including Center Directors), as well as District/Field Officials (including State Directors and the Director, Office of Fire and Aviation). In State organizations, delegations of authority below the State Director level are defined in the State Office supplements to BLM Manual Section 1203. Abbreviations used in the column include:

SEC	Secretary of the Interior
AS	Assistant Secretary, Land and Minerals Management
D/DD	BLM Director and Deputy Director (Associate)
AD	Assistant Director
DC	Division Chiefs
CD	Center Directors (National Science and Technology Center, National Information Resources Management Center, National Business Center, National Human Resources Management Center, and National Training Center)
SD	State Directors
DM	District Managers*
FA	Director, Office of Fire and Aviation
LE	Director, Office of Law Enforcement and Security

* - District Managers (DMs) are listed in this revision of the Delegation of Authority Manual since some States have recently transitioned to a three-tier structure and there was not clarity as to the delegated authority of DMs. Field Managers authority should be identified in the State's supplement to this manual.

Authorities are held by the levels marked in Column 3. However, only positions representing the organizational units managed by those positions, which are responsible for particular functional areas, can exercise authorities within those areas. For example, if the "Division Chief" column is checked for an activity in rangeland management, it refers to the authority of the Division Chief,

Rangeland Resources; if the "Assistant Director" column is checked for an activity in procurement, the Assistant Director, Business and Fiscal Resources, holds that authority. Footnotes are used to provide additional information or clarity. An "X" placed in a column shows that the authority is held at that level for all within that category. For example, an X in the "State Director" column indicates that all State Directors in the BLM hold that authority. An "X" also means that the authority can be re-delegated down through the formal process (Sec. 2). An asterisk or number in the "Authority Delegated To" column directs the reader to a footnote within the activity, which states the specific authority or declares that this authority cannot be re-delegated.

Revisions to the Index. Suggestions for amendments or corrections to material in this Index should be directed to the Washington Office organizational unit responsible for the activity/function. Washington Office units considering changes to the Index are referred to .22A.

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Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1102	Issue employee identification cards. _____ Source: 310 Departmental Manual (DM) 3					X	X	X	X	X	X
1103	Approve use of the BLM uniform and the replacement uniform allowance up to $400 annually. Source: 5 U.S.C. 5901-5902				X	X	X	X	X	X	X
1112	Approve purchase of personal protective equipment for all programs.				X		X	X	X	X	X
1112	Approve, where necessary, entry of BLM employees onto officially controlled, low-risk sites limited to Level D personal protective equipment. Assure that employee's position description reflects site entry and that all applicable safety and health laws are applied. _____ * - National Science and Technology Center (NSTC) employees require concurrence of the NSTC Director.						*	X	X		
1112	Authorize appropriate financial and staffing resources to effectively implement and maintain the required Occupational Safety and Environmental Health Program, pursuant to the following. - Public Law 91-596, "Occupational Safety and Health Act of 1970," Sections 6 and 19. - Executive Order 12196, "Occupational Safety and Health Programs for Federal Employees." - Title 29, Code of Federal Regulations (CFR) Part 1960, "Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters." - National Consensus Standards. _____ * - BLM Safety and Occupational Health Manager. Source: 485 DM, 29 CFR 1960.7	X		X	*		X	X	X	X	
1112	Appoint Tort Claims Administrators. _____ * - Chief Human Capital Management Project Director. Source: 451 DM			X	*		X	X		X	

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1112	Authorize motor vehicle road tests determined to be appropriate and appoint examiners. _____ * - Chief Human Capital Management Project Director.				*		X	X		X	
1112	Approve Risk Management Plans (Job Hazards Analysis). Source: BLM H-1112-1 Chap. 12.1B			X	X	X	X	X	X	X	X
1112, 1783	Appoint management members to Safety Committees within their respective jurisdictions. (NOTE: Safety Committees shall have equal representation of management and non-management employees. Refer to 29 CFR 1960.37 (a) (b) (2) for rules of appointment for non-management employees). _____ * - Chief Human Capital Management Project Director, for Washington Office (WO) Safety Committee.			X	*	X	X	X	X	X	
1112	Appoint a qualified BLM Safety Manager. Appoint a qualified State/Center Safety Manager. _____ * - Chief Human Capital Management Project Director. Source: BLM Manual 1112.04				*		X	X		X	X
1112	Authorize annual inspections of all facilities and approve abatement actions. _____ * - Chief Human Capital Management Project Director. Source: BLM Manual 1112.04				*		X	X	X	X	
1112	Appoint Boards of Inquiry to review the circumstances relating to fatalities and serious accidents or losses, upon recommendation by the BLM Safety Manager (WO-740). Source: 485 DM 7, BLM Manual 1112.04			X							
1112	Appoint Accident Investigation Teams upon notification of an employment related accident which resulted in a fatality or the hospitalization of 3 or more employees, or accidental damage or loss to Government property exceeding $250,000, or multiple visitor fatalities or hospitalization of 3 or more visitors. _____ * - Requires approval of BLM Safety and Occupational Health Manager. Source: 485 DM 7				*		*	*		*	

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1112	Approve the BLM Safety Award for best safety performance by a State, upon recommendation by the BLM Safety Manager (WO-740). Source: 485 DM 10, BLM Manual 1112.14			X							
1113	Approve, authorize, and reimburse personal horse use. Source: BLM Manual 1113.12A							X	X		
1114	Sign agreements with volunteers and volunteer groups that wish to contribute services. Source: Section 307, FLPMA			X	X	X	X	X	X	X	X
1170	Provide assistance in case of disasters in any part of the United States when requested by the President through the Department of Homeland Security and/or Federal Emergency Management Agency (FEMA). (See 43 CFR 1815 and 42 U.S.C. 5170b) Assist State Directors in periods of disaster upon request. Provide disaster assistance when requested by FEMA by coordinating the movement of the closest forces capable of performing the relief requested. Provide a facility to temporarily operate the BLM in the event of military attack. Provide search and rescue assistance when requested by the local authorities in charge. Provide assistance to help alleviate the effects of a local disaster within the ability of the personnel and equipment in the area at the time of the emergency. Source: 900 DM 1 and 905 DM 1				X X X X X X		X X X X X	X X X X	X X X X	X X X X X X	X X X X X
1170	Provide emergency Civil Defense assistance. Source: 446 DM 4, 900 DM 1 and BLM Manual 1170.27				X		X	X	X	X	X

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1202	Organization and Management Structure and Functions:										
	Approve changes in Headquarters Structure within the Directorates and National Offices.		X								
	Approve changes in Headquarters functions below the Division level.			**							
	Approve changes in organization structure and functions for State, District and Field Offices*.				*			X			
	Approve organization structure and function changes for the National Centers.			X	1						
	Approve organization structure and function changes for the Office of Fire and Aviation.			X							
	Approve organization structure and function changes to the Office of Law Enforcement and Security.			X							
	Office Status:										
	Approve all changes in location or status of the BLM offices outside the leasing process.		X								
	Boundaries:										
	Approve changes in District and Field Office boundaries.			2							
	Approve changes to State Office geographical responsibilities.		X								
	Positions:										
	Approve establishment or abolishment of Associate or Assistant District/Field Managers.							X			
	_____ 1 - Approval by the Assistant Directorate with delegated authority of the National Center. 2 - Approval by the Director and concurrence by the Office of the Assistant Secretary. * - State, District, Field and Division level within these units. SEE BLM MANUAL 1202 **- Changes that create or eliminate Divisions must be approved by the Assistant Secretary, PMB, since affects the DOI Manual.										

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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1203	Approve reciprocal delegations of authority, on a trial basis through Fiscal Year 2008, in conjunction with the Forest Service, National Park Service, and Fish and Wildlife Service.				X		X	X		X	
1203	Designate Acting Officials. Source: BLM Manual 1203.24			X	X	X	X	X	X	X	X
1220, 1813	Approve Federal Register Notices on the following: Calls for Nominations to Boards or Commissions Advisory Committee Meetings _____ 1-Requires Washington Office (WO) review. Source: WO Instruction Memorandum No. 2003-250							1			
1220	Approve Federal Register Notices on Information Collections and OMB 83-1 forms. _____ * - Division Chief, Division of Regulatory Affairs (WO-630).				X	*					
1220	Approve new or revised subject codes. _____ * - Division Chief, Division of Regulatory Affairs (WO-630).					*					
1220	Request records disposition approval from the National Archives and Records Administration. _____ * - Division Chief, Division of Information Resources Management Governance (WO-560).					*					
1220, 1270	Authority to sign SF-135 to transfer records to and access records from the Federal Records Centers. Authority to sign SF-258 to transfer ownership of records to the National Archives and Records Administration (NARA). Authority to sign Notices of Destruction NARA.* Authority to access records from the National Archives. _____ 1 –Records Manager or next highest organizational level. * Requires review and concurrence of program officials or owners of records. Source: 44 U.S.C. 3302			X X X	X X X X	1 1 X 1	X 1 X X	X 1 X X	X	X 1 X X	X 1 X X

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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1221	Directives (see signing authority chart in Manual Section 1221.2).										
	Sign Instruction Memorandums within their area of authority.			X	X		X	X		X	X
	Sign Information Bulletins within their area of authority.			X	X	X	X	X	X	X	X
	Sign BLM Manuals and Handbooks within their area of authority.			X	X		X	X		X	X
1223	Approve BLM forms. _____ * - Assistant Director, Business and Fiscal Resources. Source: 380 DM 7				*						
1223	Prescribe and issue "Public Use" forms. (Requires Department and OMB approval). _____ * - Assistant Director, Communications. Source: 380 DM 7 and 5 CFR 1320		X		*						
1228	Approve Center, State and District/Field Office Forms. Source: 380 DM 7						X	X		X	
1240	Approve Management Control Reviews.			X	X		X	X	X	X	X
	Approve BLM's Management Control Plan as required under the Federal Manager's Financial Integrity Act and OMB Circular A-123.			X							
	Approve Bureau-wide Management Annual Assurance Statement.		X	X							
1240	Approve evaluations/reviews.			X	X		X	X	X	X	X
1245	Approve responses to GAO/OIG Audit Reports (draft and final).		X	X	1						
	Prepare responses to draft/final Audit Reports within their area of responsibility. _____ 1 – Assistant Director, Business and Fiscal Resources, only. NOTE: Final approval of all GAO/OIG Audit reports is delegated to the appropriate Department Assistant Secretary based on subject matter.				X		X	X		X	X

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1261, 1263	Investments in Information Technology with a total life cycle cost of more than $35 million dollars, or annual costs greater than $5 million, or affects multiple agencies; or where the investment is mandated by legislation or Executive Order; or identified by the Secretary as critical; or requires a common infrastructure investment; or Department strategic or mandatory-use systems; or differs from or impacts the Department infrastructure, architecture, or standard guidelines; or is a financial system with total life cycle costs greater than $500,000; or is a high-risk as determined by OMB, GAO, Congress and/or the Department CIO; or directly supports the President's Management Agenda Items of "high executive visibility", or is E-Government in nature or uses e-business technology. All investments that meet the national level screening criteria must follow the BLM's ITIM process. Investments in Information Technology with a total life cycle cost of more than $500,000, or affect multiple States/Centers or affect multiple business areas or are a Major Application or a General Support System or more than $50,000 where a State/Center does not have a certified CIO and a functioning Information Technology Investment Board. _____ 1 – The Deputy Director as Chair of the National ITIB. 2 – The Director, Office of Fire and Policy as Chair of the OF&A ITIB. 3 – The Director, Office of Law Enforcement and Security.		X		1					2	3
1261, 1263	All IT investments meeting the minimum State/Center level screening criteria must follow their respective ITIM processes. The screening criteria for a State/Center level investment are any Information Technology Investment with a total life cycle cost of less than $500,000 where the State/Center has a CIO-certified and functioning ITIB, or any proposed investment with a life cycle value of less than $50,000 where the State/Center does not have a CIO-certified and functioning ITIB. _____ 1 – The State/Center Director as Chair of the State/Center ITIB.						1	1			

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1270, 1278	Authority to Sign Freedom of Information Act (FOIA) Responses:										
	- Authority to release documents.			X	1	2	3	X		3	
	- Authority to withhold a requested record.*			X	1	2	3	3		3	
	- Authority to release a record which is exempt from disclosure (discretionary release.)*			X	1	2	3	3		3	
	- Authority to deny a fee waiver.*			X	1	2	3	3		3	
	- Authority to sign interim FOIA responses which include clarification of fee issues, scope of the FOIA request and request for extensions.			X	1	2	X	X	X	X	
	- Authority to sign "no records" response.				1	2	3	X		3	
	_____ *Only after consultation with the office of the appropriate associate, regional, or District/Field solicitor. 1 – Assistant Director, Information Resources Management. 2 – Division Chief, Division of Information Resources Management Governance (WO-560). 3 – Cannot be re-delegated. Source: 43 CFR 2.16 and IM No. 2003-049										
1270	Deny Privacy Act (PA) requests with concurrence of PA Officer. *			1	1	1	2	2		2	
	Release PA records to third party requester (through FOIA request).			1	1	1	2	2		2	
	_____ 1 – Consult with Privacy Administrator. 2 – Cannot be re-delegated. * Only after consultation with the office of appropriate associate, regional, or District/Field solicitor. Source: 43 CFR 2.64										

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1275, 1220, 1824	Prepare and publish in the Federal Register Notices of the official filing of accepted plats of survey, resurvey, general meeting notices and approved protraction diagrams. _____ * - State Office Chief Cadastral Surveyor only. Source: 43 U.S.C. 2 and 52 and WO IM No. 2003-250 and IM No. 2003-290							*			
1278	Prepare and approve Official Agency Record Designation Documents (OARDD). Approve transition of records from non-public or to the public record category. _____ 1 - All OARDDs and formal records transition actions must be reviewed and concurred by the State Records Administrator and the State FOIA/Privacy Act Specialist and approved by State Director. 2 – Must be reviewed and concurred by BLM Records Administrator and approved by Division Chief, Division of IRM Governance. * - Cannot be re-delegated.				X	X 2*		1*			
1278	Approve data sharing agreements where no funds are involved. Approve data sharing agreements, if funds are to be exchanged*. _____ 1 – Reviewed and concurred by the Records Administrator and Data Administrator and the FOIA/Privacy Act Specialist. *- With concurrence and signature of the Contracting Officer.				1	1		X 1			
1283	Designate, approve, and change personnel as data stewards for their respective areas of jurisdiction.					X	X	X	X		
1283	Approve data quality assurance (QA) plans.						X	X		X	X
1291	Approve requests for radio frequency assignments							X		X	X

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1301	Approval of BLM Financial Management Systems in compliance with Treasury, Office of Management and Budget and Federal Accounting Standards Advisory Board Accounting Principles and Standards as prescribed by law and regulations. Financial systems design and application to specific areas (e.g., Cash Management, Assets, Liabilities, Equity Accounts, etc.). _____ 1 – Assistant Director, Business and Fiscal Resources, only. 2 – Director, National Business Center, only.			X	1 1		 2				
1320,-1323	Approve use of cost procedure systems and systems to record financial transactions that represent obligations and liabilities of the BLM. Approve billing and collection systems for monies due the BLM from cost recoverable projects. _____ 1 – Assistant Director, Business and Fiscal Resources. 2 – Director, National Business Center.				 1		2 2				
1374	Authorize BLM refund in Collections and Billings System (CBS) so accounts staff can process refunds. Authorize transfers and returns from the Collections and Billings System. _____ 1 - May be re-delegated from SD to District/Field Manager and then to Program Specialist.						X X	1 1	 X	X X	
1375	Authorize waivers (full or partial) in the Collections and Billings System (CBS) for bills, including late fees.					X	X	X	X	X	
1375	Approve compromise, suspension or termination of collection actions on debts due the United States upon approval by District/Field or Regional Solicitors, - Up to $100,000. Source: 903 CFR 1						 X	 X		 X	
1375	Approve all promissory notes when rescheduling debts under the standards.					X	X	X	X		

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1375, 9230	Approve liability and damages for unauthorized use of the public lands.							X			
	Accept damages and/or liabilities for unauthorized use:										
	A. Accept full payment.							X			*
	B. Approve Write Off/Close-out of debts due the United States when BLM determines it is no longer cost effective to pursue collection or it is not required by a program:										
	$1- $99						X	1		X	
	$100 - $49,999						X	X		X	
	$50,000 - $99,999						2	2		2	
	$100,000 and up						3	3		3	
	C. Approve waiver of Interest, Penalty, Administrative Charges or late fee Assessment						X	4		X	
	Compromise, suspension, and termination of Debts due the United States										
	$1 -$49,999	X		*			X	X		X	
	$50,000 - $99,999	X		*			2	2		2	
	$100,000 and up	X		*			3	3		3	
	_____ 1 – State Director may re-delegate to District/Field Office manager who may further re-delegate to the specialist, i.e., Land Law Examiner, Realty Specialist, Range Conservationist, etc.. 2 – State Director, Center Directors, Fire and Aviation, with concurrence of the Office of Financial Management. 3 – Debt is reviewed by State Director and sent to NBC for referral through the Solicitor to the Department of Justice. 4 – State Director may re-delegate to District/Field Office Manager who may further re-delegate no lower than Administrative Officer. * - With the concurrence of the Solicitor. Source: BC IM No. 2000-011, 31 U.S.C 3711, 26 CFR 1										

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1376	Approve payment of telephone bills: - Cellular Telephone Bills - Land Line Telephone Bills Source: (DOI Policy on Telephone Use June 14, 2000)			X	X	X	X	X	X	X	X X
1379	Secure Rural Schools and Community Self-Determination Act of 2000.							X			
1382	Authorize full actual travel expenses. Source: NBC Travel Guide (January 2005)				X			X			
1382	Approve up to 99 percent of the authorized rate for extended (over 30 days) emergency temporary duty travel Federal Travel Regulations (301-7.12a through d). Source: IB No. OF&A 2002-021.				X	X	X	X	X	X	X
1382	Approve travel for pre-appointment interviews.				X		X	X		X	X
1382	Approve or authorize Headquarters staff travel connected with programs in their respective offices, including travel of advisory board members and use of rental cars. This does not include attendance at non-government meetings, pre-appointment interviews, or travel by experts or consultants. * - FA Authority is limited to the approval/authorization of travel for FA staff that are assigned to, or physically located, at Headquarters.				X	X				*	
1382	Approve or authorize travel connected with programs in their respective offices, including travel of advisory board members and use of rental cars. This does not include attendance at non-government meetings, pre-appointment interviews, or travel by experts or consultants.				X	X	X	X	X	X	X
1382	Approval of intrastate permanent change of station travel.						X	X		X	X
1382	Approval of interstate permanent change of station travel. * - Assistant Director, Business and Fiscal Resources, only.				*			*			
1382	Approve travel of experts and consultants. * - Assistant Director, Business and Fiscal Resources.				*		X	X		X	X
1382, 1788	Approval or authorization of travel for attendance at non-government meetings.			X	X	X	X	X	X	X	X

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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1382	Approve advanced written request for actual per diem or lodging costs up to 300 percent of the allowable per diem or lodging allowance for the locality. *Cannot be re-delegated. Source: NBC Travel Guide (January 2005)				*		*	*		*	*
1382	Approve travel to foreign countries. _____ * - Assistant Secretary, Land and Minerals Management, must approve most foreign travel. However, State Directors and the Director, Office of Fire and Aviation, may approve travel under certain exceptions as stated in 547 DM 7. This authority cannot be re-delegated.		*					*		*	
1384	Approval of Accountable Officers (except Collection Officers).				X	X	X	X			
1384	Approval and Revocation of a Designated Collection Officers (including contractors and volunteers). Source: BLM Manual 1384.33					X	X	X		X	
1400-213	Authorize Excepted Service Appointments (i.e. STEP, SCEP, Seasonal, Handicapped, 30-day Special Need).				X		X	X		X	X
1400-300	Approval of Details.			X	X	X	X	X	X	X	X
1400-300, 311.41	Administer Oath of Office. Source: BLM Manual 1400-311.41			X	X	X	X	X	X	X	X

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1400-300, 1400-335	- Directed reassignments to key positions.			X							
	- Directed reassignments to all other positions (directed reassignments across State/Center lines require obtaining State Director/Center Director concurrence).			X	X	X	X	X	X	X	X
	- Details to key positions not to exceed 120 days.		X	X							
	- Details to Senior Executive Service positions not to exceed 120 days.		X	X							
	- Details to Senior Executive Service positions over 120 days. (Note: Details to Senior Executive Service positions over 240 days must be approved by the Office of Personnel Management.)		X	X							
	- Details involving Memorandums of Understanding. Federal funds may not be obligated in a Memorandum of Understanding.			X	*						
	_____ * - Chief Human Capital Management Project Director.										
	Source: 920 DM										
1400-302	Authorize Temporary Limited Appointments.			X	X	X	X	X	X	X	X
1400-311	Powers of appointment and removal (SF-50) (Certain key positions require Secretarial approval. Refer to 370 DM 311.)										
	- GS-1 through GS-15.			X	X		X	X		X	X
	- Wage System Position				X		X	X		X	X
1400-317	Senior Executive Service.										
	- Position Approval.	X	X								
	- Recommends (SES) Position.			X							
	- Recruitment of Senior Executive Service positions.		X	X	*						
	- Selection of Senior Executive positions.	X	X								
	_____ * - Chief Human Capital Management Project Director.										
	Source: 920 DM										

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1400-334	Approval of Intergovernmental Personnel Act Assignments. _____ * - Chief Human Capital Management Project Director. Source: 334 DM			X	*						
1400-335	Promotion and Internal Placement. - Recruitment for all positions GS-15 and below. - Approval of selections for all GS-15 position. *With exception of ASD, DAD, DSD, NCD, National Office Deputy, WO-GS-15, all District/Field Managers GS-14 and above and NLCS managers, must have National Personnel Management Committee (NPMC) approval. - Approve selection of Public Affairs Officers and related public affairs positions. - Consultant and Expert Appointment. - Approve selection of Personnel Officers and Equal Employment Opportunity Officers. _____ 1 - Chief Human Capital Management Project Director. 2 - Assistant Director, Communications. Source: 370 DM 335			X X X	X 2 1	X	X	X	X	X	X
1400-351	Approval of Reduction in Force. _____ 1 - Chief Human Capital Management Project Director. 2 - CD, SD, FA and LE have authority to review and advise as appropriate.			X	1		2	2		2	2
1400-410	Authorize Training. Source: BLM Manual 1400-410.04			X	X	X	X	X	X	X	X

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1400-430	Employee Performance Plans.										
	- Prepare Annual Performance Plans.			X	X	X	X	X	X	X	X
	- Develop/Approve Performance Improvement Plans.			*	*	*	*	*	*	*	*
	- Prepare Annual Summary Ratings.			X	X	X	X	X	X	X	X
	- Concur by next higher official with "Level 1, 2 and 5 Summary Rating" Summary Rating.			X	X	X	X	X	X	X	X
	_____ * - All first-level supervisors after review and advice by Servicing Personnel Office, as appropriate.										
1400-432	Performance Based Actions.										
	- Issue Notices of Proposed Adverse Actions.			1	1	1	1	1	1	1	1
	- Issue Notices of Decisions.			2	2	2	2	2	2	2	2
	_____ 1 - All first-level supervisors after review and advice by Servicing Personnel Office, as appropriate. 2 - All second level supervisors after review and advice by Servicing Personnel Office, as appropriate.										
1400-451	Approve Awards.										
	- Star Awards of $50 - $500 (Net).			X	X	X	X	X	X	X	X
	- Individual awards up to $5,000.			X	X	X	X	X	X	X	X
	- Individual awards of $5,001 - $10,000.		X								
	- Division awards below $5,000.			X	X	X	X	X	X	X	X
	- - Division awards of $5,000 - $10,000 so long as no one individual receives $5,000 or more.			X							
	- - Awards in excess of $10,000 must be approved by the Office of Personnel Management.										
	- Senior Executive Service cash award.		X	X	*						
	_____ * - Chief Human Capital Management Project Director.										
	Source: 461 DM										

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1400-511	Position Classification.										
	- All positions GS-1 through GS-14 and Wage System positions except positions requiring Departmental approval.			X	X	X	X	X	3	X	X
	- GS-15 positions.				X						
	- Precedent setting classifications affecting 10 or more positions BLM-wide.				1						
	- Appeals decided in BLM.				1		2				
	_____ 1 - Chief Human Capital Management Project Director. 2 - Director, National Human Resources Management Center. 3 – With concurrence of the State Director										
1400-531, 550	Rates of Pay.										
	- Approve Superior Qualifications Appointment not to exceed 20 percent above candidate's existing rate of pay. Over 20 percent of existing rate of pay requires the Assistant Secretary approval.			X	1	X	X	X	X	X	X
	- Within-grade increases.			2	2	2	2	2	2	2	2
	- Quality Step Increases.			2	2	2	2	2	2	2	2
	- Denial of within-grade increases.			2	2	2	2	2	2	2	2
	- Reconsideration of denials of within-grade increases.			3	3		3	3		3	3
	_____ 1 - Chief Human Capital Management Project Director. (Reviews and advises Director only). 2 - All first-level supervisors after review and advice by Servicing Personnel Office, as appropriate. 3 - All second-level supervisors after review and advice by Servicing Personnel Office, as appropriate.										
1400-536	Grant optional grade and pay retention in major reduction or reorganization.			X	X		X	X		X	X

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1400-550	Pay Administration.										
	- Approve Overtime and Holiday Pay.			X	X	X	X	X	X	X	X
	+ During emergency situations in absence of authorized official.			*	*	*	*	*	*	*	*
	- Approve Hazard and Environmental Differentials.			X	X		X	X		X	X
	+ During emergency situations in absence of authorized official.			*	*		*	*		*	*
	Approve changing exemption status of employees for performing work when non-fire emergency situations exists (5CFR551.208(f).			X	X		X	X		X	X
	_____ * - All first-level supervisors after review and advice by Servicing Personnel Office, as appropriate.										
1400-550	Payment of travel and transportation expenses for new appointees to the first post or duty.			X	X	X	X	X	X	X	X
	Payment of travel and transportation expenses for pre-employment interviews.			X	X	X	X	X	X	X	X
1400-550	Recruitment and Relocation Bonuses and Retention Allowances.										
	- Fire Positions.									X	
	- Approval for GS-15 and below.			2	1			3			
	_____ 1 - Chief Human Capital Management Project Director (reviews all request before submission from Deputy Director for final approval). 2 - Cannot be re-delegated. 3 – State Director can request through the Chief Human Capital Management Project Director approval from the Deputy Director.										
1400-550	Approval Student Loan Repayment Benefit Plan.				*						
	_____ * - Chief Human Capital Management Project Director-cannot be re-delegated.										
1400-610	Approve and set hours of duty.			X	X	X	X	X	X	X	X
	Approve Telecommuting and Flexible Workplace.			X	X	X	X	X	X	X	X

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1400-630	Absence and Leave.										
	- Approve Absence and Leave.			1	1	1	1	1	1	1	1
	- Leave Without Pay, 30 days to 1 year.			X	X		X	X		X	X
	- Leave Without Pay, over 1 year.			X	2						
	- Approve denial or restoration of leave due to extenuating work circumstances (exigency of the public business).			3	3		3	3		3	3
	- Approve annual leave restoration.			X	X		X	X		X	X
	Leave Transfer Program:										
	- Recommend employee application to become a leave recipient.			X	X	X	X	X	X	X	X
	- Approve employee applications to become a leave recipient.			X	X		X	X		X	X
	_____ 1 - All first-level supervisors. 2 - Chief Human Capital Management Project Director. 3 - Cannot be re-delegated.										

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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1400-731	Personnel Suitability and Security Program management, oversight and review authority for personnel suitability and security adjudication and program and position sensitivity.			X	1						2
	- Adjudicate all sensitive personnel investigations.			X							2
	- Adjudicate all non-sensitive personnel investigations.			X			3	X		X	2
	- Make position sensitivity designations.			X	1		3	X		X	2
	- Requesting official for all sensitive personnel investigations.			X			3	X		X	2
	- Requesting official for all non-sensitive personnel investigations.			X							2
	- Issue certifications for sensitive positions and granting security clearances within the BLM.			X							2
	- Approve and inspect all sites for personnel security and storage of classified material and information.			X							2
	- Initiate Personnel and Physical Security Management Evaluations.			X	X	X	X	X	X	X	2
	_____ 1 - Chief Human Capital Management Project Director, Human Capital Management 2 - Director, Office of Law Enforcement, Security and Protection. 3 - Director, National Human Resources Management Center only. Source: 5 CFR, 32 CFR and 441- 442 DM										

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1400-752	Discipline and Adverse Actions.										
	- Issue warning and reprimands.			X	X	X	X	X	X	X	X
	- Propose suspensions of 14 days or less.			X	X		1	1		1	1
	- Decisions on proposed suspensions of 14 days or less.			2	2		2	2		2	2
	- Proposed adverse actions (e.g., suspension of greater than 14 days, removal and demotion).			1	1		1	1		1	1
	- Issue decisions on proposed adverse actions.			2	2		2	2		2	2
	_____ 1 - All first-level supervisors after review and advice by Servicing Personnel Office, as appropriate. 2 - All second-level supervisors after review and advice by Servicing Personnel Office, as appropriate. Source: 370 DM 752										
1400-752, 771	Grievances (Consult with the WO Human Resources staff).										
	- Issue Adjustment/Decision of informal grievance.			X	X		X	X		X	X
	- Issue Adjustment/Decision of formal grievance.			X	X		X	X		X	X
	- Referral of grievance to Office of Hearings and Appeals.						*				
	_____ * - Director, National Human Resources Management Center, only. Source: 370 DM 752										
1400-792	Establish employee health, wellness and assistance programs.			X	X		X	X	X	X	X
1400-831, 842	Firefighter and Law Enforcement Retirement Program Authority.	X								X	*
	_____ * - Seek Advice from Director, Office of Fire and Aviation.										

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1510	Purchase of refreshments or meals with appropriated funds only when in compliance with specific enabling legislation or statutes such as Amendment 89 to the Federal Travel Regulations, the Government Employees Training Act, the Government Employees Incentive Awards Act, Public Law 98-540, to amend the Volunteers in the Parks Act of 1969, or various Comptroller General decisions. The maximum cost will not exceed $2 per attendee up to $500 per event. In the absence of a specific authority, the purchase of refreshments or meals is not authorized for either Government personnel or non-government personnel, such as partners or visiting dignitaries. _____ * - Conferences with over 30 attendees require approval by the Assistant Secretary, Land and Minerals Management Source: 5 U.S.C. 5403		*		X		X	X			
1510	Approve requisitions. _____ * - All Supervisors. Source: BLM Manual 1510.04I			*	*	*	*	*	*	*	*
1510	Approve memberships in associations up to $2500. Source: BLM Manual 1510-1.602-1			X	X	X	X	X	X	X	X
1510	Ratify unauthorized procurements up to the office's delegated acquisition authority by the Chief of the Contracting Office only with concurrence by the State or Center Director. This authority may not be re-delegated. Note: Legal review is required on ratifications in excess of $2,500 as per the Department of the Interior Acquisition Policy Release (DIAPR) 2001-3. _____ 1 - Unauthorized procurement in excess of $100,000 or the State Office delegated acquisition authority is ratified by the BLM Procurement Chief (WO-850). 2 - State/Office of Fire and Aviation Procurement Analyst, Chief (OR-952) and Division Administrators (BC- 660 and BC-670) only. Source: BLM Manual 1510-1.602-3				1		2	2		2	

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1510	Select, appoint and terminate Contracting Officers in accordance with the Department of the Interior Contracting Officers Warrant Manual. _____ * - BLM Procurement Chief (WO-850) only. Source: BLM Manual 1510-1.603				*						
1510	Suspend a Contracting Officer's warrant pending completion of corrective actions or while investigating procurement abuses or other potential causes for termination. _____ 1 - BLM Procurement Chief (WO-850) only. 2 - Division Administrators (Chief, National Acquisition Division BC-660) or the Division Administrators' supervisors. 3 - Chief of the Contracting Office (State Procurement Analyst, Chief (OR-952)) or the Contracting Officer's supervisor. Source: BLM Manual 1510-1.603				1		2	3		3	
1510	Unlimited dollar BLM-wide contracting, space leasing and open market information technology acquisition authority within Contracting Officer warrants. Unlimited dollar acquisition authority within Contracting Officer warrant in the States of Oregon and Washington only. Special purpose space leasing authority is limited to $25,000. Open market information technology acquisition authority is limited to $100,000. _____ 1 - National Business Center Contracting Officers only. 2 - Oregon State Office Contracting Officers only. Source: BLM Manual 1510-1.671						1	2			
1510, 1511	Authority to award/administer stewardship contracting projects, including those entered into by agreement (all contracts over $100,000 using this authority shall be conducted as performance-based acquisitions). _____ 1 – Contracting Officers who have been specifically delegated Stewardship Contracting Authority in writing by the BLM Procurement Chief. 2 - National Business Center Level III and Level IV Contracting Officers and the BLM Oregon State Office. Source: BLM Manual 1510-1.671				1			2			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1510	Authority not to exceed the $100,000 simplified acquisition threshold for open market acquisitions, the maximum order limitation in existing Government contracts and unlimited from required sources. NOTE: States without Procurement Analysts are limited to $25,000. Special purpose space leasing authority is limited to $25,000. _____ * - Contracting Officers in State Offices and Office of Fire and Aviation with Procurement Analysts only. Source: BLM Manual 1510-1.671							*		*	
1510	The ability to retain any excess offset values for reinvestment into other stewardship contracting projects without further appropriations. _____ * - Contracting Officer Source: Section 323 Public Law 108-7 and BLM Manual 1510-1.671				*						
1510	The authority to enter into stewardship contracts up to 10 years in length. _____ * - Contracting Officer Source: IM No. 2004-081 and BLM Manual 1510-1.671				*						
1510	Approve Justification for other than Full and Open Competition. - Up to $500,000. - Greater than $500,000 up to $10 million. - Greater than $10 million up to $50 million. - Greater than $50 million. _____ 1 - Contracting Officers within their warrant limits. 2 - BLM Procurement Chief (WO-850) only. 3 - Head of Contracting Activity (WO-800). 4 - Senior Procurement Executive. Source: BLM Manual 1510-6.304, 17.503		4		2 3		1	1		1	

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1510	Purchase card (Bank of America) acquisition authority less than the $2,500 micro-purchase threshold. Receipt of personalized card is the authority. Ordering authority under Blanket Purchase Agreements may be delegated to any BLM employee by a Contracting Officer. Fixed-price indefinite delivery contract ordering authority may be delegated by the cognizant Contracting Officer at the National Business Center or Oregon State Office to either a District/Field Contracting Officer or Contracting Officer Representative. _____ * - Contracting officer. Source: BLM Manual 1510-13			X	*	*	*	*		X	X
1510	Issue Invitations for Bids. _____ * - National Business Center, Fire and Aviation and State Office Contracting Officers only. Source: BLM Manual 1510-14						*	*		*	
1510	Issue Requests for Proposals. _____ * - National Business Center, Fire and Aviation and State Office Contracting Officers only. Source: BLM Manual 1510-15						*	*		*	
1510	Award Interagency/Intragency Agreements of unlimited dollar value. $25,000 authority may be re-delegated to District/Field offices only. Note: Legal review of required agreements in excess of $500,000 as per the DIAPR 2001-3. The BLM Procurement Chief's (WO-850) approval is required in excess of $500,000. _____ 1 - WO-850 Contracting Officers only. 2 - National Business Center Contracting Officers only. 3 - Up to $25,000 may be re-delegated to State, District, Field, or Center Contracting Officers after approval of the State/Center Procurement Analyst. Source: BLM Manual 1510-17.5		X	X	1		2	3		X	X

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1511	Unlimited dollar assistance agreement and reimbursable law enforcement agreement authority by Assistance Officers with a Level II or above Contracting Officer warrant and having completed assistance agreement training requirements. For assistance agreements, the Chief of the Contracting Office's approval is required on the Statement of Programmatic Involvement/Instrument Selection Determination (SPI/ISD). Assistance agreements that are expected to exceed $100,000 over the life of the agreement, including all modifications and task orders, require approval of the SPI/ISD by WO-850. _____ 1 - WO-850 Contracting Officers only. 2 - National Business Center Contracting Officers only. 3 - Up to $25,000 may be re-delegated to State, District/Field, or Center Contracting Officers for assistance agreements and reimbursable law enforcement agreements by Assistance Officers with a Contracting Officer warrant and having completed assistance agreement training requirements. For assistance agreements, the State/Center Procurement Analyst's approval is required on the Statement of Programmatic Involvement/Instrument Selection Determination (SPI/ISD).				1		2	3		3	3
1512	Terminate micro-purchase authority as indicated in paragraph 1.3.1.2 of the DOI Integrated Charge Card Program Guide dated March 12, 2002. _____ * - Chief of the Contracting Office. Source: BLM Manual 1512.06D			*			*	*		*	*
1512	Grant exemption from the mandatory use of government sponsored/contractor issued travel charge card. Source: BLM Manual 1512.21		X								
1512	Approve cash advance for cardholders who have lost their charge card privileges because their account was suspended or canceled due to delinquency or their cash advance authority has otherwise been restricted. _____ * - Assistant Director, Business and Fiscal Resources, only. Source: BLM Manual 1512.33				*						

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1512	Approve requests to use a corporate charge card account to purchase transportation tickets for a cardholder whose account is suspended or canceled. Source: BLM Manual 1512.4				X		X	X		X	X
1515	Approve Indian Self-Determination 638 contracts and Indian Self-Governance Annual Funding Agreements. Includes the authority to approve, negotiate and administer both 638 Contracts and Annual Funding Agreements. The obligation of funds will correspond to existing procurement delegations. _____ * - The authority to negotiate and administer funding agreements may be re-delegated to State Office Technical and/or Procurement leads only. Source: Public Law 93-638, Public Law 103-413							*			
1520, 1530	Exercise all of the authority delegated to the Assistant Secretary, Land and Minerals Management, in 205 DM 9, Personal Property Management, 205 DM 10, Real Property Management and 205 DM 11, Procurement and Contracting. _____ * - Assistant Director, Business and Fiscal Resources. Source: 235 DM 3.1				*						
1520	Acquires, safeguards, maintains, uses, reassigns and disposes of personal property under their jurisdiction. NOTE: See BLM Manual Section 1520 for specific delegations and limitations related to personal property management. _____ * - Accountable Officers only.					*	*	*	*	*	*
1520, 1521	Designated BLM Receiving Officers are authorized to sign receiving reports for Personal Property and Services after inspection and acceptance. This signature serves as the basis for the expenditure of Government funds.				X		X	X		X	X
1520, 1522	Serves as the BLM accountable officers. Source: BLM Manual 1520.04				X		X	X	X	X	X

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1520, 1525	Approves requests from Law Enforcement Officers under their jurisdiction to domicile government owned or leased vehicles. An approved copy of Form 1520-10 is sent to the appropriate Washington Office unit. _____ * - Cannot be re-delegated. Source: BLM Manual 1520.10							*			*
1520, 1525	Domiciling of Government Vehicles Approve requests to domicile Government-owned or leased vehicles at employee's place of residence in connection with Field work Approves requests to domicile Government-owned or leased vehicles in connection with official travel. _____ * - Cannot be re-delegated. Requests must be submitted through WO-850 Source: BLM Manual 1520.27	*			X		X	X	X	X	X
1523	Authorizes temporary storage of personal property for another Federal Agency, a contractor in connection with a Federal contract or cooperative agreement, State or local government, or an employee. A written agreement is required from all entities mentioned above with the exception of the employee. _____ 1 - Senior Property Management Specialist. 2 - State/Center Directors, Associate State/Center Directors, Deputy State/Center Directors, or District/Field Managers only.				1		2	2	2	2	2
1523	Accountable Officers, certifies accuracy of all inventories assigned prior to departure. Source: BLM Manual 1520				X		X	X		X	X
1523	Approves reassigning property within the State, except reassignment of motor vehicles and equipment in the Working Capital Fund which must be coordinated with the appropriate National Business Center Unit.							X		X	X
1523	Approves rental or loan of BLM-owned vehicles/equipment. Source: BLM Manual 1520					X	X	X		X	X
1524	Appoints standing board of survey to act on Reports of Survey originating in State/District/Field/Center Office.						X	X		X	X

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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1524	Appoints three-member special board of survey to act on Reports or Survey originating in State/District/Field/Center Office.				X		X	X		X	X
1524	Approves as Reviewing Authority all Reports of Survey and Certificates of Loss or Damage originating in offices under the State/Center Director. _____ * - May be re-delegated within the State Offices only.						*	*		X	X
1525	Sign and certify requisitions to purchase motor vehicles (requisitions are sent to the National Business Center).						X	X		X	X
1525	Approves repairs exceeding the maximum single-job repair percentage and all repairs to vehicle/equipment exceeding replacement standards (years, miles, hours). However, all must contact the appropriate National Business Center Unit for approval prior to repair.						X	X	X	X	X
1525	Approves incidental use involving "unofficial passengers" in extra space in motor vehicles and boats in cases of emergency or disaster situations to transport persons with injuries or in pain and to prevent death or serious damage to persons or property.				X		X	X	X	X	X
1527	Approves as Reviewing Authority decisions to scrap, salvage, or cannibalize a vehicle or equipment (must be coordinated with the National Business Center). _____ * - May be re-delegated within the State/Center Offices only.						*	*		X	X
1527	Sign available property reports, Form 1520-34. The delegation of authority is to Accountable Property Officers (State Director and District Managers). Redelegated as follows: 1) For the State Office, the delegation is specific to the State Office Property Manager (and the State Property Manager as backup). 2) For Districts, the delegation is specific to the District Property Manager for each District. May not be further re-delegated. See also Subject Code 1384 regarding designation of accountable property officers. Source: 410 DM and BLM Manual 1520							1	2		

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1529	Approve Transfer Orders, Excess Personal Property, SF-122, or other documents for acquiring personal property except motor vehicles and heavy equipment. Approve authorization to screen excess property lists, inspect property, and place freeze requests. _____ 1- State Office delegation is specific to the DSD for Support Services and Chief, Administrative Services. Source: 410 DM and BLM Manual 1520					X	X	X 1	X	X	X
1530	Reserve public easements in any conveyance of the public lands. Source: Public Law 92-303, 43 CFR 2650.4-7 and ANCSA Easements 17(b).							X			
1530	Approves abandonment, destruction, or donation to public bodies, constructed assets and related personal property having no commercial value.							X	X	X	X
1530, 1532	Approves safeguarding, maintaining, utilizing and recording accountability for BLM-owned real property.				X		X	X		X	X
1530	Approves utilizing real property, properly maintaining records and directing real property management programs.						X	X		X	X
1530	Authorizes the disposal of surplus real property and related personal property having fair market value of less than $1,000. _____ 1 - State Office delegation is specific to the DSD for Support Services and Chief, Administrative Services.						X	1	X	X	X
1530	Transfer or disposal of Real Property Valued under $50,000. _____ * - National Business Center						*				
1534	Assigns and terminates Government quarters for employees.						X	X	X	X	X
1535	Approves Reimbursable Work Authorizations (GSA Form 2957) for alterations costing less than $10,000 to GSA with proper coordination of the National Business Center (Space Leasing Branch). Reimbursable work authorization is a budget process.						X	X		X	X
1551	Approves issuance of site-specific general-purpose publications (471 DM 4.3) under $20,000. Source: IM No. 2005-15 and BLM Manual 1551.2						X	X		X	X

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1551	Approves printing through GPO and other authorized Federal sources. Source: BLM Manual 1551.6						X	X		X	X
1601	Decisions regarding staffing, management and protection of components of the National Landscape Conservation System. Approval of Resource Management Plans for components of the National Landscape Conservation System. Establishment and location of any BLM visitor center.			X				X X			
1601	Approve and conduct public participation activities. Source: 43 CFR 1610.2							X			
1601	Approve and publish plans and amendments. _____ * - Cannot be re-delegated. Source: 43 CFR 1610.5-1							*			

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1601, 2300	Specific sections of the Military Lands Withdrawal Act of 1999 pertaining to the Barry M. Goldwater Range, Section 3031(a)(5) pertaining to changes in use, Section 3031(b)(2) pertaining to access restrictions, Section 3031(b)(1)(C) pertaining to the Integrated Natural Resources Management plan and pertaining to the transfer of responsibility for the natural and cultural resources, Section 3031(c) through (f) pertaining to management and administration of the withdrawal itself, Section 3031(b)(7) pertaining to the transfer of management responsibility (limitations noted below) and Section 3031(g) pertaining to management of natural and cultural resources in accordance with the Integrated Natural Resources Management Plan and under the subsequent management plan developed in accordance with the Federal Land Policy and Management Act (limitations noted below). Decisions to accept transfer, relinquishment, or jurisdiction of lands under Section 3031 (g) and to open such lands to operation of the public land laws. Decisions to transfer management responsibility from or to a military department pursuant to subsection (b)(7). _____ *- BLM Director, cannot be re-delegated. Source: Public Law 106-65			* *				X			
1601	Issue national level guidance for planning. _____ * - Cannot be re-delegated. Source: 43 CFR 1600, 1610.1 and BLM Manual 1601.04			*	*					*	
1601, 1611	Issue supplemental guidance for planning. Source: 43 CFR 1610.1 and BLM Manual 1601.04			X	X			X			
1601	Render decisions on protests to plan or amendment approvals. _____ * - Cannot be re-delegated. Source: 43 CFR 1610.5-2 and BLM Manual 1601.4			*	*						

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
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1601	Approve management and quality control procedures with a State to achieve the BLM planning documentation and process standards. Approve activity plans to protect and prevent irreparable damage to important historical, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards. Source: Section 202, FLPMA, 43 CFR 1601 and BLM Manual 1601.4							X	X		
1601	Approve the schedule of a plan or amendment and arrange for the preparation. _____ * - Cannot be re-delegated. Source: BLM Manual 1601.4							*			
1601, 1631	Approve management and quality control procedures with a State to achieve the BLM planning documentation and process standards. Source: BLM Manual 1601.4							X			
1610, 1617	Approve and publish draft and final Resource Management Plans, amendments, and amendments to Management Framework Plans, revisions, and file RMP-related Environmental Impact Statements. The approval of an RMP, plan revision, or plan amendment constitutes formal designation of any Area of Critical Environmental Concern (ACEC) involved. Source: 43 CFR 1610 and BLM Manual 1617.1							X			
1610	Approve National Environmental Policy Act (NEPA) compliance documents to the level of the specific delegation of authority for approving the proposed action. Approve National Programmatic NEPA documents. 1) After consultation with, and concurrence of, the District Manager. Source: 40 CFR 1500				X			X	X		
1610	Approve Record of Decision (ROD) for land use plans - related environmental impact statements. Source: 40 CFR 1505 and 43 CFR 1610							X			

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		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
1610	Approve supplemental guidance and planning criteria for preparation of Resource Management Plans (RMPs). Source: IM No. 2006-046 and 43 CFR 1610							X			
1617	Determine conformity of resource management authorizations and actions, including proposals to higher level officials, to approved plans. Source: 43 CFR 1610.5-3 and BLM Manual 1617.3							X	X		
1617	Adopt another agency's plan. (43 CFR 1610.5-7). _____ * - Cannot be re-delegated. Source: 43 CFR 1610.5-7 and BLM Manual 1617.5							*	*		
1617	Review for designation areas unsuitable for surface mining. _____ * - Cannot be re-delegated. Source: 43 CFR 1610.7-1 and BLM Manual 1617.7							X	*		
1617	Designate Areas of Critical Environmental Concern. _____ * - Cannot be re-delegated. Source: 43 CFR 1610.7-2 and BLM Manual 1617.8							*			
1620	Approve supplemental guidance as necessary to maintain and use existing land use plans.							X			
1680	Waive or reduce administrative surcharge on reimbursable projects. _____ * - Assistant Director, Division of Budget only.					*		X			
1681, 1323	Waive or reduce administrative surcharge on contributed fund projects. Source: IM No. 2006-046				*		X	X			
1681	Approve exceptions to the Indirect Cost Rate-Trust Fund Projects (request on Form 1380-11a). Source: BLM H-1681-1							X	X		
1681	Manual Reimbursable Work Authorization _____ * - Division Chief only.					*	*	*			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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1691	Request Apportionments (SF-132) and Activity Allotments (DI-520) for BLM Appropriations. Approve and Issue Allotments of Appropriations. Approve Non-expenditure Transfers (SF-1151) among Accounts. _____ * - Division Chief, Division of Budget only.					* * *					
1702	Approve prospectus on all projects likely to have a total cost - Under $50,000. - $50,000 - $100,000. - Over $100,000. Approve implementation of an R&D or study project with estimated total cost - Under $50,000. - $50,000 - $100,000. - Over $100,000.			 X X	 X X		 X X X	 X X X		 X X X	 X X X
1703	Establish the DOI's policy and guidelines for hazardous materials management and natural resource damage assessment and restoration. Source: 112 DM 4 and E.0. 13016	X									
1703	Set inter-BLM priorities for program and site action and funding based on risk ranking, for hazardous materials management in the DOI. Source: 112 DM 4 and E.0. 13016	X									
1703	Establish and interpret legal requirement and guidelines for hazardous materials management and natural resource trusteeship in the DOI. Source: 112 DM 4 and E.O. 13016	X									
1703	Signatory Authority for congressional and interagency reports (e.g., E.O. 12856). Source: 112 DM 4 and E.O. 13016	X									

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1703	Approval of Remedial Investigation and Feasibility Studies. Source: 112 DM 4 and E.O. 13016			X							
1703	Approve Consent Decrees, Bilateral Administrative Orders, Indemnification Agreements, Interagency or Intergovernmental Agreements, covenants and related documents for Comprehensive Environmental Response Compensation and Liability Act (CERCLA) remedial action, Resource Conservation and Recovery Act corrective action, or CERCLA removal actions required by regulatory or judicial order, or by Record of Decision. Indemnification of response action contractors relating to response activities. _____ * - Cannot be re-delegated. Source: 112 DM 4 and E.O. 13016	X		*							
1703	Establish the DOI's policy and guidelines for hazardous materials management and Natural Resource Damage Assessment. Establish and interpret legal requirement and guidelines for hazardous materials management and natural resource trusteeship in the DOI. Source: 112 DM 4 and E.O. 13016	X X	X X								
1703	Set inter-BLM priorities for program and site action and funding based on restoration needs ranking for natural resource trusteeship in the DOI. Source: 112 DM 4 and E.O. 13016	X									
1703	Approve hazardous materials surveys for land disposals and acquisitions by the BLM by purchase, exchange, condemnation, donation, etc. _____ * - State Directors may approve Level I surveys which indicate no hazardous materials or where it will cost less than $500,000 to mitigate. This authority may be re-delegated. Source: 602 DM 2	X	X	*				*			
1703	Approve Level 1 hazardous waste contaminant surveys with negative findings. Source: 602 DM 2.6 d-f							X	X		

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1703	Approve participation with other BLM staff in natural resource damage assessment and restoration activities including signature of designation of a BLM Official. _____ * - Cannot be re-delegated. Source: 207 DM 6			*	*			*			
1703	Request the DOI for approval of designation of BLM as Departmental Authorized Official for Natural Resource Damage Assessment and Restoration activities. _____ * - Cannot be re-delegated. Source: 207 DM 6			*	*			*			
1703	Approve natural resource damage assessment and restoration reports, plans and agreements, consistent with the National Contingency Plan and appropriate regulations. - Approval of Memorandum of Understanding /Agreement. - Approval of Pre-Assessment Screen Report, Assessment Plan, Report of Assessment and Restoration Plan. - Approval of Restoration Completion Report. _____ * - Cannot be re-delegated. Source: 521 DM 3			*				*			
1703	General authority to implement natural resource damage assessment and restoration activities for sites within their jurisdiction. Source: 521 DM 2			X				X			
1703	Approve initiating any Remedial Investigation and Feasibility Study or any removal action greater than $500,000 via Record of Decision. Source: 207 DM 7			X							
1703	Set BLM policy for hazardous materials management and natural resource damage assessment and restoration. Source: 521 DM 2			X							

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1703	Set policy for hazardous materials management and natural resource damage assessment and restoration within area of jurisdiction. Source: 521 DM 2				X		X	X		X	X
1703	Set program and site action priorities on public lands based on hazardous materials risk ranking and natural resource restoration needs. Source: 521 DM 2			X	X	X					
1703	Set program and site action priorities within area of jurisdiction. Source: 521 DM 2						X	X		X	X
1703	Conduct hazardous materials management and natural resource damage assessment and restoration contracting activities that are managed on a Bureau-wide basis. Source: 521 DM 2			X	X	X	X				
1703	Approval for initiating Natural Resource Damage Assessments and restoration activities at Field sites. Source: 521 DM 2			X							
1703	Interagency Reporting of Federal Facilities Docket sites and biennial Resource Conservation and Recovery Act Section 3016 reports.			X	X	X					
1703	Interagency coordination of Bureau-wide policy and legal issues (Comprehensive Environmental Response Compensation and Liability Act, Section 120). Source: E.O. 12088 and E.O. 13016			X	X	X					
1703	Interagency coordination on policy and legal issues within area of jurisdiction.						X	X		X	X
1703	Response to Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Section 120 Reporting Requirements, including Alternative Funding Sources.			X	X	X					
1703	Conduct specific reporting of hazardous materials risks and management activities required by CERCLA Section 103, Resource Conservation and Recovery (RCRA) Act Sections 3005 and 3010, RCRA manifests and summaries, small quantity generator reports provision, other generator reports provisions, and other Federal and State laws for sites and action within their own jurisdiction.						X	X		X	X
1703	Conduct specific reporting and contingency planning required by Emergency Planning and Community Right-To-Know Act within their own jurisdiction.						X	X		X	X

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1703	Conduct contingency planning and emergency response decisions (and contracting) with appropriate reporting and coordination with Federal and State or local requirements. Source: E.O. 13016				X			X		X	X
1703	Conduct inventories of known or suspected hazardous substance release sites on public lands. Prepare appropriate land status assessments on each site discovered.							X			
1703	Initiate and manage Expanded Site Investigation Contracts or plan Remedial Investigation and Feasibility Studies.							X			
1703	Initiate and prepare the administrative records required for all sites of emergency response or removal actions or any other Comprehensive Environmental Response Compensation and Liability Act (CERCLA) action after completion of a site investigation on a site in compliance with Section 113(k) of CERCLA and the National Contingency Plan. Source: 40 CFR 300 and BLM Manual 1703.06							X			
1703	Negotiate and recommend to the Secretary allocation agreements with other parties on costs of restoration actions, consistent with the Justice Department or Solicitor guidance or concurrence. _____ * - Cannot be re-delegated. Source: BLM Manual 1703.06			*				*			
1703	Establish procedures for control of hazardous materials risks and liability for all programs within their jurisdiction. Source: BLM Manual 1703.06			X	X	X	X	X	X	X	X
1703	Approve any authorized activities involving hazardous materials as being subject to appropriate laws and permits at all applicable levels. Cosign Resource Conservation and Recovery Act permits. _____ * - Cannot be re-delegated. Source: BLM Manual 1703.06							*			

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1703	Ensure appropriate coordination between the BLM hazardous materials management and all other related BLM programs and designate hazardous materials management Program Leaders and Coordinators at appropriate locations in the organization and within areas of jurisdiction. Source: BLM Manual 1703.06			X	X	X	X	X	X	X	X
1703	Inventory, manage and audit the BLM's internal waste streams within each BLM facility and meeting required reporting and minimization provisions for any hazardous wastes with their jurisdiction. Source: BLM Manual 1703.06						X	X		X	X
1703	Signatory and certification authority for hazardous waste disposal manifests and permits required within their jurisdiction. Source: BLM Manual 1703.06						X	X	X	X	X
1703	Provide adequate opportunities for hazardous materials training for personnel within their jurisdiction.				X	X	X	X	X	X	X
1703	Request funding for multi-year hazardous materials management projects.		X	X	X	X		X		X	
1703	Authorize decision to prepare Record of Decision, recommend action to the Secretary, on remedy selection (under Remedial Investigation and Feasibility Studies or corrective action, or on approval of a consent degree, order or agreement for cleanup of a site). Source: BLM Manual 1703.06							X			
1703	Authorize decision to prepare a Record of Decision and recommendation to the Solicitor/Secretary on Indemnification Agreements. Source: BLM Manual 1703.06							X			
1703	Authorize decision to prepare a Record of Decision and recommend action to the Director or Assistant Secretary on Natural Resource Damage Assessments.							X			
1703	Negotiate draft Indemnification Agreements, remedial or corrective action agreements or consent decrees, in consultation with the Solicitor, for recommendation to the Director or the DOI. Source: BLM Manual 1703.06			X				X			

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1703	Approve sub-agreements on secretarially approved Remedial Investigation and Feasibility Studies, Remedial Design and Remedial Action, or major removal. (e.g., safety plan agreements, public participation plan, penalty negotiations, etc.)							X			
1703	Initiate and manage Remedial Investigation and Feasibility Study as approved by the Director consistent with the National Contingency Plan. Source: 900 DM 2							X			
1703	Initiate and manage Remedial Design and Remedial Action as approved by the Department of the Interior and as necessary, the Environmental Protection Agency and applicable States, consistent with the National Contingency Plan.							X			
1703	Negotiate and recommend allocation agreements with other parties to the Secretary on costs of remedial or removal actions or corrective actions consistent with the National Contingency Plan and the Department of Justice or Solicitor guidance or concurrence. Source: BLM Manual 1703.06			X				X			
1734	Approve all actions under Section 201 of the Federal Land Policy and Management Act necessary to coordinate the preparation and maintenance of an inventory of the public lands and their resources and related monitoring activities.				X			X			
1738	Approve and issue guidance and take actions as necessary to carry out BLM functions and responsibilities under the Coastal Zone Management Act of 1972, as amended. Source: 15 CFR 923			X							
1738	Approve consistency of BLM actions with approved State Coastal Zone Management Plans, where required. Source: 15 CFR 923							X			

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1742	Normal and Emergency Stabilization and Burned Area Rehabilitation - Approve. - Approve funding for less than $500,000. - Approve funding for more than $500,000. Revoke or withhold funding approval authority. Approve normal and emergency funding from the Wildland Fire Management Account. _____ * - Division Chief, Division of Budget only. Source: 620 DM 3					 * *		 X X 			
1742	Approve Normal Fire Rehabilitation Plan. Source: BLM H-1742-1							X			
1745	Approve reintroduction, transplant and augmentation of species. Source: 620 DM 3							X			
1750	Approve the position of the DOI on legislation and legislative matters.	X	X								
1760	Promulgate and issue regulations under the various statutory authorities.	X	X								
1776	Approve International Agreements. Source: 1 U.S.C. 112A			X							
1784	Approve (sign) charters for Advisory Boards/Councils. Appoint members of Advisory Boards/Councils. Source: 41 CFR 102 and 308 DM	X X									

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1786	Approve Memorandum of Understanding in consultation with a Procurement Analyst. NOTE: Federal funds may not be obligated in a Memorandum of Understanding. Authorities for awarding Assistance and Law Enforcement Agreements under the Grants and Cooperative Agreements Act with non-Federal parties are included under Subject Code 1511. Authorities for other Agreements are included under the appropriate Subject Code references. The authority for transferring funds to other Federal agencies is included in Subject Code 1510-17.5. See Subject Code 9260 for agreements that confer or accept law enforcement authority to and from other agencies.	X	X	X	X	X	X	X	X	X	X
1790	Approve determination that an action is categorically excluded under the National Environmental Policy Act. Source: 40 CFR 1500.4, 516 DM 6 and Appendix 5							X			
1790	Approve finding of no significant impacts with associated environmental assessment. Source: 40 CFR 1501.4, 516 DM 6 and Appendix 5							X			
1793	Publish, file and approve draft and final environmental impact statements and associated records of decisions, consistent with Assistant Secretaries delegations. _____ * - Authority for Legislative Environmental Impact Statement's (i.e., Wilderness or Wild and Scenic Rivers) and associated reports and transmittals have not been delegated to the BLM. Source: 40 CFR 1502.9, 516 DM Appendix 5	*	*	X				X			
1813	Approve Notations to Public Land Records. _____ NOTE: Except Cadastral Survey Records.							X			
1813	Approve publication of Federal Register notices.							X	X		
1813	Approve filing of survey plats. (see Subject Code - 9600)										
1813	Approval and inspection of serial register.							X			
1813, 1270	Authority to provide certified copies of records/papers. Source: 310 DM 10			X			X	X		X	X
1815	Approve Disaster Relief.		X								
1815, 5400	Timber Sale Contracts (see Subject Code 5400)										

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1821	Execution and filing of forms. All functions. Source: 380 DM 7							X			
1822	Approve payments and repayments. Source: Section 304, FLPMA and 43 U.S.C. 1734.							X			
1823	Approve Proofs and Testimony, Touhy request and subpoena functions. All functions.							X			
1824	Publication and posting of notices. All functions.							X			
1825	Approve Relinquishments. All functions							X			
1826	Reinstatement of canceled entries. All functions.							X			
1850	Approve Hearing procedures for other than Interior Board of Land Appeals Cases.							X			
1850	Approval of Reservations, Reverters or Reversionary Clauses, Covenants, and Condition of Conveyance documents. Source: 43 CFR 1860 and BLM H-1860-1							X			
1850	Act on Government Contests.							X			
1860	Issue conveyance documents.							X			
1860, 1862	Patent preparation and issuance. All functions. Issue Certificate of Allotment, Trust Patent, and Fee Patent. Source: BLM H-1860-1							X			
1860	Issue Clear Lists and other conveyance documents. Source: 43 CFR 1860							X			
1862	Prepare and issue patents and amendments of patents or their equivalent for grants of land under the authority of the Government in the name of the United States other than conveyance which require the approval or signature of the President of the United States. All functions.							X			
1863	Approve other title conveyances. All functions.							X			
1864	Assume all actions relating to the issuance of recordable disclaimers of interest subject to Regional or District/Field Solicitor review and concurrence. Source: Section 315, FLPMA and 43 CFR 1864							X			
1865	Issue correction documents of conveyance subject to Regional or District/Field Solicitor review and concurrence. Source: 43 CFR 1865 and Section 316, FLPMA							X			
1871	Authority for adjudication. All functions.							X			

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1871	Cases subjected to equitable adjudication. All functions.			X	X			X			
1872	Disposition, Records and Testimony Deny or approve employee testimony or production of records (Subpoena Duces Tecum) related to court proceedings in which the United States in not a party. _____ * - Cannot be re-delegated. Must consult with the Office of the Solicitor. Source: 43 CFR 2.80			*	*		*	*			
1881	Approve payments in lieu of taxes. All functions.							X			
1882	Approve mineral development impact relief loans. All functions.			X	X	X					
2000, 2100, 2700	Provide for the orderly disposal of certain Federal lands and to provide for the acquisition of environmentally sensitive land in the State of Nevada, under the Lincoln County Land Act of 2000 as of October 13, 2000 (Public Law 106-298), inclusive of expenditure amounts deposited in the special account for purposes described in section 5(3)(b)(1)(A), (B), (C) and (D) of this Act. Establish wilderness areas, promote conservation, improve public land, and provide for the high quality development in Lincoln County, Nevada, and for other purposes, under the Lincoln County Conservation, Recreation, and Development Act of 2004 as of November 30, 2004 (Public Law 108-424), inclusive of expenditure amounts deposited in the special account for purposes described in section 103(b)(3)(A),(B),(C),(D),(E) and (F) of this Act.			X X				X X			
2091	Segregate and open lands. All functions.			X	X			X			
2100	Authorize payment to cover certain costs in relocating (moving) a private party when the private property that is occupied is acquired by the BLM. Source: 42 U.S.C. 4601 et seq; 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762.							X			

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2100	Approve acquisitions, including donations, purchases, exchanges and eminent domain/declaration of taking (approval of negotiated settlements in exceeding $2,000 above the appraised value cannot be re-delegated). In addition, all negotiated settlements under the Land and Water Conservation Fund require congressional approval. Delegation includes all functions under the Uniform Relocation Assistance and Property Acquisition Act, (PL 91-646) as amended. (Refer also to Subject Code 2200). _____ * - Approval by the Office of Solicitor							*			
2100, 2120	Approve Leases (Pierce Act-Grazing). All actions.							X			
2100, 1703	Approve Acquisitions. _____ * - State Director only for acquisitions more than $2,000 over the appraised value. State Directors may approve surveys for hazardous substances where no hazardous materials exists and where the cost to remove and otherwise mitigate does not exceed $250,000. This authority may be re-delegated.							*			
2110	Release or cancel rights acquired for access easements in perpetuity. Make partial or complete cancellation. (Does not include Land and Water Conservation Fund acquisitions; authority lies with Secretary of the Interior.) Source: 43 U.S.C. 1715, 1737, 1762; 42 U.S.C. 4601 et seq.; 1241 et seq.; 16 U.S.C. 1271 et seq.; 23 U.S.C. 214; 69 stat. 374; 43 U.S.C. 1181a et seq., 315 et seq.; 40 U.S.C. 257 and 43 CFR 2110, 2130							X			
2110	Accept as a gift, on behalf of the United States, any land or interests therein where such action promotes the purposes of the BLM or facilitates the administration of the public land and resources. Source: 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762							X	X		
2120	Release or cancel contract leases, permits, and temporary access easements. Make partial or complete cancellation. Source: 43 CFR 2120, 2800; 43 U.S.C. 315, et seq.; 16 U.S.C. 590a; 66 Stat 597; 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762							X	X		

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2133	Negotiate fee or partial interest through a mutual agreement between the Owner of Record and the BLM, which would also include payment. Source: 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762							X	X		
2137	Approve fee or partial interest by BLM through court action. Source: 40 U.S.C. 257; 40 U.S.C. 258a; 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762							X			
2200	Approve all actions, subject to the title opinion of the District/Field or Regional Solicitor, in all matters relating to exchange of lands and issuing conveyance documents under the Federal Land Policy and Management Act or other authority. Bargaining and other appropriate negotiating processes are acceptable means of determining final value settlements.							X			
2201, 2710, 2740, 2920, 2912	Accept real estate appraisal services (see note 1) for purposes of setting minimum bid values, offer of market value, rents, and recommendations regarding disputes. _____ 1 - Real Estate appraisals are prepared by the US Department of the Interior, Appraisal Services Directorate. Source: IM 2004-190.							X	X		
2300	Sign requests to Federal Energy Regulatory Commission (FERC) for concurrence before issuance of a permit or lease within a powersite classification or reservation. Source: 43 CFR 2300							X	X		
2300	Sign requests to FERC for concurrence before issuance of Right-of-Way within powersite classification or reservation. Source: 43 CFR 2300							X	X		
2300	Make, modify, extend, revoke, or terminate withdrawals, including waterpower and reservoir resource withdrawals regardless of which Department or agency administers the lands in accordance with the provisions and limitations of Section 204a of the Federal Land Policy and Management Act. Source: 603 DM 1	X	X								

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2300	Approve a petition from an Interior Agency for a withdrawal application. Source: 603 DM 1	X	X								
2300	Publish Federal Register notices to segregate lands in a withdrawal petition or application and request public comments. Approve requests for land segregation. Approve applications for licenses, permits, cooperative agreements, etc., on lands segregated by publication of a withdrawal notice. Publish Federal Register notices opening lands if the withdrawal application is canceled or terminated. Conduct public meetings. Prepare findings and recommendations on withdrawal actions. Also prepare proposed order or notice of denial.	X	X					X X X X X			
2300	Determine with the concurrence of the Administrator of the General Services Administration that lands withdrawn or reserved from the public domain and subsequently declared excess to the needs of the agency are suitable or not suitable for return to the public domain for management under the general public land laws. Determine suitability for disposition under the mineral leasing laws minerals in lands or portions of lands withdrawn or reserved for the needs of the agency. Source: 43 CFR 2300							X X	X		
2300	Issue orders of restoration where revocation or modification of a withdrawal or reservation is not involved. All such orders must be published in the Federal Register. Source: 43 CFR 2300							X			
2300	Make, modify, or revoke withdrawals. Source: 43 CFR 2300 and E. O. 10355	X	X								

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2320	Request a determination (or vacation of a power project withdrawal) under Section 24 of the Federal Power Act. _____ * - State Directors, Associate State Directors and Deputy State Directors only. Source: 43 CFR 2320							*			
2320	Provide the Federal Energy Regulatory Commission an opportunity to comment on all the BLM reports which justify the modification, revocation, or termination of waterpower resource withdrawals by the Secretary of the Interior. _____ * - State Directors, Associate State Directors and Deputy State Directors only. Source: 43 CFR 2320							*			
2320	Prepare reports and recommendations to the Federal Energy Regulatory Commission relating to applications for interim use (Rights-of -Way, mineral lease, etc.) of power-site lands. Source: 43 CFR 2320							X			
2320, 2091	Notation of records upon receipt of a notice (43 CFR 2091) from the Federal Energy Regulatory Commission of a new power project withdrawal or the vacation of a power project withdrawal.							X			
2320	Authority to provide the Notice to the Governor as required by Section 24 of the Federal Power Act.							X			
2320	Approve reports and recommendations to FERC relating to applications received for outright revocation or revocation subject to the provision of Section 24 of the Federal Power Act for Waterpower Withdrawals. Source: 43 CFR 2320							X			
2355	Modify (such as to continue), or terminate withdrawals or reservations in accordance with the provisions and limitations of Section 204(1), Federal Land Policy and Management Act.	X	X								
2360	Actions on National Petroleum Reserve in Alaska (NPRA). All functions _____ * - Subject to compliance with Attorney General Notification Requirements. Source: 43 CFR 3130, 43 CFR 2361.2 and NPRA, 1976							*			

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2370	Authority to revoke withdrawals or reservations of public lands.	X	X								
2374	Acceptance of Jurisdiction. _____ * Concurrence appropriate office Source: 43 CFR 2374.1			*							
2400	Issue notices of realty action, proposed and initial classification decisions and classification terminations. Source: 43 CFR 2400							X	X		
2520	Approve and reject desert land applications; approve field report, environmental assessments, cultural clearances, and issue notice of allowance. Approve annual proofs. Take final proofs. Source: 43 CFR 2520							X	X		
2530	Assume all actions relating to Indian allotments on the public lands with the concurrence of the Commissioner of Indian Affairs as to applicant eligibility. Source: 43 CFR 2530							X	X		
2540	Assume all actions relating to Color-of-Title and riparian claims. Source: 43 CFR 2540							X			
2561	Assume all actions relating to Alaska Native Allotments with the concurrence of the Commissioner of Indian Affairs. Source: 43 CFR 2561 and Public Law 96-487 and Public Law 108-452.							X			
2563	Assume all actions on home sites and headquarters sites in Alaska. Source: 43 CFR 2563 and Public Law 96-487.							X			
2564, 2565, 2566	Assume all actions on all townsite matters except withdrawals, including the designation of townsites trustees. Source: 43 CFR 2564 and 2565.							X			
2568	Assume all actions relating to Alaska Native Veterans Allotments except for issuance of a Conservation System Unit (CSU) consistency determination where the land is managed by a Federal agency other than the BLM. Source: 43 CFR 2568 and 43 U.S.C. 1629g							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
2611	Approve Carey Act development plans and contracts for transmittal to Director. Source: 43 CFR 2611							X			
2611, 2620	Assume all actions on State grants and selections, including actions under Public Law 108-452. Issue classification decisions on Carey Act applications. Source: 43 CFR 2611 and 2620							X	X		
2630, 2400	Adjust railroad grants and claims subject to approval of the validity of the grant rights. Assume all actions on State grants and selections, including actions under Public Law 108-452. Source: 43 CFR 2620							X	X		
2630	Adjust railroad grants and claims subject to approval of the validity of the grant rights. Source: 43 CFR 2630							X			
2630	Exercise the authority of the Secretary of the Interior under the Alaska Railroad Transfer Act of 1982. Source: 43 CFR 2630 and Public Law 97-468, 96 Stat. 2556.							X			
2640	Approve all actions under the Airport and Airway Improvement Act of 1982, subject to the Department of Justice concurrence. Source: 43 CFR 2640							X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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2650-2655	Assume all actions delegated to the Director, BLM, by 235 DM l.lG under the Alaska Native Claims Settlement Act of December 18, 1971, as amended, including:										
	- Execute agreements;							X			
	- Make navigability determinations;							X			
	- Determine, reserve, and terminate easements;							X			
	- Make determinations of public lands;							X			
	- Issue decisions and conveyances;							X			
	- Grant non-statutory waivers of regulations;	X									
	- Grant waivers of whole section selections;	X		X				X			
	- Conduct exchanges of lands or selection rights;	X		X				X			
	- Approve all functions pertaining to survey of Native village lands for purposes of re-conveyance as required by Act of Dec. 18, 1971, 85 Stat.702 (43 U.S.C. 1612); and							X			
	- Assume all actions delegated to the Director, BLM, under the Alaska Land Transfer Acceleration Act, Public Law 108-452, including the authority in section 201 to grant waivers of selection filing deadlines under sections 12 and 16 of the Alaska Native Claims Settlement Act.							*			
	_____ * Cannot be re-delegated.										
2650, 2655	Approve all activities under the Agreement and Grant of Right-of -Way (ROW) for Trans Alaska Pipeline System necessary to carry out the Operations, Maintenance and Termination of the ROW. Source: 613 DM 2 and 43 CFR 27							X			
2650	Exercise the authority of the Secretary of the Interior under the Alaska National Interest Lands Conservation Act of December 2, 1980 (Public Law 96 -487, 94 Stat. 2371). This authority does not include authority granted to the Assistant Secretary, Indian Affairs, or the Assistant Secretary, Fish and Wildlife and Parks. Source: 613 DM 2							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
2710	Assume all actions on public land sales pursuant to Section 203 of the Federal Land Policy and Management Act (43 U.S.C. 1712) subject to congressional review for sales of more than 2,500 acres.							X			
2720	Approve all actions relating to the conveyance of Federal owned mineral interests as provided in Section 209 of the Federal Land Policy and Management Act. Source: Section 209, FLPMA and 43 CFR 2720							X			
2740	Issue transfers and change of use documents. Source: 43 CFR 2740							X	X		
2740	Approve all actions with respect to conveyances for recreation and public purposes to Federal, State and local Government units and nonprofit associations and corporations. Source: 43 U.S.C. 869-4, as amended and Section 212 FLPMA.							X	X		
2760	Approves townsite public reserve on reclamation project lands. Patent issuance actions only.							X			
2800	Determine cost recovery fees for processing and monitoring a ROW application or grant (except for reduction or waiver of cost recovery fees for hardship). Source: 43 CFR 2800 (Title V of FLPMA) and 43 CFR 2880 (Section 28 of the Mining Law Act (MLA))							X	X		
2800	Reduce or waive of cost recovery fees for processing and monitoring a ROW application or grant because of hardship. Source: 43 CFR 2800 (Title V of FLPMA) and 43 CFR 2880 (Sec. 28 of the MLA)							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
2800	Approve all actions required for the granting and management of Rights-of –Way:										
	- Title V of the Federal Land Policy and Management Act (FLPMA).							X			
	- Sec. 28 of the Minerals Leasing Act, as amended.							X			
	- Appropriations under Title 23 of the Federal Highway Act.							X			
	- Titles I and III of the Alaska National Interest Land Conservation Act.							X			
	- Administration of grants issued under authorities repealed by Title VII of FLPMA.							X	X		
	- Determinations of assertions under R.S. 2477.							X			
	- Issuance of perpetual Right-of -Way grants and temporary use permits.							X	X		
	- Interstate Right-of -Way Grants.			X	X			1			
	- Interdistrict of Right-of -Way grants and temporary use permits.			X				1			
	-Within District Right-of -Way grants.			X				1	X		
	- Departmental EEO Compliance Officer (Trans-Alaska Pipeline System (TAPS)).							2			
	- All activities under the Agreement and Grant of Right-of Way for TAPS necessary to carry out the Operations, Maintenance and Termination of the Rights-of -Way.							X			
	_____ 1– Delegation of Lead State by Director only. 2 – Alaska, BLM, EEO Officer.										
	Source: 613 DM 2										

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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2800	Determine the rental charge for land within the Right-of-Way boundary for grants under the Linear ROW Schedule (Except for reduction or waiver of rent for hardship, or decision not to use Communication Use Rent Schedule) Source: Title V of FLPMA and 43 CFR 2880 (Sec. 28 of the MLA)							X	X		
2800	Reduction or waiver of rent for hardship, or decision not to use Communication Use Rent Schedule to determine rental charge. Source: Title V of FLPMA and 43 CFR 2880 (Sec. 28 of the MLA).							X			
2800	Approve cost-share and road-use agreement - consummate agreements for the construction and use of roads on land owned or controlled by the parties involved and the sharing of construction cost. Source: Section 502(a) of FLPMA							X	X		
2800	Approve site-specific proposals under terms of each cost-share and road-use agreement. Source: Section 502 (a), FLPMA							X	X		
2800	Require user(s) of roads or trails to maintain them on a pro-rata basis or to accept funds to provide for maintenance. Expend these deposited funds for the maintenance of any road or trail under the BLM jurisdiction. Source: 43 U.S.C. 1382.							X	X		
2800	Approve all actions pertaining to the granting and management of rights-of-way issued for power project facilities developed after 1992, located on the BLM administered lands and licensed by Federal Energy Regulatory Commission (FERC).							X			
2810	Rights-of -Way and Road Use Agreements (Timber Management only, 43 CFR 28 12). - Approve permits and agreements. Consummate reciprocal permits and agreements for the construction and use of roads on lands owned or controlled by the parties involved and the sharing of construction costs. - Assume actions under the terms of reciprocal permits and agreements approving site specific proposals under the terms of each permit and agreement.							X X X	X X X		
2911	Approve and issue Airport Leases. All actions.							X	X		

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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2912	Accept real estate appraisal services* for purposes of setting minimum bid values, offer of market value, rents, and recommendations regarding disputes. _____ * - Real Estate appraisals are prepared by the US Department of the Interior, Appraisal Services Directorate. Source: (IM No. 2004-190)							X	X		
2912, 2740	Recreation and Public Purpose Act Leases. Source: See 43 CFR 2740, 2912							X	X		
2916	Approve Alaska Fur Farm Leases. All actions. (Under the Act of July 3, 1926, Alaska only).							X			
2920	Approve leases, permits and easements. All actions. Source: Section 302, FLPMA							X	X		
2930, 2920, 1786	The Federal Lands Recreation Enhancement Act (Public Law 108.447): Approve Recreation Fee Site communication, marketing, and business plan. Submit proposal for Recreation Fee Sites and fee increases for Recreation Resource Advisory Committee review. Approve Recreation Fee Sites and Fee Increases. Prepare the Triennial Recreation Fee Project Report to Congress. Use authorizations for recreation and concession leases.		X			X X		X X X X			
2932	Establish the conditions where special recreation permits are required. Source: 43 CFR 2932.13							X	X		
2932	Accept Special Recreation Permit Application earlier than 180 days prior to use. Source: 43 CFR 2932.22							X			
2932	Approve maximum time by which Special Recreation Permit applications will be accepted. Source: 43 CFR 2932.22							X			

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2932	Approve issuing and administration of Special Recreation Permits. Source: 43 CFR 2932.26							X			
2932	Establish and maintain fees for commercial Special Recreation Permits. Establish and maintain fees for all other Special Recreation Permits. Source: 43 CFR 2932.31			X				X			
2933	Approve issuing and administration of Recreation Use Permits. Source: 43 CFR 2933							X			
3000*	Act on minerals management activities, including fair market value determinations and all mandatory prerequisites for minerals actions. Classify Mineral Lands. Approve Mineral Land classification standards. *Solicitor's opinion.				X			X X	 X		
3000	Act on protests and appeals. Source: 43 CFR 4.							X			
3060	Prepare Mineral Reports.							X			
3100	Act on oil and gas leases. Sources: Act of February 25, 1920 (30 U.S.C. 181, et seq.), as amended and supplemented, the Act of August 7, 1947 (30 U.S.C. 351-359), as amended, the Act of May 21, 1930 (30 U.S.C. 301-305), the Attorney General's Opinion of April 2, 1941 (Vol. 40 Op. Atty. Gen. 41)and other statutory authorities provided in 43 CFR 3100.0-3.							X			
3100	Execute drainage agreements. Source: 43 CFR 3100.2-1							X			
3100, 3162	Authorize payment of compensatory royalty. Source: 43 CFR 3100.2-2 and 3162.2							X			
3101, 3162	Require reasonable measures to minimize adverse impacts to other resource values within listed specifications. Source: 43 CFR 3101.1-2 and 3162.2							X			

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3103	Approve royalty rate reductions. Source: 43 CFR 3103.4							X			
3103	Approve suspensions of operations and/or production. Source: 43 CFR 3103.4							X			
3104, 3474	Approve bonds. Source: 43 CFR 3474							X			
3104	Increase bond amounts. Source: 43 CFR 3104.5							X			
3104	Terminate period of bond liability. Source: 43 CFR 3104.8							X			
3105	Approve combinations for joint operations or for transportation of oil applications. Source: 43 CFR 3105.4							X			
3105	Approve subsurface storage agreements and related activities. Source: 43 CFR 3105.5							X			
3106	Approve general transfers. Source: 43 CFR 3106.1							X			
3107	Approve diligent drilling extensions. Source: BLM Manual 3107							X			
3107	Make Natural Gas Policy Act determination recommendations to Department of Energy. Source: 18 CFR 274.501							X			
3107	Issue determinations that leases may be extended due to drilling operations. Source: 43 CFR 3107.1							X			
3107	Issue determinations that leases in their extended term are considered either capable or no longer capable of production in paying quantities. Source: 43 CFR 3107.2							X			
3107	Issue order to place well in production. Source: 43 CFR 3107.2-3							X			
3108	Assume action on lease relinquishments. Source: 43 CFR 3108.1							X			

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3108	Assume action on lease termination and reinstatements. Source: 43 CFR 3108.2							X			
3108	Assume action to cancel leases for noncompliance. Source: 43 CFR 3108 .3							X			
3130	Approve all action on oil and gas leases, geophysical exploration permits and applications for permits to drill in the National Petroleum Reserve in Alaska (NPRA) pursuant to the Department of the Interior Appropriations Act, Fiscal Year 1981. Approve all actions and conduct all studies necessary to provide the congressionally-mandated protections to NPRA special areas as discussed in the Naval Petroleum Reserves Production Act of 1976. _____ * – Alaska State Director only. Source: 43 CFR 3130, 42 U.S.C. 6504, 94 Statute 2957, and Record of Decision January 11, 2006							* * 			
3130	Approve all actions and conduct all studies involved in any cooperative planning for financing and permitting of a pipeline or pipelines to transport NPRA hydrocarbons as authorized in the Naval Petroleum Reserves Production Act of 1976. _____ * – Alaska State Director only. Source: Source: 43 CFR 3130 and 42 U.S.C. 6501							*			
3140, 3141	Approve Tar Sands plan of operations. Approve Tar Sands hydrocarbon lease. Source: 43 CFR 3141							X X			
3150	Act on oil and gas geophysical exploration permits. Source: 432 CFR 3150							X			
3160	Approve applications for permit to drill for oil and gas in potash area in New Mexico only. _____ * – New Mexico State Director only. Source: 43 CFR 3160							*			

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3161	Approve unitization, communitization, gas storage and other contracts for Federal lands. Source: 43 CFR 3161							X			
3162, 3251, 3261	Approve Geothermal plans of: - Exploration off lease. - Exploration on lease. Source: 43 CFR 3162.7-2, 43 CFR 3251.13 and 43 CFR 3261.20							 X X			
3162	Monitor drilling obligations. Monitor producing obligations. Source: 43 CFR 3162							X X			
3162	Make drainage determinations and require operators to protect Federal and Indian lands from drainage, including the payment of compensatory royalty. Source: 43 CFR 3162							X			
3162	Make diligence determinations to assure diligent development of producing Indian leases. Source: 43 CFR 3162							X			
3162	Approve drilling applications and plans. Source: 43 CFR 3162.3-1							X			
3162	Approve subsequent well operations (reenter, workover, production facilities plug and abandonment). Source: 43 CFR 3162.3-2							X			
3162	Approve additional surface disturbance. Source: 43 CFR 3162.3-3							X			
3162	Approve well abandonment. Source: 43 CFR 3162.3-4							X			
3162	May require lease records. Source: 43 CFR 3162.4-1							X			
3162	Require samples, tests, and surveys. Source: 43 CFR 3162.4-2							X			
3162	Approve method of water disposal. Source: 43 CFR 3162.5							X			

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3162	Sets standards for disposition of production, including: - Approve surface commingling between leases; - Approve oil and gas measurement devices; - Approve off-lease storage and/or measurement; and - Approve applications for venting of produced gas. Source: 43 CFR 3162.7							 X X X X			
3162	Stop and inspect motor vehicles carrying oil from Federal or Indian Leases. Source: 43 CFR 3162.7							X			
3162	Determine commercially-productive wells for variable royalty rate leases. Source: 43 CFR 3162.7-4							X			
3162	Approve variances from minimum site security standards. Source: 43 CFR 3162.7-5							X			
3162	Oil or gas production verification. Source: 43 CFR 3162.7-5/3192.2-3							X			
3163	Issue incidents of noncompliance. (Shut-in operations or perform operations for compliance.) Source: 43 CFR 3163.1							X X			
3163	Determine and charge assessments. Source: 43 CFR 3163.1							X			
3163	Determine and levy civil penalties. Source: 43 CFR 3163.2							X			
3163	Compromise or reduce civil penalties. _____ * - Cannot be re-delegated. Source: 43 CFR 3163.2 (h)							*			
3163	Bring civil action. _____ * - Attorney General of U.S. or designee. Source: 43 CFR 3163.6							*			

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3164	Issue Onshore Oil and Gas Orders. Source: 43 CFR 3164.1			X							
3164	Issue Notice to Lessees. Source: 43 CFR 3164.2							X			
3165	Act on requests for administrative review. Source: 43 CFR 3165.3							X			
3180	Approve all actions associated with fluid mineral unit agreements, including: - Make paying quantities determinations under approved units. - Designate logical areas for unit agreement. - Approve successor unit operator. - Approve unit agreements. - Approve expansion/contraction of unit area. - Approve participating area and modifications. - Approve unit plan of development. Source: 43 CFR 3180							X X X X X X X X	X		
3191	Grant delegation of inspection and enforcement authority to States. Source: 43 CFR 3191.1							X			
3191	Sign letter of authorization and issue special identification cards to qualified Federal Oil and Gas inspectors and State and Indian tribal inspectors working under cooperative agreements. Source: FOGRMA Section 101(b) (1) and 108(a)&(b)							X			
3191	Authorize comprehensive inspection system and procedures to inspect oil and gas lease sites. Source: FOGRMA Section 101 (a)&(b)(l) and 43 CFR 3191.2							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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3191	Authorize training program to assure that oil and gas inspectors are trained in methods and techniques of inspection. Source: FOGRMA Section 101 (b) (2) and 43 CFR 3191.2							X			
3191	Approve entering into agreements with Indian tribes for inspection of oil and gas producing operations. Source: FOGRMA Section 202 (a) and 43 CFR 3191.2							X			
3191	Require affidavits, administer oaths, and require testimony and materials by subpoena related to oil and gas theft investigations. Source: FOGRMA 30 U.S.C. 1717 and 43 CFR 3191.2										X
3191	Establish minimum standards to be used by a State carrying out activities established in a delegation. Source: 43 CFR 3191.4							X			
3200	Act on matters involving Geothermal resources leases pursuant to the Act of December 24, 1970 (84 Stat. 1566, 30 U.S.C. 1001 through 1025and 43 CFR 3200). Source: 43 CFR 3200							X			
3203	Identify other lands subject to competitive leasing for Geothermal resources. Source: 43 CFR 3203.11							X	X		
3207	Act on additional term requests. Source: 43 CFR 3207.10							X			
3208	Act on lease extension requests. Source: 43 CFR 3208.10							X			
3208, 3244	Issue determinations that leases in extended term are considered no longer capable of production in paying quantities. Source: 43 CFR 3208.11							X			
3210	Make drainage determinations and require operators to protect Federal and Indian lands from drainage, including payments of compensatory royalty. Source: 43 CFR 3210.23							X			
3212	Approve royalty rate reductions. Source: 43 CFR 3212.15							X			

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3212	Approve suspensions of operations and production. Source: 43 CFR 3212.11							X			
3214, 3250, 3261, 3271	Bonding. Source: 43 CFR 3214, 3251, 3261.18, 3271.12							X			
3217	Approve communitization agreements. Source: 43 CFR 3217.13							X	X		
3250, 3260	Approve exploration operations. Source: 43 CFR 3250, 3260							X			
3250	Approve Notice of Intent and Permit to Conduct Source: 43 CFR 3250.11							X			
3256	Variances to Exploration.							X			
3260	Issue Notice to Lessees. Source: 43 CFR 3260.12							X	X		
3260	Issue Geothermal Resource Operational Order. Source: 43 CFR 3260.12			X							
3261	Approve industry operations to test wells. Source: 43 CFR 3261.15							X			
3261, 3264	Approve industry Geothermal drilling permit. Source: 43 CFR 3261.15, 3264.2							X			
3261	Approve variances to orders. Source: 43 CFR 3261.17							X			
3261, 3262	Approve subsequent well operations to: - Re-enter. - Workover. - Construct production facilities. - Plug and abandon. Source: 43 CFR 3261.22							 X X X X			
3262, 3261	Approve well spacing. Source: 43 CFR 3261.6							X			
3263, 3212	Approve plugging and abandonment of wells. Source: 43 CFR 3263.12, 3212.5-5							X			

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3263, 3242	Authorize releasing abandoned wells for production of water. Source: 43 CFR 3263.15, 3242.2-3							X			
3265	Give Notice of Noncompliance. Source: 43 CFR 3265.12							X	X		
3265	Shut down operations. Source: 43 CFR 3265.12							X	X		
3272, 3262	Approve plan of utilization. Source: 43 CFR 3272, 3262.4-1							X			
3272, 3262	Approve Geothermal plan of baseline data collection. Source: 43 CFR 3272.13, 3262.4							X			
3272, 3264	Approve utilization permit. Source: 43 CFR 3273.13, 3264.2-1							X			
3272	Approve Facility Construction Permit. Source: 43 CFR 3272.14							X			
3273, 3250	Approve site license applications for utilization of Geothermal resources. Source: 43 CFR 3273, 3250							X			
3274	Approve Commercial Use Permit. Source: 43 CFR 3274							X			
3274	Approve Geothermal metering systems. Source: 43 CFR 3274.12							X			
3274, 3280	Approve all actions associated with fluid mineral unit agreements. Source: 43 CFR 3274.12, 3280							X	X		
3275, 3286, 3262, 3212	Approve limited suspension, waivers, reduction of royalty for pilot facilities and testing. Source: 43 CFR 3275.10, 3286.2, 3212, 3262.9							X			
3275	Approve surface commingling between leases. Source: 43 CFR 3275.19							X			
3280	Approve all actions associated with Geothermal unit agreements. Source: 43 CFR 3280							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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3281	Designate logical area for unit agreements. Source: 43 CFR 3281.2							X			
3282	Approve successor unit operator. Source: 43 CFR 3282.1							X			
3283, 3276	Make commercial well determinations under approved units. Source: 43 CFR 3283.1, 3276							X			
3400	Act on coal leases, licenses and exchanges (43 CFR 3400-3453). Source: 43 CFR 3400							X			
3410	Assume all necessary action to process and approve exploration licenses. Source: 43 CFR 3410.3							X			
3420	Approve regional coal leasing levels. Source: 43 CFR 3420.2(d).		X								
3420	Approve preliminary tract delineations. _____ * – Chair, Regional Coal Team. Source: 43 CFR 3420.3							*			
3420	Approve regional tract ranking, selection and scheduling. _____ * – Chair, Regional Coal Team. Source: 43 CFR 3420.3-4							*			
3420	Conduct and approve final consultation with other Federal and State agencies and Indian tribes on the proposed regional coal lease sale schedule. Source: 43 CFR 3420.4		X								
3420	Adopt final regional coal lease sale schedule. Source: 43 CFR 3420.5	X									
3422	Approve and execute competitive coal leases in coal production regions. Source: 43 CFR 3422.4							X			
3425	Approve applications for coal lease sales under the emergency leasing criteria. Source: 43 CFR 3425.1-4							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
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3425	Approve applications for coal lease sales outside coal production regions or within eastern coal production regions not scheduled for activity planning. Source: 43 CFR 3425.1-5							X			
3430	Approve issuance of coal preference right leases. Source: 43 CFR 3430							X			
3430	Approve Preference Right Lease Application cost estimate document and record of decision. Source: 43 CFR 3430.4-3							X			
3431	Approve negotiated sales of Rights-of -Way. Source: 43 CFR 3431							X			
3432	Approve coal lease modifications. Source: 43 CFR 3432							X			
3435	Approve coal lease exchanges. Source: 43 CFR 3435							X			
3436	Approve Alluvial Valley Floor coal lease and coal land exchanges. Source: 43 CFR 3431							X			
3440	Approve licenses to mine coal. Source: 43 CFR 3440							X			
3451	Approve coal lease readjustments. _____ * – State Director only. Source: 43 CFR 3451							*			
3452	Cancel, terminate or accept coal lease relinquishments. _____ * – State Director only. Source: 43 CFR 3452							*			
3453	Approve coal lease transfers. _____ * – State Director only. Source: 43 CFR 3453							*			

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3461	Approve lands as unsuitable for surface mining as a result of application of unsuitability criteria. Respond to Office of Surface Mining on Petition to Declare Lands Unsuitable for Mining. Source: 43 CFR 3461							X X			
3472, 3502	Determine if lessees meet qualification requirements. Source: 43 CFR 3472, 3502							X			
3473	Prescribe rents and royalties. Source: 43 CFR 3473							X			
3480	Approve maximum economic recovery. Source: 43 CFR 3480.0-5 (21)							X			
3480	Approve the stipulations for licenses, permits or leases on Indian lands. Source: 43 CFR 3480.0-6							X			
3480, 3590	Issue General Mining Orders. Source: 43 CFR 3480.0-6 (12), 3590			X							
3482	Approve exploration plans and modifications to a lease or exploration license. Source: 43 CFR 3482 .2(1)							X			
3482	Approve Resource Recovery and Protection Plans and modifications on Federal land. Source: 43 CFR 3482 .2(2)							X			
3483	Approve commercial quantities and monitor diligent development and continued operation. Source: 43 CFR 3483.1							X			
3483	Terminate leases or initiate cancellation of leases. _____ * – State Director only. Source: 43 CFR 3483.2							*			
3483	Approve suspensions. _____ * – State Director only. Source: 43 CFR 3483.3							*			
3483	Approve advance royalty payments. Source: 43 CFR 3483.4							X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
3484	Approve temporary or final abandonment with respect to the coal resources for all or part of a mine or deposit. Source: 43 CFR 3484.2							X			
3485	Approve waiver, suspension, or reduction of the rental or royalty on producing leases. _____ * – State Director only. Source: 43 CFR 3485.2							*			
3486	Authorize inspections. Source: 43 CFR 3486.1							X			
3486	Issue notices of noncompliance with regulations and license or lease terms and provisions of the Resource Recovery and Protection Plan. Source: 43 CFR 3486.3							X			
3487	Approve Logical Mining Units and Logical Mining Units Modifications. _____ * – State Director only. Source: 43 CFR 3487.1							*			
3500, 3501	Approve all action on matters related to the noncompetitive and competitive leasing of Phosphate, Sodium, Potassium, Sulphur (in Louisiana and New Mexico and Acquired Lands), “Gilsonite” (including all vein-type Solid Hydrocarbons) and Hardrock Minerals. Source: 43 CFR 3500, 3501							X			
3500-3517	Approve all steps necessary for complete adjudication of applications submitted for non-energy permits and leases. Source: 43 CFR 3500-3517, 3501.1							X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
3501, 3580, 3582	Approve all action on matters related to leasing of minerals in the following Special Leasing Areas: Gold, Silver, or Quicksilver in confirmed private land grants (43 CFR 3581 and 3578.4). National Park Service Areas (43 CFR 3582): - Lake Mead National Recreation Area. - Whiskeytown unit of the Whiskeytown-Shasta-Trinity National Recreation Area. - Glen Canyon National Recreation Area. Shasta and Trinity units of the Whiskeytown-Shasta-Trinity National Recreational Area (43 CFR 3583). Reserved minerals in lands patented to the State of California for Park and other public purposes (43 CFR 3584). White Mountains National Recreation Area, Alaska (43 CFR 3585). Source: 43 CFR 3501							X			
3501	Approve all actions on permits and leases for minerals pursuant to Sec. 402, Reorganization Plan No. 3 of 1946 (60 Stat. 1099), which transferred the functions of the Secretary of Agriculture to the Secretary of the Interior in certain Acquired Lands. Source: 43 CFR 3501.1(b)(1)							X			
3503	Approve all action on matters related to the competitive leasing of asphalt (Oklahoma). Source: 43 CFR 3503.14							X			
3504	Prescribe rents and royalties. Source: 43 CFR 3504							X			
3504, 3505, 3506, 3512, 3515, 3522	Approve all action matters related to issuance of prospecting permits and exploration licenses on Public Domain and Acquired Lands. Source: 43 CFR 3504, 3505, 3506, 3512, 3515, 3522							X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
3507, 3508, 3510, 3511, 3513, 3515	Approve all actions necessary to issue preference right and competitive leases of mineral lands and deposits on Public Domain and Acquired Lands. Source: 43 CFR 3507, 3508, 3510, 3511, 3513, 3515							X			
3509	Approve all actions on matters relating to fractional and future interest permits and leases on Public Domain and Acquired Lands. Source: 43 CFR 3509							X			
3511, 3517, 3527	Approve all actions required to issue use permits under appropriate terms and conditions. Source: 43 CFR 3511, 3517, 3527							X			
3513, 3503	Approve applications for waiver, suspension, or reduction of rental or minimum royalty or reduction of royalty. _____ * – State Director only. Source: 43 CFR 3513, 3503.3.2							*			
3513	Approve applications for suspensions of operations. _____ * – State Director only. Source: 43 CFR 3513							*			
3515, 3508	Approve all actions on matters relating to mineral lease exchange. Source: 43 CFR 3515							X			
3590	Approve exploration and mining operations in accordance with the regulations. Source: 43 CFR 3590.2							X			
3590	Inspect and regulate prospecting, exploration testing, development, mining and processing operations. Source: 43 CFR 3590.2 (b), (c), (d)							X			
3590	Require operators to be in compliance with regulations, lease or permit terms and approved plans.							X			
3590	Obtain and check records of production of minerals and verify production.							X			
3590	Act on applications for suspension of operations or production. _____ * – State Director only.							*			
3590	Inspect and report on the cessation and abandonment of operations.							X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
3590	Report to the agency having administrative jurisdiction any trespass involving removal of mineral deposits.							X			
3590	Implement General Mining Orders and issue other orders, determinations, comments and approvals to implement or assure compliance with the 43 CFR 3590 operating regulations.							X			
3592, 3486	Approve exploration plans, mining plans and major modifications on Federal and Indian lands. Source: 43 CFR 3592.1							X	X		
3592	Receive certified maps of mining operations drawn to an acceptable scale. Source: 43 CFR 3592.2							X			
3592	Receive production maps which show all excavations in such a manner that production for any royalty reporting period can be accurately determined. Source: 43 CFR 3592.3(a)							X			
3592	Authorize surveys if operator fails to submit proper maps. Source: 43 CFR 3592.3(b)							X			
3593	Authorize the collection of logs, cores, samples, or cuttings for exploration or development drilling and approve conversion of any drill hole to surveillance wells. Source: 43 CFR 3593.1(a),(c)							X			
3594	Approve mining methods which will achieve ultimate maximum recovery of the resource and approve mining of isolated blocks or boundary pillars. Source: 43 CFR 3594.1(a) 3594.2							X			
3595, 3596	Approve methods of abandonment and waste disposal to ensure protection against mining hazards. Source: 43 CFR 3595, 3596							X			
3597	Authorize production verification to ensure that production allocations are reported accurately, making volumetric measurements or other determinations to verify production. Source: 43 CFR 3597							X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
3598	Conduct inspections to assure compliance with regulations, lease terms and conditions of plan approval. Source: 43 CFR 3598.1							X			
3598	Issue notices of noncompliance and Assume other enforcement actions as necessary for violations. Source: 43 CFR 3598.2-.4							X	X		
3600, 3630	Approve all actions relating to any contract for the sale or disposal of mineral materials, including approvals, modifications and cancellations, designations, modifications and cancellations of community pits and common use areas and authorizations of exploration and sampling activities. Approve designation, modification or cancellation of free use areas for petrified wood on lands under the jurisdiction of other Federal departments or agencies, other than the Department of Agriculture, with the consent of the other departments or agencies involved. Approve mineral material appraisal reports. Source: 43 CFR 3600, 3630							X X X	X		
3700-3746	Approve all actions necessary under 43 CFR 3710 – Multiple Use, Mining. Source: 43 CFR 3700-3746							X			
3715	Enforce Use and Occupancy Regulations							X	X		
3800 except 3860	Adjudicate all cases, perform mineral examinations, initiate mineral contest actions and accept conditional relinquishments under Public Law 108-452. Approve letters, notices, and decisions							X X			
3802	Assume all actions as necessary to approve Plan of Operation Wilderness Review Program. Source: 43 CFR 3802							X	X		
3809	Assume all actions as necessary for Plans of Operation and Notices for the Surface Management Program. Source: 43 CFR 3809							X	X		
3814	Record and Adjudicate Stockraising Homestead Act (SRHA) Notice of Intent to Locate (NOITL). Source: 235 DM 1.1K							X			
3835	Assessment work.							X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO								
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
3860	Approve Mineral Entry Final Certificates and Mineral Patents (209 DM 7). Adjudicate Mineral Patent Applications. _____ * – Cannot be re-delegated.			*				*			
3900	Approve all oil shale actions. Source: 235 DM 1.1K							X			
4110	Determine qualifications for grazing use of public lands.							X			
4110	Determine base property.							X			
4110	Specify permitted use.							X			
4110	Approve transfers and relinquishments of grazing preference.							X	X		
4110	Designate allotments for livestock grazing.							X	X		
4110	Change permitted use levels.							X			
4110, 4120	Close public lands to grazing use when needed. - Permanent closure. - Temporary closure. _____ * – Cannot be re-delegated.							* X			
4110	Assume grazing management actions that address changes in public land acreage.							X			
4120	Implement grazing management through allotment management plans resource activity plans and grazing systems.							X			
4120	Implement range improvements through permits and cooperative agreements and determine their value. Approve assignment of range improvement interest and maintenance responsibility.							X	X		
4120	Accept contributions for range improvements.							X	X		
4120	Enter into Memorandum of Understanding or Cooperative Agreement to manage other agency lands.				X			X			
4120	Cooperate with State, county and Federal agencies in the administration of laws and regulations relating to livestock diseases, sanitation and noxious weeds.				X			X			
4130	Adjudicate conflicting applications.							X	X		
4130	Issue, modify and renew grazing permits and leases and exchanges-of-use agreements. Specify numbers and kinds of livestock, periods of use, places of use and other grazing management terms and conditions in grazing permits and leases and exchanges-of-use agreements.							X	X		

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
4130	Collect and deposit fees for grazing use and approve refunds.							X			
4150	Issue notices of violations and other actions.							X	X		
4150	Assume corrective and disciplinary actions as necessary on violations, initiating remedial actions to abate unauthorized grazing use as necessary, including livestock impoundment, accepting settlements.							X			
4150	Issue order to impound unauthorized livestock.							X	X		
4150	Issue order to sell impounded livestock (after consultation with the Director and Solicitor). _____ * – Cannot be re-delegated.							*			
4160	Issue proposed and final decisions on matters of grazing administration and management.							X	X		
4180	Assume appropriate action to assure attainment of rangeland health fundamentals.							X	X		
4180	Develop regional standards and guidelines for grazing administration for Secretarial approval. _____ * – Cannot be re-delegated							*			
4180	Determine that grazing practices or levels of grazing use are significant factors in failing to achieve standards and conform to the guidelines.							X			
4180	Implement actions to make significant progress toward fulfillment of the standards and significant progress toward conformance with the guidelines.							X			
4190	Implement wildfire management decisions. _____ *- Field Manager Only							*			
4200	Administer Livestock Grazing in Alaska.							X			
4300	Administer reindeer grazing in Alaska.							X			
4700	Authority to sign Bill of Sale for Wild Horses and Burros.							X			
4710	Establish Wild Horse and/or Burro Herd Management Areas.							X			
4710	Designate Wild Horse and/or Burro ranges.			X							
4710	Close herd areas to grazing by domestic livestock.							X	X		
4710	Establish conditions for removal of unauthorized livestock from areas occupied by Wild Horses and Burros.							X			
4720	Authorize the removal excess Wild Horses and Burros from the public lands.							X			
4720	Remove strayed or excess animals from private lands.							X			
4730	Sign Herd Management Area Plan.							X	X		
4730	Destroy old, sick and lame Wild Horses and Burros.							X	X		

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
4740	Direct the use of helicopters and motor vehicles in the management and transport of Wild Horses and Burros.							X	X		
4750	Make healthy excess Wild Horses and Burros available for private maintenance through adoption.							X			
4750	Approve applications for adoption of Wild Horses and Burros.							X			
4750	Replace adopted Wild Horses and Burros that died within six months of adoption.							X			
4750	Waive adoption fees for otherwise unadoptable animals. Approve adjustments in adoption fees for otherwise un-adoptable animals.				X			 X			
4750	Issue Certificates of Title to Wild Horses and Burros.							X	X		
4760	Certify the proper care and humane treatment of adopted Wild Horses and Burros for purposes of compliance with the Private Maintenance and Care Agreement.							X			
4760	Authorize BLM law enforcement personnel to arrest without warrant persons who violate the Wild Horse and Burro Act or regulations in their presence.										X
4770	Repossess adopted Wild Horses and Burros if the adopter fails to comply with the Private Maintenance and Care Agreement.							X			
5003	Implement General Forest Management full force and effect Decisions/Wildfire Management full force and effect management decisions. Source: 43 CFR 5003.1							X			
5041	Declare the annual productive capacity of commercial forest land. Source: 43 CFR 5041.1							X			
5043	Hold hearings in connection with each proposed sustained yield unit. Source: 43 CFR 5043.2							X			
5043	Approve action on appropriate recommendations concerning sustained (yield) units. Source: 43 CFR 5043.2							X			
5045	Exchange lands to consolidate or segregate O&C timber lands. Source: 43 CFR 5045.1							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
5400, 1815	Timber Sale Contracts. - Determinations of U.S. Share of Cost. - Cancellation of Timber Sale Contracts. Source: 43 CFR 1815.1-1							X X			
5400	Dispose of timber and other vegetative resources including those on unpatented mining claims located after July 23, 1955. Source: 43 CFR 5400.0-3 (B)							X	X		
5400	Make disposals on lands withdrawn for other public functions with the consent of the other public agencies. Source: 43 CFR 5400.0-3 (B)2							X			
5400	Hold public hearings on species and grades to be exempted from export restrictions. Source: 43 CFR 5400.0-7			X							
5400	Determine species and grades to be exempted from export restrictions. Source: 43 CFR 5400.0-7	X									
5400	The ability to offset the value of timber or forest products produced as a by-product of the land management treatment for the cost of services received.			X							
5400	Make reports of timber disposals to Congress, BLM Offices and others. * – State Office Personnel only. Source: 43 CFR 5400							*			
5402	Act on matters involving Rights-of -Way acquisition and the approval of road construction projects to provide access to timber. Source: 43 CFR 5402.0-6							X	X		
5402	Dispose of timber and other vegetative resources where values do not exceed $2,499 using Form 5450-5. Source: 43 CFR 5402.0-2							X			
5402	Approve sale of negotiated stewardship contracts of less than 250,000 board feet. Special justification is needed to exceed 250,000 board feet. Source: 43 CFR 5402.0-6. IM 2005-009							X	X		

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		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
5410	Develop an annual timber sale plan, including any subsequent changes, alterations, or amendments. Source: 43 CFR 5410.0-6							X	X		
5410	Approve Timber Sale Plans. ____ * – State Office Personnel only. Source: 43 CFR 5410							*			
5420	Establish minimum selling values by species and/or products. ____ * – State Office Personnel only. Source: 43 CFR 5420.0-6							*			
5420	Determine a form of measurement of timber or other vegetative resources to be in the public interest. Source: 43 CFR 5420.0-6							X	X		
5422	Authorize Scale Sales. Source: 43 CFR 5422.2							X			
5422	Determine when to use scaling for administrative reasons. Source: 43 CFR 5422 .2(A)							X			
5422	Determine when to use third-party scaling. Source: 43 CFR 5422 .2(B)							X			
5424	Determine provisions for timber sale contracts.							X			
5424	Sign timber sale contract. See 5450 for limitations.							X			
5430	Determine when to use longer (or shorter) than usual advertising periods.							X			
5441	Confirm qualifications of bidders. Source: 43 CFR 5441.1							X			
5441	Initiate action on Small Business Administration road construction loan applications. Source: 43 CFR 5441.1-2							X			
5441	Manage BLM's Small Business Administration set aside preferential timber sale program. Source: 43 CFR 5441.1-3							X			

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5442	Select sealed bids, written bids, oral bids, or a combination of bidding methods for advertised sales. Source: 43 CFR 5442.1							X			
5442	Conduct a sale and determine the high bidder. Source: 43 CFR 5442.1							X	X		
5442	Reject any or all bids. Source: 43 CFR 5442.3							X			
5443	Determine when to keep a no-bid sale open for 90 days. Source: 43 CFR 5443.1							X			
5450	Award timber sale contract to successful purchaser, Less than or equal to 10 MMBF. More than 10, less than or equal to 25 M MBF. More than 25 MMBF. _____ 1 – May be re-delegated to all District, Field and Resource Area Managers only. Additional sales to existing contract up to 50 MBF maybe re-delegated to any employee designated only by the contracting officer. 2 – May be re-delegated to all District, Field and Resource Area Managers only. 3 – State Director only.							 1 2 3			
5450	Confirm performance qualifications and award contract. Source: 43 CFR 5450.1							X	X		
5451	Determine whether to require a bond for cash sales less than $2,500. Source: 43 CFR 5451.1(A)							X			
5451	Approve forms used for performance bonds. Source: 43 CFR 5451.1(A)			X							
5451	Approve completed performance bond forms. Source: 43 CFR 5451.1(A)							X			
5451	Authorize a reduction in the amount of a performance bond. Source: 43 CFR 5451.3							X			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
5451	Approve payment bonds prior to cutting or removal of any timber covered by the bond. Source: 43 CFR 5451.4							X			
5451	Approve the allocation of a single payment bond to 2 or more contracts with the same purchaser in the same BLM administrative district. Source: 43 CFR 5451.4							X			
5461	Determine the amount of installment payments. Source: 43 CFR 5461.2							X			
5473	Grant an extension of contract time for cutting or removing of timber. Source: 43 CFR 5473.4							X	X		
5473	Require the reappraised contract price be paid in full as a condition of granting an extension. Source: 43 CFR 5473.4-1							X			
5474	Approve a contract assignment. Source: 43 CFR 5474.1							X	X		
5500	Issue free use permits on BLM lands. Source: 43 CFR 5500.03							X	X		
5510	Issue free use permits to citizens, corporations, public agencies, nonprofit organizations and certain citizens in Alaska. Source: 43 CFR 5510.0-3							X			
5511	Prescribe provisions for cutting and removing free-use timber. Source: 43 CFR 5511.1							X			
5511	Cancel a permit for noncompliance or if the permit was issued erroneously. Source: 43 CFR 5511.2-3							X			
5511	Approve free-use permit form. Source: 43 CFR 5511.3-2			X							
5921	Approve Stewardship Projects.						X	X			

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		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
6250, 6260	National Historic and Scenic Trails (National Trail System Act):										
	-Designate DOI Trail Administering Agency (ies) (NTSA, Sec. 5(a) and DM 710).	X									
	- Develop and publish uniform trail use regulations (NTSA, Sec. 7(i)).	X									
	- Certify non-Federal lands as components of National Historic Trails (NTSA, Sec. 3(a)(3)).	X									
	- Make recommendation for trail administering agency, forwards to Secretary (NTSA, Sec. 5(a), DM 710).			X							
	- Assign lead State Director* to oversee trail administration if more than one State is affected (DM 710).			X							
	- Maintain official map of designated trail when assigned administration role (NTSA, Sec. (5a)).							*			
	- Approve congressionally authorized feasibility studies, forward to Secretary (NTSA, Sec. (5b)).			X							
	- Approve findings of congressionally authorized feasibility study conducted through another agency where BLM lands involved, forward to responsible agency (NTSA, Sec. (5b)).			X							
	- Approve Comprehensive Management Plan where BLM is trail administrator/co-administrator when one State with affected BLM lands/RMPs involved (NTSA, Sec. (5e), (5f)).							X			
	- Approve Comprehensive Management Plan where BLM is trail administrator/co- administrator when more than one State with affected BLM lands/RMPs involved (NTSA, Sec (5e), (5f)).			X				X			
	- Approve Comprehensive Management Plan where BLM lands involved when BLM is not trail administrator (NTSA. Sec. (5e), (5f)).							*			
	Continued on next page,										

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
6250, 6260	- When assigned administration role, establish advisory council (NTSA, Sec. (5d).							*			
	- Approve statewide plan affecting designated National Scenic or Historic Trails or a mends RMPs with provisions (NTSA, Sec. (7c), FLPMA).							X			
	- Maintain copy of official designated trail map (NTSA, Sec. (5a)).							X			
	_____ * - Cannot be re-delegated.										
	Source: 710DM1										

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
6250, 6260	- Approve RMP/amendment containing provisions for National Scenic or Historic Trails (NTSA, Sec. (7c), FLPMA.							X			
	- Maintain copy of official designated trail map (NTSA, Sec. (5a)).							X			
	- Inventories/assesses significant sites or segments or trail locations (NTSA, Sec. (7c)).							X			
	- Approve or deny actions affecting high potential sites or segments or trail location (NTSA, Sec. (7c), (7i), NHPA).							X			
	- Approve or deny actions affecting trail corridor area (NTSA, Sec. (7c), NHPA, FLPMA).							X			
	- Approve or deny trail land management transfer to/from other Federal agencies under memorandum (NTSA, Sec. (7a, 1b), FLPMA).							X			
	- Approve or deny LWCF acquisitions, related disposals, exchanges, easements or other lands actions affecting trail corridor area (NTSA, Sec. (7g), (9e, 3-4), (7f), (9b), (9c-d), (7k), (10c), FLPMA).							X			
	- Maintain a uniform marker for the national trail system appropriate to each trail, in cooperation with other agencies (NTSA, Sec. (3a4), (7c)).							X*			
	- Recommends any substantial trail re-location or new components to Congress, forward recommendation to Secretary (NTSA, Sec. (7b), (2b)).			X							
	_____ *Lead State Director responsible for trail administration when more than one State with BLM lands involved.										
6300	Management of designated Wilderness areas: - Assume all approval or denial actions in designated Wilderness areas. _____ * - Field Managers only. Source: 43 CFR 6300							*			

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		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
6350,1601	Approve or deny interim management actions in Wilderness Study Areas to avoid impairment. _____ * - Field Managers only. Source: Sec. 603 (c), FLPMA							*			
6361,1601	Approve Wilderness Management Plans.							X			
6400	Identification and Studies of Wild and Scenic Rivers (FLPMA, Wild and Scenic Rivers (WSR) Act, USDI Final Revised Guidelines, and, BLM Manual Section 8351): - Approve eligibility/non-eligibility findings, assessments and evaluations. - Approve suitability/non-suitability findings, assessments and evaluations. - Release eligible river segments determined non-suitable in the land-use planning/NEPA process and sign the ROD. - Based on recommendations of the State Director(s), decide which eligible/suitable river segments are to be recommended for WSR designation, forward recommendations to the Secretary. Source: 710 DM 1			X				X X X			
6400	Report on WSR Studies (Sections 5(a) and 5(d)(1) of the WSR Act, FLPMA, NEPA, BLM Manual Section 8351): - For congressionally authorized study rivers, approve assessment results, transmittal reports and recommendations to the President. - For land-use planning study rivers, approve assessment results, transmittal reports and recommendations to the President.		X X								
6400	Approve or deny proposed projects in eligible river corridors to protect identified outstandingly remarkable values. _____ *- Field Manager. Source: BLM Manual 8351							*			

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		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
6400	Approve detailed boundaries and classification via notification of Congress and publishing a notice of availability in the Federal Register pursuant to Section 3(b) of the WRSA.		X								
6400, 8351	Approve maps, boundaries and classification descriptions of designated WSRs and make available for public inspection (Section 3(c) of the WSRA). Approve comprehensive WSR management plan(s) and publish a notice of completion and availability in the FR (Section 3(d)(1) of the WSRA). _____ * - Field Managers.							* *			
6400, 8351	Management of designated WSRs. Approve or deny proposed projects in designated WSRs to protect and enhance values for which the river was designated. _____ * - Field Managers Source: 36 CRF 297 and 43 CFR 8351							*			
6500-6900	Authorize all actions relating to wildlife management. Source: BLM Manual Sections 6500-6900 and FLPMA							X	X		
6500	Authorize protecting and/or reestablishing wildlife habitat pursuant to the Surface Mining Control and Reclamation Act of 1977. Source: 30 U.S.C. 1201 et. Seq.							X	X		
6500	Approve planning and implementing needed wildlife habitat research studies: - BLM. - State.					X		 X			
6500	Approve developing and implementing rangeland improvements for wildlife pursuant to the Public Rangelands Improvement Act and the Taylor Grazing Act.							X			
6500	Approve protective provisions (stipulations) in leases, licenses, permits and grants issued by BLM to safeguard wildlife habitat per Federal Land Policy and Management Act, Surface Mining Control and Reclamation Act, and other applicable authorities.							X	X		

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
6520	Approve developing and implementing cooperative programs for habitat management, including Cooperative Management Agreements, with non-Governmental entities.					X		X	X		
6525	Authorize developing, signing and implementing cooperative management programs, including cooperative management agreements jointly with State wildlife agencies pursuant to the Sikes Act, as amended. Source: 74 Stat. 1052, 88 Stat. 1369, 92 Stat. 921							X	X		
6602	Approve developing and implementing inventory and monitoring plans. Source: 43 U.S.C. 1701 et seq; NEPA, and 42 U.S.C. 4321							X	X		
6620	Approve habitat management plans.							X	X		
6630	Approve developing and implementing Tule elk management programs (California) pursuant to Joint Resolution Regarding Tule elk. Source: 16 U.S.C. 673, 90 Stat. 1189							X			
6830	Approve animal damage control plans where the BLM is the action agency.							X			
6840	Conduct endangered species consultations under Section 7 of the Endangered Species Act, as amended.							X	X		
6840	Designate BLM Sensitive Species. *Cannot be re-delegated.							*			
8000	Authorize recreation use and specify terms and conditions of such use (exceptions are provided for in the regulations). Source: 16 U.S.C. 4601-6A							X	X		
8120	Approve matters of responsibility of BLM relating to determination of eligibility for nomination to the National Register. Source: 8000.0-4 16 U.S.C. 4601-6A and 36 CFR 63							X	X		
8120	Approve matters of responsibility of BLM relating to nomination to the National Register. Source: 36 CFR 60							X	X		
8130, 8131	Approve Cultural Resource Management Plans							X	X		

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
8140	Approve repatriations under Native American Graves Protection and Repatriation Act. _____ * – State Director only.							*			
8150	Approve cultural and Paleontological use permits. _____ * – Deputy State Director with oversight for their State's Cultural Heritage Program only.							*			
8341	Approve restrictions on the use of Off Highway Vehicles on BLM land (regarding conditions of use).							X	X		
8341	Approve closing areas to Off Highway Vehicle use. Source: 43 CFR 8341.2(a)							X	X		
8341	Approve closing portions of the public lands for use by Off Highway Vehicles. _____ * Cannot be re-delegated. Source: 43 CFR 8341.2(b)							*			
8342	Designate all public lands as open, limited, or closed to Off Highway Vehicles.							X	X		
8357	Designate Back Country Byways in consultation with State and local authorities and other interest groups.							X			
8364	Approve closing areas and access to areas. Source: 43 CFR 8364							X	X		
8365	Approve actions such as posting rules, denying use, and taking other actions as appropriate concerning use of developed recreation sites and facilities.							X	X		
8365	Establish supplementary rules to protect the public health, safety, and resources in undeveloped areas. _____ * – Cannot be re-delegated.							*			
8365	Establish reasonable fees for recreation use.							X	X		
8380	Designation of significant caves. _____ * – Delegated to Field Managers.							*			
8400	Develop policy, guidelines, training and overall coordination of Visual Resource Management functions for the BLM. _____ * - Division Chief, Division of Recreation and Visitor Services.					*					
8400	Administration of Visual Resource Management. Implement BLM VRM policy and provide statewide program coordination and guidance.							X X			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
8510, 1601	Approve wilderness management inventory decisions.							X			
9011	Approve submitted Pesticide Use Proposals. _____ * - Only States with certified applicators reviewing Pesticide Use Proposals. This authority may not be re-delegated below the District /Field Manager.							*	*		
9014	Approve submitted Biological Control Agent Release Proposals except those retained by the Department.							X			
9100, 9600	Technical approval of easement surveys, easement plans and legal descriptions for acquisitions is delegated through the State Director and the District/Field Manager to the District/Field Office Engineer and the State Office Chief Cadastral Surveyor. If there are no qualified District/Field Office Engineers, then delegation of authority goes to the next highest organizational level in engineering.							X	X		
9101	Approval of site studies is delegated through the State Director to the District/Field Manager except at the National Interagency Fire Center. Approval of the design narrative and action plan, except where reserved for the State Director (large buildings and recreational developments) is delegated through the State Director to the District/Field Manager.						X X	X X	X X	X	
9102	Design approval for major structures which affect public safety is delegated through the line to any level, however, the signing official is required to be a registered professional engineer experienced in that particular type of structure. All engineering designs (construction and maintenance) are approved technically as outlined in the BLM Manual Section 9102. The responsibility for determining the level at which approval will occur for each office lies with the State Engineer who retains technical responsibility for all designs. NOTE: Authority to construct a facility or expend funds is delegated through the State Director to the District/Field Manager, except at the Office of Fire and Aviation and BLM Centers.						X X	X X	X	X	X
9113	Approval of road standards that are within the limits outlined in BLM Manual Section 9113 is delegated through the State Director to the District/Field Manager subject to BLM Manual Section 9113 limitations.							X	X		

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
9114	Authority to approve a trail location is delegated through the State Director to the District/Field Manager.							X			
9172	Authority to approve a water control or water development structure is delegated through the State Director to the District/Field Manager, however, the signing official is required to be a registered professional engineer experienced in that particular type of structure.							X			
9180	Verification of legal descriptions for accuracy for acquisitions and exchanges. _____ * - State Office Chief Cadastral Surveyor							*			
9180, 9600	Approve, accept, suspend, and cancel surveys, resurveys and protraction diagrams of the lands within the jurisdiction of the office. _____ * - This authority is delegated from the Director, BLM, to the State Office Chief Cadastral Surveyor and cannot be re-delegated. Source: 43 CFR 9180, 43 U.S.C. 2, 52 and 1201			*				*			
9180	Prepare and publish in the Federal Register notices of the official filing of accepted plats of survey, resurvey and approved protraction diagrams. _____ * - State Office Chief Cadastral Surveyor only. Source: 43 U.S.C. 2 and 52							*			
9185	Approve applications for extension of original surveys or lands omitted from original surveys. _____ * - State Office Chief Cadastral Surveyor only. Source: 43 CFR 9185.1-1, 43 U.S.C. 2							*			
9185, 9180	Approve requests for surveys and resurveys. _____ * - State Office Chief Cadastral Surveyor only. Source: 43 CFR 9185.1-2, 43 CFR 9180.0-3 (c) (2), 43 U.S.C. 772 and 773							*			
9185, 3861	Issue and cancel survey order for the survey of a mining claim. _____ * - State Office Chief Cadastral Surveyor only. Source: 43 CFR 9185.1-3 (a), 43 CFR 3861.5, 30 U.S.C. 39							*			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
9185, 3861	Perform all functions and sign for the Director all documents relating to the appointment of United States Mineral Surveyors. _____ * - Washington Office Chief Cadastral Surveyor only. Source: 43 CFR 9185.1-3 (b), 43 CFR 3861.5, and 30 U.S.C. 39					*					
9210	Coordinate decisions of the National Multi-Agency Coordinating Division as they affect BLM lands to establish fire priorities, allocate and re-allocate fire suppression resources.									X	
9210	Authority to expend up to $100,000 for State short-term fire severity needs. _____ * - State Director only.							*			
9210	Enter into national level fire agreements to facilitate mutual assistance for prevention training, pre-suppression and suppression. Source: 31 U.S.C. 686, 42 U.S.C. 1856a, 43 U.S.C. 1701.									X	
9210	Approve fire operating plans committing funds and/or manpower in support of national level agreements for mutual assistance.							X	X	X	
9210	Enter into fire agreements to provide for the housekeeping functions of combined agency-operated facilities.							X	X	X	
9211	Approve Fire Management Plans.							X	X		
9211	Approve Wildland Fire Situation Analysis (WFSA) when a wildfire escapes initial attack. Approval is subject to the following fire cost limits: - Up to $2,000,000 - $2,000,000 to $5,000,000 - Above $5,000,000 _____ * - Cannot be re-delegated 1 – Can be re-delegated to the Field Manager Only.			*				* *	1		
9211	Approve Wildland Fire Implementation Plans (WFIP) for wildland fire use events, consistent with Fire Management Plans.							X			
9211	Develop and approve prescribed fire plans. Approval can be re-delegated if a qualified, independent plan review can be made.							X	X		

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
9212	Close areas under the administration of the BLM during periods of high hazard to prevent fires. Source: 43 CFR 9212.2, 43 CFR 8364.1				X			X			
9212	Issue fire prevention orders that close entry to, or restrict use of, designated public lands. Source: 43 CFR 9212.2				X			X			
9230	Determine liability for unauthorized use on public lands. Accept payment in full. Dispose resources and recover funds.							X	X		
9230	Approve actions necessary to prevent or abate the unauthorized use of public lands. Source: 43 CFR 9230							X			
9230	Issue order to seize Government property.							X	X		
9230	Issue notices of Demand (Demand Letters).							X			
9230, 1375	See Subject Code 1375 - Approve liability and damages for unauthorized use of the public lands.										
9230	Accept Real Property Offered for Settlement of Unauthorized Use. - Recommendation. - Approval.			X				X			
9260	Delegate, suspend, or revoke law enforcement authority of Federal personnel to make arrests, carry firearms in the course of law enforcement duties, and to enforce Federal laws and regulations relating to the public lands and resources. _____ * – Director, Office of Law Enforcement, Security and Protection.										*
9260	Approve local operational agreements for the cross designation of law enforcement authority among BLM and other Department of the Interior law enforcement agencies and the U.S. Forest Service. _____ * - With the concurrence of the Director, Office of Law Enforcement, Security and Protection.							*			*
9260	Approve Memoranda of Understanding for receiving cross designation of law enforcement authority from other Federal agencies.	X		X							

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
9260	Approve Law Enforcement Agreements - Reimbursable: Reimburse State and local law enforcement agencies for work outside of the normal scope of that agency's activities on public lands. _____ * - Requires State Director and warranted contracting officer approval (see Subject Code 1511).							*			X
9260	Approve Law Enforcement Agreements – Non-reimbursable: Confer State and local law enforcement authority upon BLM law enforcement officers for better cooperation and collaboration in utilizing the resources of both agencies while providing for more adequate protection of persons and property on the public lands. _____ * - State Director only.							*			X
9260	Authorize setting aside and expenditures of a specific amount of baseline appropriations to be used for the acquisition of information or evidence (i.e., purchase of evidence, payment to informants, rewards, etc.) concerning violations of laws enforced by the BLM. _____ * – Director, Office of Law Enforcement, Security and Protection.										*
9260	Authorize the non-consensual use of electronic surveillance equipment. _____ * - Director, Office of Law Enforcement, Security and Protection.										*
9260	Authorize internal investigations related to crimes within BLM jurisdiction, law enforcement officer misconduct, fraud and waste and abuse investigations remanded from the Department of the Interior, Office of Inspector General. _____ * - Director, Office of Law Enforcement, Security and Protection.										*
9260	Issue regulations with respect to the management, use and protection of the public lands. Source: 43 CFR 9260.0-3		X								

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
9260	Authorize BLM law enforcement employees to administer oaths, affirmations, affidavits, or depositions whenever necessary in the performance of their official duties. _____ * - Director, Office of Law Enforcement, Security and Protection. Source: 43 U.S.C. 1466 (1976), 54 Stat.1175										*
9261	Authorize BLM non-law enforcement employees to carry firearms in performance of their official duty. _____ * - State Director only. Source: BLM H-1112-2							*			
9300	Request appraisals for all actions involving sale, exchange or conveyance of public lands and interest in lands and acquisition of private property for a Federal project. (NOTE: The appraisal function has been consolidated for all Interior agencies into one Departmental appraisal organization). Approve fair market rent for non-rental schedule rights of-way or permits. _____ 1 - This authority maybe re-delegated to Field Managers, Chief Appraiser or other qualified review appraisers only. 2 – State Director only.							X 2	1		
9400	Contract for aircraft. Approve all requests for contract rental or charter aircraft services to the Department of the Interior, Office of Aircraft Services.									X	
9400	Approve aircraft use for transportation of passengers and cargo in accordance with Office of Management and Budget Circular A-126 (Revised), January 18, 1989. Ensure official travel on Government aircraft is properly authorized, justified and documented.				X		X	X		X	X
9600, 1813	Prepare plat-filing instructions to appropriate offices. File survey plats. _____ * - State Office Chief Cadastral Surveyor.				X			* *			
9600	Sign and issue Special and Assignment Instruction for Surveys. _____ * - State Office Chief Cadastral Surveyor.			X				*			

Subject Code Or Regulation	Activity	AUTHORITY DELEGATED TO									
		Depart-ment		BLM WO Officials				BLM Field Officials		BLM National Office Officials	
		SEC	AS	D/DD	AD	DC	CD	SD	DM	FA	LE
9600	Sign all Cadastral Survey documents pertaining to the dependent resurvey and monumentation of state boundaries. Disposition of the Secretary's copies of the Public Land and Mineral Land Survey Records. _____ * - WO Chief Cadastral Surveyor, Only Source: 43 U.S.C. 3 and 53				* *						
9600	Determination of Survey Requirement. Approve Standards for Indian Trust Lands Boundary Evidence Certificates of lands within the jurisdiction of the office. _____ * - WO Chief Cadastral Surveyor and SO Chief Cadastral Surveyors, only.				*			*			
9600	Issue correspondence to Federal, state and local government(s) and members of the public pertaining to routine matters involving Cadastral Survey. _____ * - State Office Chief Cadastral Surveyor							*			
9640	Issue formal decisions of Protest and Appeals involving Cadastral Surveys. _____ * - State Director only. Source: 43 CFR 9180 and 9185							*			
9640	Provide the final interpretation of the Manual of Instructions for the Survey of the Public Lands of the United States. _____ * - Washington Office Chief Cadastral Surveyor only. Source: 43 CFR 9180.0-3				*						

Exhibit 6

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Apendix 1 - Wyoming Delegations of Authority Index

.01 Purpose. This Manual Supplement provides: (A) policy for delegation of authority to supplement the authorities contained in the BLM Manual 1203; (B) criteria for determining appropriate level of delegations of authority; (C) procedures for re-delegating authorities; (D) procedures for revoking authorities; (E) procedures for designating Acting Officials; and (F) an index of authorities from the BLM Manual 1203 which are re-delegated to the District and Field Manager and other levels as determined by the Wyoming State Leadership Team and/or state-specific delegations to implement Wyoming policies and procedures.

.02 Objectives. This Manual Supplement is issued to meet the following objectives: (A) supplement the BLM Manual 1203 to re-delegate authorities within the organizations under the authority of the Wyoming State Director; (B) provide State Office officials, District Managers, and Field Managers with the necessary authorities to manage BLM programs in Wyoming; (C) assure that authority is delegated to the lowest practical level; (D) assist officials in identifying their formal authorities; and (E) facilitate evaluation of proposed and existing re-delegations of authority by consolidating delegations in one section of the BLM Manual.

.03 Authority. – See BLM Manual 1203.

.04 Responsibility A. through F. – See BLM Manual 1203.

G. State Director (SD) is responsible for ensuring that the authorities included in this supplement comprise those that have been delegated to the SD through BLM Manual 1203 and other BLM directives. Re-delegation is limited to those authorities that can be further delegated. The SD is responsible for periodically evaluating delegation of authorities to determine if re-delegation to other officials within the state is desirable and in compliance with BLM Manual 1203. The SD is also responsible for ensuring that delegations within Wyoming follow sound management practices and facilitate the accomplishment of BLM objectives.

H. Associate State Director (ASD) has the full delegated authority given to the SD and exercises that authority under the general supervision of the SD.

I. Deputy State Directors (DSDs) ensure that the re-delegations of authority within the state are in keeping with the procedures and requirements set forth in BLM Manual 1203 and that material concerning authorities in their respective areas of jurisdiction are accurate. This includes responding to District Office and Field Office suggestions for amendments to material in this Manual Supplement and providing advice to the SD regarding re-delegation proposals within the state. DSDs are responsible for periodically evaluating the system for re-delegating authorities set forth in this Manual Supplement.

J. District Managers (DMs) are responsible for thoroughly understanding authorities delegated to them and for evaluating the desirability of further re-delegation to other District

employees and Field Office officials within their jurisdiction. They ensure that re-delegations within their jurisdiction comply with the requirements set forth in BLM Manual 1203 and this Manual Supplement. DMs recommend to the SD other delegations which could be made to the District or Field Office level.

K. Field Managers (FMs) are responsible for thoroughly understanding authorities delegated to them and for evaluating the desirability of further re-delegation to other Field Office employees. They ensure that re-delegations within their jurisdiction comply with the requirements set forth in BLM Manual 1203 and this Manual Supplement. FMs recommend to the DM other delegations which could be made to the Field Office level.

L. All Management Officials who have the stated authority to re-delegate all or part of their authorities are responsible for determining the desirability of further re-delegation. They are responsible for ensuring that all of their authorities are exercised on a daily basis consistent with job responsibilities and BLM objectives and that all actions are properly taken.

.05 References. – See BLM Manual 1203

.06 Policy. It is Wyoming policy that all authorities are delegated to the lowest organizational levels possible, consistent with efficient program management. The following principles apply to all delegations:

A. The incumbent of the position has the knowledge and ability to accurately and judiciously exercise the authority. Full re-delegations will not be made to incumbents who have not reached the full performance level of their positions.

B. The use of formal authority is necessary to meet the daily requirements of the job.

C. The re-delegation is consistent with BLM policies and procedures.

D. The re-delegation can be clearly defined in writing and is not likely to raise jurisdictional questions.

E. The re-delegation will promote better balance in workload among positions.

F. The re-delegations do not conflict with the public's convenience in identifying a minimum of BLM officials responsible for specific official acts.

.07 File and Records Maintenance. See BLM Manual 1203.

.1 Provisions for Delegations or Re-delegations.

.11 Authority to Delegate or Re-delegate. A. – See BLM Manual 1203.

B. Positions Holding Authority. Any official to whom authority is delegated in this Manual Supplement may, in writing and in accordance with .2, re-delegate such authority unless re-delegation is specifically prohibited or limited. Such limits are indicated with an asterisk (▫) or a number, directing the reader to a footnote.

1. An official who delegates an authority does not divest himself/herself of the power to exercise that authority.

2. Delegation of an authority does not preclude that management official from later revoking that authority from the lower level. The delegation or re-delegation may be revoked at any time upon proper notice (see .22).

3. Delegation of an authority does not relieve that individual of the responsibility for action taken pursuant to the delegation at the organizational level receiving the authority.

4. An official or employee to whom an authority is delegated must exercise this authority in conformance with any overriding requirements that govern its use—as the person making the delegation would be called upon to observe. Such overriding requirements and restrictions are found in the Departmental Manual, Council on Environmental Quality Regulations, Code of Federal Regulations, and/or Executive Orders.

5. Delegated authority must be exercised in accordance with relevant policies, standards, programs, organization and budgetary limitations, and administrative instructions prescribed by officials of the Department and the BLM.

6. Any delegation to a position may in turn be re-delegated unless re-delegation is prohibited.

7. All re-delegations must conform to the provisions of BLM Manual 1203 and this Manual Supplement.

.12 Level of Re-delegation.

A. General Rule for Level of Re-delegation. It is the policy of the Wyoming SD that all authorities be delegated to the lowest organizational level possible, consistent with efficient program management. It is also the policy of the SD that decisions/actions subject to protest or appeal shall not be delegated below a line official (DSDs, DMs, and FMs) and when such decisions affect more than one Field Office within a District, DM approval is required and when such decisions affect more than one District Office, SD approval is required.

B. Criteria for Determining Level of Authority. .

1. The position to which re-delegation is being considered has access to, on a regular basis, the knowledge and skills necessary to judiciously exercise the authority.

2. There are no legal restrictions or reservations of authority precluding the re-delegation.

3. There are, or will be provided, adequate guidelines accompanying the re-delegation.

4. There is, or will be provided, adequate staff and funding at the level of re-delegation to carry out the responsibilities inherent in the re-delegation.

5. The organizational structure and geographic location of the position receiving the authority is such that the incumbent will be able to exercise that authority effectively.

6. There is, or will be provided, access to all necessary data/information/records needed to carry out the delegated authorities.

7. The official considering re-delegation must make certain that the original delegation of authority permits further re-delegation of that authority and is in accordance with the policy (see .06 and .12A).

.13 Publication of Delegations or Re-delegations. – See BLM Manual 1203.

.2 Delegating, Re-delegating, or Revoking Authority.

.21 Notification of Position Receiving Authority. Delegations of authority, in all instances, must be made by written notice to the position receiving the authority. This written notice must be made on Form 1203-2, Delgation of Authority, signed by the official delagting the authority and sent to the positions receiving the authority. Any re-delegations to positions lower than FM, which are not included in this Manual Supplement, are only permitted where regulations allow and when authorized on a BLM Form 1203-2.

.22 Recordation and Documentation. Written documentation of a Wyoming delegation of authority must be made in the form of an amendment to Appendix 1 using a Form 1203-2.

A. Amendments to Manual Supplement.

1. State Office organizational units (Divisions, District Offices, Field Offices, etc.) are responsible for assuring delegations of authority that fall within their areas of functional responsibility are accurate, current, clear, and complete.

2. Issues, questions, comments, and amendments to the Delegations of Authority Index, Appendix 1 of this Manual Supplement, are to be directed to the Division of Business and Support Services (WY 950). Copies of all approved Form 1203-2 (Illustration 1) shall be furnished to WY 950 in addition to the copy provided to the position(s) involved. The original signed Form 1203-2 must be submitted to the Wyoming State Office Central Files for inclusion in the official file for this Manual Supplement.

3. Amendments to Appendix 1 must be submitted by the responsible organizational unit to the Division of Business and Support Services (WY950) in final form on a Form 1203-2

.23 Revoking Authorities. Revocation of a delegated authority follows a similar pocess as delegation of an authority, described in .21 and .22.

.24 Designating Acting Officials.

A. Rotating Acting Schedules.

1. Only one individual may be designated as acting for a specified period of time. **Exception: If a designated acting official is teleworking and his/her physical presence is required to sign a document or to attend a meeting, then the next person in line of designees can assume the acting role for those purposes.**

2. Form 1203-1 or it's electronic equivalent, Delegation and Cerification of Acting Authroity, should be sued to record standard acting rotation schedules within offices and to officially record the specific periods individuals serve in an acting capacity. Designation of acting indificiuals in unique situations, or not in accord with established schedules, should be made by memorandum to the supervisor of the acting position.

B. Unique Situations/Authority of Acting Officials. Individuals serving in an acting capacity assume all the authorities of that position unless specific authorities are withheld in writing. Individuals serving in an acting capacity must use judgment in exercising those authorities. This includes considering the relative importance of an issue, whether the issue could or should be deferred, and the known preference of the individual for whom that person is acting.

C. Details or Temporary Promotions. Employees detailed or temporarily promoted to positions covered in this Manual Supplement will assume the responsibilities and delegations of that position and will sign documents as "Acting."

.3 Re-delegation of Authority to State Directors. – See BLM Manual 1203.

.4 Current Delegations of Authority Affecting Wyoming BLM – Instructions for Use. As a supplement to the BLM Manual 1203, Appendix 1 provides an index of current re-delegations concerning Wyoming programs and operations.

.41 Appendix 1 Format.

A. Column 1: "Subject Code or Reference". This column lists BLM Subject Codes (also

known as "file codes") for the activities described in Column 2. Subject Codes serve as a cross-reference to the BLM Manual where the activities are discussed, if a BLM Manual exists for that activity. Other references include a related Washington Office or Wyoming Instruction Memorandum (IM) or Wyoming Supplemental Manual or Handbook.

B. Column 2: "Activity". This column describes activities related to the Subject Code indicated in Column 1. Not all related activities are individually listed.

C. Column 3: "Authority Delegated to". This column indicates the position the authority is delegated to. A designation in the "DM" column indicates authority is held at that level for all Wyoming DMs, unless otherwise noted. When BLM Manual 1203 allows, the decision to re-delegate below the FM is determined by the FM with concurrence of the DM with jurisdiction over that office. Such re-delegation shall be made in accordance with .2 of this Manual Supplement.

1. Symbols used in Column 3, and their definitions, follow:

a. An "●" indicates that the authority is held by all within that category and may be re-delegated to a lower level by the official designated with that authority.

b. An "▫" indicates that the authority may **not** be re-delegated below the designated official, except as annotated in an accompanying footnote (if applicable). Limitations may be in accordance with regulations or may be at the discretion of the higher level authority.

c. A number (i.e. "1") indicates either a specific position receiving the delegation or an explanatory footnote for that activity.

2. Abbreviations used in Column 3:

a. DOI = Department of the Interior
b. WO = BLM Washington Office/Headquarters.
c. SD = State Director and Associate State Director.
d. DSD = Deputy State Directors.
e. DM = District Managers.
f. FM = Field Managers.

D. Abbreviations. The following abbreviations and acronyms are used in Appendix 1:

WSO	Wyoming State Office
BLM	Bureau of Land Management
CIO	Chief Information Officer

DM	District Manager
DO	District Office
DSD	Deputy State Director
EA	Environmental Assessment
EIS	Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FM	Field Manager
FMO	Fire Management Officer
FO	Field Office
GA	Group Administrator
GSA	U.S. General Services Administration
HR	Human Resources
IB	Information Bulletin
IBLA	Interior Board of Land Appeals
IFTR	Indian Fiduciary Trust Record
IM	Instruction Memorandum
IRM	Information Resources Management
IT	Information Technology
OMB	Office of Management and Budget
NOC	National Operations Center
RMP	Resource Management Plan
ROD	Record of Decision
ROW	Right-of-Way
WO	Washington Office

.42 How to Revise Appendix 1. Submit suggestions for amendments or corrections to material in Appendix 1 to the Wyoming State Office organizational unit responsible for the activity/function at issue. Following review and concurrence by the responsible State Office official, the revision(s) shall be submitted to the Division of Business and Support Services (WY 950) in accordance with .22A of this Manual Supplement.

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
1102	Issue employee ID cards as stipulated in BLM manual. Does not include authority to issue Department of the Interior ID cards. Date of Last Review: 3/24/10 * All supervisors	●	*	*	*	*	*
1103	Approve use of the BLM uniform and the replacement uniform allowance up to $800 annually. _____ * All Supervisors Source: 5 U.S.C. 5901-5902 IM OC-2008-012 Date of Last Review: 3/24/10	●	*	*	*	*	*
1112	Approve purchase of personal protective equipment for all programs. _____ * All Supervisors Date of Last Review: 3/24/10	●	*	*	*	*	*
1112	Approve, where necessary, entry of BLM employees onto officially controlled, low-risk sites limited to Level D personal protective equipment. Assure that employee's position description reflects site entry and that all applicable safety and health laws are applied. _____ Date of Last Review: 3/24/10	●	●	●	●	●	●
1112	Authorize appropriate financial and staffing resources to effectively implement and maintain the required Occupational Safety and Environmental Health Program, pursuant to the following: - Public Law 91-596, "Occupational Safety and Health Act of 1970," Sections 6 and 19. - Executive Order 12196, "Occupational Safety and Health Programs for Federal Employees." - Title 29, Code of Federal Regulations (CFR) Part 1960, "Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters." - National Consensus Standards. Source: 485 DM,29 CFR 1960.7	●			●	●	●

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			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
1112 488 DM (also see 1400-930)	Authorize motor vehicle road tests determined to be appropriate and appoint examiners. Date of Last Review: 3/24/10	●			●	●	●
1112	Approve Risk Management Plans Source: BLM H-1112-1 Chap. 12.1B Date of Last Review: 3/24/10	●	●	●	●	●	●
1112, 1783	Appoint management members to Safety Committees within their respective jurisdictions. (NOTE: Safety Committees shall have equal representation of management and non-management employees. Refer to 29 CFR 1960.37 (a) (b) (2) for rules of appointment for non-management employees). Date of Last Review: 3/24/10	●	●	●	●	●	●
1112.04	Appoint a qualified safety manager to be: - State safety manager - District Safety Manager - Field Office safety coordinator Date of Last Review: 3/24/10	●			◘	● ●	●
1112.15A	Authorize annual inspections of all facilities and approve abatement actions. Date of Last Review: 3/24/10	●			◘	●	
1112.21C	Appoint Accident Investigation Teams upon notification of an employment related accident which resulted in a fatality or the hospitalization of 3 or more employees, or accidental damage or loss to Government property exceeding $250,000, or multiple visitor fatalities or hospitalization of 3 or more visitors. Source: 485 DM 7 Date of Last Review: 3/24/10	●			◘		
1113.03B	Approve, authorize, and reimburse personal horse use. Source: BLM Manual 1113.12A Date of Last Review: 3/24/10	●				◘	◘
1114	Sign agreements with volunteers and volunteer groups that wish to contribute services. ____	●	◘	◘	◘	◘	◘

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			DSD				
		SD	920	930	950	DM	FM
	Source: Section 307, FLPMA Date of Last Review: 3/24/10						
1120	Approve all state level publications under the cost of $25,000. In addition to actual printing costs this figure includes any contracted services for graphics, typesetting, layout and design. Date of Last Review: 3/24/10 (Per WO IM 2002-264) [1] - 912: Under the advice of the WY-912, State Printing Specialist, concerning printing policies.	●[1]					
1170	Provide assistance in case of disasters in any part of the United States when requested by the President through the Department of Homeland Security and/or Federal Emergency Management Agency (FEMA). (See 43 CFR 1815 and 42 U.S.C. 5170b)						
	Assist State Directors in periods of disaster upon request.					1	1
	Provide disaster assistance when requested by FEMA by coordinating the movement of the closest forces capable of performing the relief requested.	●				●[1]	◘[1]
	Provide a facility to temporarily operate the BLM in the event of military attack.	●[2]			●[2]	●[2]	●[2]
	Provide search and rescue assistance when requested by the local authorities in charge.	●				●	●
	Provide assistance to help alleviate the effects of a local disaster within the ability of the personnel and equipment in the area at the time of the emergency.	●				●	●
	_____ 1 – LE 2 – The further Delegation should also be noted in the COOP Source: 900 DM 1 and 905 DM 1 Date of Last Review: 3/24/10						
1170.27B	Provide emergency Civil Defense assistance Date of Last Review: 3/24/10	●			◘	●	●
1202.03	Organization and Management Structure and Functions: Approve changes in organization structure and functions for						

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO: SD	DSD 920	DSD 930	DSD 950	DM	FM
	State, District and Field Offices. Office Status: Boundaries: Approve changes in District and Field Office boundaries. Positions: Approve establishment or abolishment of Associate or Assistant District/Field Managers. _____ 1- Changes that create or eliminate Divisions must be approved by the Assistant Secretary, PMB, since affects the DOI Manual. 2- State, District, Field and Division level within these units. SEE BLM MANUAL 1202 3 - Approval by the Director and concurrence by the Office of the Assistant Secretary. Date of Last Review: 3/24/10	2 3 ●					
1203	Approve reciprocal delegations of authority, on a trial basis through Fiscal Year 2011, in conjunction with the Forest Service, National Park Service, and Fish and Wildlife Service. Date of Last Review: 3/24/10	●					
1203.04F	Designates acting officials. *- All Supervisors Source BLM Manual 1203.24 Date of Last Review: 3/24/10	*	*	*	*	*	*
1220, 1813	Approve Federal Register Notices on the following: Calls for Nominations to Boards or Commissions Advisory Committee Meetings. _____ 1 Requires Washington Office (WO) review. Source: WO Instruction Memorandum No. 2003-250 Date of Last Review: 3/24/10	1					
1220, 1270	Authority to sign SF-135 to transfer records to and access records from the Federal Records Centers. Authority to sign SF-258 to transfer ownership of records to the National Archives and Records Administration (NARA). Authority to sign Notices of Destruction NARA _____ 1 - Records Manager or next highest organizational level. 2 - Requires review and concurrence of program officials or				1 1 1,2	●[1] ●[1] ●[1]	

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			DSD				
		SD	920	930	950	DM	FM
	owners of records. Source: 44 U.S.C. 3302 Date of Last Review: 3/24/10						
1221	Directives (see signing authority chart in Manual Section 1221.2).						
	Sign Instruction Memorandums within their area of authority.	●	◘	◘	◘	●	◘
	Sign Information Bulletins within their area of authority.	●	◘	◘	◘	●	◘
	Sign BLM Manuals and Handbooks within their area of authority Date of Last Review: 3/24/10	●	◘	◘	◘		
1223	Approve BLM forms.						
	Approve National Operations Center, State, District and Field Office Forms	●			●[1]	●[1]	◘[1]
	_____ 1 – After review anad approval by the SO Printing and Records Specialist Source: 380 DM 7 Date of Last Review: 3/24/10						
1240	Approve Management Control Reviews.	●	●	●	●	●	●[1]
	1-With review from next level up Manager Date of Last Review: 3/24/10						
1240	Approve State and NOC submission of Annual Assurance Statements and Risk Assessments Date of Last Review: 3/24/10	●					
1240	Approve Evaluations/Reviews 1 – With Review from next level up manager. Date of Last Review: 3/24/10	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
1245	Approve responses to GAO/OIG Audit Reports (draft and final).	◘					
	Prepare responses to draft/final Audit Reports within their area of responsibility.	●	●	●	●		
	_____ Date of Last Review: 3/24/10						
1261, 1263	All IT investments meeting the minimum State/Center level screening criteria must follow their respective ITIM	1			1		

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	processes. The screening criteria for a State/Center level investment are any Information Technology Investment with a total life cycle cost of less than $500,000 where the State/Center has a CIO-certified and functioning ITIB, or any proposed investment with a life cycle value of less than $50,000 where the State/Center does not have a CIO-certified and functioning ITIB. _____ 1– The State/Center Director as Chair of the State/Center ITIB. Date of Last Review: 3/24/10						
1270, 1278	Authority to Sign Freedom of Information Act (FOIA) Responses:						
	- Authority to release documents.	●[1]			●[1]		
	- Authority to withhold a requested record.*	◘					
	- Authority to release a record which is exempt from disclosure (discretionary release).*	◘					
	- Authority to deny a fee waiver.*	◘			●[1]		
	- Authority to sign interim FOIA responses which include clarification of fee issues, scope of the FOIA request and request for extensions.	●[2]			●[2]	●[2]	◘[2]
	- Authority to sign —no records‖ response.	●					
	- Authority to deny expedited processing.	◘					
	_____ *Only after consultation with the office of the appropriate associate, regional, or District/Field solicitor. 1 – State FIOA officer Only 2 – In consultation with State FIOA Officer Source:43 CFR 2.16 Date of Last Review: 3/24/10						
1270	Deny Privacy Act (PA) requests with concurrence of PA Officer.	◘					
	Release PA records to third party requester (through FOIA request). Only after consultation with the office of appropriate associate, regional or District/Filed solicitor. Date of Last Review: 3/24/10	●					

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		SD	920	930	950	DM	FM
1270	Records Certification: Sign Forms, and emboss with official BLM seal, certifying and attesting to the source and authenticity of BLM copies, records for court or other customer requests. _____ 1- Redelegation limited to permanent employees Source: BLM Manual 1270.63 and Title 43 U.S.C. Chapter 31 1460 Date of Last Review: 3/24/10	1					
1270. 1813	Authority to provide certified copies of records/papers. _____ Source: 310 DM 10 Date of Last Review: 3/24/10	●			●	●	●
1275, 1220, 1824	Prepare and publish in the Federal Register notices of general meeting. _____ Source: WO IM No. 2003-250 and IM No. 2003-290 Date of Last Review: 3/24/10	●	●	●	●	●	●
1278	Prepare and approve Official Agency Record Designation Documents (OARDD). Approve transition of records from non-public to the public record category. Date of Last Review: 3/24/10	◘ ◘					
1278	Approve data sharing agreements where no funds are involved. Approve data sharing agreements, if funds are to be exchanged. 1 – Reviewed and concurred by the Records Administrator and Data Administrator and the FOIA/Privacy Act Specialist. 2-With concurrence and signature of the Contracting Officer Date of Last Review: 3/24/10	●[1] ●[2]	◘[1]	◘[1]	◘[1] ●[2]	●[1] ●[2]	◘[1]
1283	Approve changes involving the Bureau's data element dictionary/data dictionary for Wyoming corporate data. Submit proposed changes to Bureau corporate data to other BLM offices for review and comment and to the Bureau Data Administrator for approval. Date of Last Review: 3/24/10	●	◘	◘	◘		
1283	Designate, approve, and change personnel as data stewards for their respective areas of jurisdiction.	●	◘	◘	◘	●	◘

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		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
1283	Approve data quality assurance (QA) plans. Date of Last Review: 3/24/10	●	◘	◘	◘	●	◘
1291	Approve requests for radio frequency assignments. 1 With approval of radio telecom Manager Date of Last Review: 3/24/10	●[1]			●[1]	●[1]	
1301	Financial systems design and application to specific areas (e.g., Cash Management, Assets, Liabilities, Equity Accounts, etc.). Date of Last Review: 3/24/10	●					
1374	Authorize transfers and returns from the Collections and Billings System. May be re-delegated from SD to District/Field Manager and then to Program Specialist. Date of Last Review: 3/24/10	●	●		●	●	◘
1375	Authorize waivers (full or partial) in the Collections and Billings System (CBS) for bills, including late fees. Date of Last Review: 3/24/10	●			●	●	
1375	Approve compromise, suspension or termination of collection actions on debts due the United States upon approval by District/Field or Regional Solicitors, - Up to $100,000. Source: 903 CFR 1 Date of Last Review: 3/24/10	●					
1375	Approve all promissory notes when rescheduling debts under the standards Date of Last Review: 3/24/10	●			●	●	
1375, 9230	Approve liability and damages for unauthorized use of the public lands. Accept damages and/or liabilities for unauthorized use: A. Accept full payment. B. Approve Write Off/Close-out of debts due the United States when BLM determines it is no longer cost effective to	● ● ●				●	●[1]

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	pursue collection or it is not required by a program: $1- $99 $100 - $49,999 $50,000 - $99,999 $100,000 and up C. Approve waiver of Interest, Penalty, Administrative Charges or late fee Assessment Compromise, suspension, and termination of Debts due the United States $1 -$49,999 $50,000 - $99,999 $100,000 and up _____ 1 – State Director may re-delegate to District/Field Office manager who may further re-delegate to the specialist, i.e., Land Law Examiner, Realty Specialist, Range Conservationist, etc. 2 – State Director, NOC Director, Assistant Director, Fire and Aviation Policy, with concurrence of the NOC, Division of Business Services. 3 – Debt is reviewed by State Director and the solicitor. Debt may be referred to the Department of Justice by the Office of the Solicitor or forwarded to the NOC for referral through the Solicitor to the Department of Justice. 4 – State Director may re-delegate to District/Field Office Manager. 5 – Cannot be re-delegated. Date of Last Review: 3/24/10	●[1] ◘[5] ◘[2] 3 ● ◘[2] 3				●[1] ◘	
1376	Approve payment of telephone bills: - Cellular Telephone Bills - Land Line Telephone Bills _____ Source: (DOI Policy on Telephone Use June 14, 2000) Date of Last Review: 3/24/10	● ●			● ●	● ●	◘ ◘
1378	Negotiate securities, Certificate of Deposit, Letter of Credit (CD/LOC). Responsible for the safe-keeping of CD/LOC for Wyoming State Minerals Oil and Gas and Geothermal resources. 1-With input of DO and FO Date of Last Review: 3/24/10	●	◘[1]				
1382	Authorize travel expenses.	●	●	●	●	●	●

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		SD	920	930	950	DM	FM
	_____ Source: NBC Travel Guide (January 2005) Date of Last Review: 3/24/10						
1382	Approve up to 99 percent of the authorized rate for extended (over 30 days) emergency temporary duty travel. _____ Source: IB No. OF&A 2002-021. Federal Travel Regulations – 301-11.200 Date of Last Review: 3/24/10	●	●	●	●	●	●
1382	Approve travel for pre-appointment interviews. Date of Last Review: 3/24/10	●	●	●	●	●	◘
1382	Approve or authorize travel connected with programs in their respective offices, including travel of advisory board members and use of rental cars. This does not include attendance at non-government meetings, pre-appointment interviews, or travel by experts or consultants. Date of Last Review: 3/24/10	●	●	●	●	●	●
1382	Approval of intrastate permanent change of station travel. Date of Last Review: 3/24/10	●	◘	◘	◘	◘	
1382	Approval of interstate permanent change of station travel. Date of Last Review: 3/24/10	●			●		
1382	Approve travel of experts and consultants. Date of Last Review: 3/24/10	●			◘	◘	
1382, 1788	Approval or authorization of travel for attendance at non-government meetings. Date of Last Review: 3/24/10	●	●	●	●	●	●
1382	Approve advanced written request for actual per diem or lodging costs up to 300 percent of the allowable per diem or lodging allowance for the locality. 9/30/09 Change 1 to 1203 per WO AS the CFO I am exercising my authority to change the following delegation from “cannot be Delegated” to allowing this function to be delegated to the managers level Date of Last Review: 3/24/10	●	◘	◘	◘	◘	◘
1382	Approve travel to foreign countries. _____ * - Assistant Secretary, Land and Minerals Management, must approve most foreign travel. However, State Directors and the Assistant Director, Office of Fire and Aviation, may approve travel under certain exceptions as stated in 347 DM 1. This authority cannot be re-delegated. Date of Last Review: 3/24/10	◘					

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1382	Authorizes and approves use of privately owned vehicles [1] – All Supervisors Per IN WY-2008-37 Date of Last Review: 3/24/10	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
1382	Approves or denies requests for: - Temporary quarters extensions beyond 30 days (Per WO IM 2001-046, 12/7/2000) - Temporary storage extensions beyond 90 days (Per WO IM No.93-206, 4/8/96) Date of Last Review: 3/24/10	◘ ◘					
1382	Approve advance travel funds for employees. *-All Supervisors Date of Last Review: 3/24/10	*	*	*	*	*	*
1384	Approval of Accountable Officers (except Collection Officers). Date of Last Review: 3/24/10	●	●	●	●	●	●
1384	Approval and Revocation of a Designated Collection Officers (including contractors). _____ Source: BLM Manual 1384.33 and IM BC-1999-047 Date of Last Review: 3/24/10	●					
1386	Appoint Tort Claims Administrators. _____ Source: 451 DM Date of Last Review: 3/24/10	●			◘		
1400-213	Authorize Excepted Service Appointments (i.e. STEP, SCEP, Seasonal, Handicapped, 30-day Special Need). 1-STEPs Date of Last Review: 3/24/10	●	●	●	●	●	●[1]
1400-300	Approves details Date of Last Review: 3/24/10	●	●	●	●	●	◘
1400-300, 311.41	Administer Oath of Office. _____ * - All Supervisors Source: BLM Manual 1400-311.41 Date of Last Review: 3/24/10	*	*	*	*	*	*
1400-300	- Directed reassignments to all other positions _____ Source: IM 2008-10 and 920 DM Date of Last Review: 3/24/10	◘					

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		SD	920	930	950	DM	FM
1400-302	Authorizes temporary limited appointments 1-Following PMC and Selection Policy Date of Last Review: 3/24/10	●[1]					
1400-311	Powers of appointment and removal (SF-50) (Certain key positions require Secretarial approval. Refer to 370 DM 311.) - GS-1 through GS-15. - Wage System Position.	 ● ●					
1400-335	Promotion and Internal Placement. - Recruitment for all positions GS-15 and below. - Approve selection of Public Affairs Officers and related public affairs positions. - Approve selection of Human Resources Officers and Equal Employment Opportunity Officers. _____ 1 - Assistant Director, Communications. Selections reviewed by DOI Director, Communications. 2 – Referral 3- All 1st Level Supervisors with concurrence by DM and DSD Source: 470 DM 335 Date of Last Review: 3/24/10	●[3] 1, 2 ◘	●[3]	●[3]	●[3]	●[3]	●[3]
1400-351	Approval of Reduction in Force. _____ 2 - NOCD, SD, Assistant Director, Fire and Aviation and LE have authority to review and advise as appropriate. Date of Last Review: 3/24/10	2					
1400-410	Authorize Training. _____ * - All Supervisors. Source: BLM Manual 1400-410.04 Date of Last Review: 3/24/10	*	*	*	*	*	*
1400-410	Approve non-government training, 80 to 120 hours. Date of Last Review: 3/24/10	◘					
1400-430	Employee Performance Plans. - Prepare Annual Performance Plans. - Develop/Approve Performance Improvement Plans. - Prepare Annual Summary Ratings.	 ● ●[1] ●	 ● ●[1] ●	 ● ●[1] ●	 ● ●[1] ●	 ● ●[1] ●	 ● ●[1] ●

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		SD	920	930	950	DM	FM
	- Concur by next higher official with —Level 1, 2 and 5 "Summary Rating" Summary Rating. Date of Last Review: 3/24/10 [1] - All first level supervisors after review and advice by Servicing Personnel Office, as appropriate. 2- All second level supervisors after review and advice by Servicing Personnel Office, as approprtiate.	●[2]	●[2]	●[2]	●[2]	●[2]	◘[2]
1400-432	Performance Based Actions. - Issue Notices of Proposed Adverse Actions. - Issue Notices of Decisions. [1] - All first level supervisors after review and advice by Servicing Personnel Office, as appropriate. [2] - All second level supervisors after review and advice by Servicing Personnel Office, as appropriate. Date of Last Review: 3/24/10	●[1] ●[2]	●[1] ●[2]	●[1] ●[2]	●[1] ●[2]	●[1] ●[2]	●[1] ●[2]
1400-451	Approve Awards. - Star Awards of $50 - $500 (Net). - Individual awards up to $5,000. - Division awards below $5,000. _____ 1 First Level Supervisor 2 Field Manager, Branch Chief recommendation with DM or DSD concurrence/approval Source: 451 DM Date of Last Review: 3/24/10	●[1] ●[2] ●[2]	●[1] ●[2] ●[2]	●[1] ●[2] ●[2]	●[1] ●[2] ●[2]	●[1] ●[2] ●[2]	●[1] ◘[2] ◘[2]
1400-511	Position Classification. - All positions GS-1 through GS-14 and Wage System positions except positions requiring Departmental approval. _____ [1] – Human Resource Office Date of Last Review: 3/24/10	●			◘[1]		

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		SD	920	930	950	DM	FM
1400-531	Rates of Pay.						
	- Approve Superior Qualifications Appointment not to exceed 20 percent above candidate's existing rate of pay. Over 20 percent of existing rate of pay requires the Office of Personnel Management approval.	◘					
	- Within-grade increases.	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
	- Quality Step Increases	●[2]	●[2]	●[2]	●[2]	●[2]	●[2]
	- Denial of within-grade increases.	●[3]	●[3]	●[3]	●[3]	●[3]	●[3]
	- Reconsideration of denials of within-grade increases.	●[2]	●[2]	●[2]	●[2]	●[2]	●[2]
	[1] - All first level supervisors after review and advice by second level supervisor and Servicing Personnel Office, as appropriate. [2] - All second level supervisors after review and advice by Servicing Personnel Office, as appropriate. [3] – Discussions with Second level and Human Resources. Date of Last Review: 3/24/10						
1400-536	Grant optional grade and pay retention in major reduction or reorganization. Date of Last Review: 3/24/10	●			◘		
1400-550	Pay Administration.						
	- Approve Overtime and Holiday Pay.	●	◘	◘	●	●	●[2]
	+ During emergency situations in absence of authorized official.	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
	- Approve Hazard and Environmental Differentials.	●	◘	◘	◘	●	◘
	+ During emergency situations in absence of authorized official.	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
	Approve changing exemption status of employees for performaing work when non-fire emergency situations exists (5CFR551.208(f).	●					
	[1] - All first level supervisors after review and advice by Servicing Personnel Office, as appropriate. [2]Assistant Field Managers Date of Last Review: 3/24/10						
1400-572	Payment of travel and transportation expenses for new appointees to the first post or duty.	●					

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			DSD				
		SD	920	930	950	DM	FM
	Payment of travel and transportation expenses for pre-employment interviews. Date of Last Review: 3/24/10	●	●	●	●	●	●
1400-550	Recruitment and Relocation Bonuses and Retention Allowances. - Fire Positions. - Approval for GS-15 and below. _____ 1 – Assistant Director, Fire and Aviation Date of Last Review: 3/24/10	1 ◘					
1440-550	Approval Student Loan Repayment benefit Plan Date of Last Review: 3/24/10	●	●	●	●	●	
1400-610	Hours of Duty						
	Set building office operating hours. WY Organization is 7:45 a.m. to 4:30 p.m. M-F except approved holidays.	◘				●[2]	
	Approve Alternate Work Schedules	●	●[1]	●[1]	●[1]	●[1]	●[1]
	Authorize Administrative Leave for an individual	●	◘	◘	◘	◘	◘
	Authorize Group Dismissal (Administrative Leave)	●	◘	◘	◘	◘	◘
	Approve Telecommuting and Flexible Workplace.	●	◘	◘	◘	◘	◘
	[1]May be redelegated to first line supervisor [2]For trail Center Only Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
1400-630	Absence and Leave.						
	- Approve Absence and Leave.	*	*	*	*	*	*
	- Leave Without Pay, 30 days to 1 year.	●	◘	◘	◘	●	◘
	- Approve denial or restoration of leave due to extenuating work circumstances (exigency of the public business).	◘					
	- Approve annual leave restoration.	◘					
	Leave Transfer Program:						
	- Recommend employee application to become a leave recipient.	●	●	●	●	●	●
	- Approve employee applications to become a leave recipient.	●	●	●	●	●	●
	_____ * - All supervisors. Date of Last Review: 3/24/10						
1400-714	Equal Employment Opportunity - Arrange for and provide mediation for all informal and formal complaints of discrimination.	●[1]					
	- Approve the informal resolution of complaints of discrimination, including mediation agreements.	●[1]					
	- Process formal complaints of discrimination.	●[1]					
	- Approve the formal settlement of complaints of discrimination, including mediation settlements.	●[2]					
	_____ 1 - State Director delegated to EEO Officer 2 - State Director delegated to EEO Officer, after review and consultation with the Regional Solicitor and BLM-WO. Source: IM 2008-010 Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
1400-731	Personnel Suitability and Security Program management, oversight and review authority for personnel suitability and security adjudication and program and position sensitivity.						
	- Adjudicate all non-sensitive personnel investigations.	●			●[1]		
	- Make position sensitivity designations.	●			●[1]		
	- Requesting official for all sensitive personnel investigations.	●			●[1]		
	- Requesting official for all non-sensitive personnel investigations.	●	●	●	●	●	●
	- Approve and inspect all sites for personnel security and storage of classified material and information.	●					
	- Initiate Personnel and Physical Security Management Evaluations.	●				●	
	_____ 1 – WY Human Resource Office Source: 5 CFR, 32 CFR and 441- 442 DM Date of Last Review: 3/24/10						
1400-735 (5 CFR 2635.803)	Employee request for approval to engage in outside employment. [1] - All first level supervisors after consultation with State Office Ethics Officer. Date of Last Review: 3/24/10	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
1400-735	Financial Disclosure Statements. - Identification of covered positions for filing. Date of Last Review: 3/24/10	◘					
1400-735	Testifying: Authorize employees to testify within Federal government (for ex. Federal Courts and Congress). Outside requests for testimony requires consultation with Regional Solicitor. _____	*	*	*	*	*	

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO: SD	DSD 920	DSD 930	DSD 950	DM	FM
	* - Delegated from State Director, to DSDs and District Managers. Date of Last Review: 3/24/10						
1400-752	Discipline and Adverse Actions.						
	- Issue warning.	*	*	*	*	*	*
	-Reprimands	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
	- Propose suspensions of 14 days or less.	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
	- Decisions on proposed suspensions of 14 days or less.	●[2]	●[2]	●[2]	●[2]	●[2]	●[2]
	- Proposed adverse actions (e.g., suspension of greater than 14 days, removal, demotion).	●[1]	●[1]	●[1]	●[1]	●[1]	●[1]
	- Issue decisions on proposed adverse actions.	●[2]	●[2]	●[2]	●[2]	●[2]	●[2]
	*All supervisors [1] - All first level supervisors after review and advice by Servicing Personnel Office, as appropriate. [2] - All second level supervisors after review and advice by Servicing Personnel Office, as appropriate. Date of Last Review: 3/24/10						
1400-752, 771	Grievances (Consult with the WO Human Resources staff). - Issue Adjustment/Decision of informal grievance.	*	*	*	*	*	*
	- Issue Adjustment/Decision of formal grievance.	●	●[1]	●[1]	●[1]	●[1]	●[1]
	_____ *All immediate Supervisors. [1] – Second Level Supervisors Date of Last Review: 3/24/10 Source: 370 DM 771						
1400-792	Establish employee health, wellness and assistance programs. Date of Last Review: 3/24/10	●				●	●
1400-792	Order Fitness for Duty examinations. [1] - After review and advice from servicing Personnel Office Date of Last Review: 3/24/10	●	◘[1]	◘[1]	◘[1]	◘[1]	◘[1]

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			DSD				
		SD	920	930	950	DM	FM
1400-792	Contract for Health Service Unit (with concurrence of Departmental Medical Officer). Date of Last Review: 3/24/10	●			●	●	
1400-900	Authorize Notary Public Commissions Date of Last Review: 3/24/10	●	●	●	●	●	◘

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			DSD				
		SD	920	930	950	DM	FM
1510	Authority to approve the purchase of refreshments or meals with appropriated funds: Only when in compliance with specific enabling legislation or statutes such as Amendment 89 to the Federal Travel Regulations, the Government Employees Training Act, the Government Employees Incentive Awards Act, Public Law 98-540, to amend the Volunteers in the Parks Act of 1969, or various Comptroller General decisions. The maximum cost will not exceed $2 per attendee up to $500 per event. In the absence of a specific authority, the purchase of refreshments or meals is not authorized for either Government personnel or non-government personnel, such as partners or visiting dignitaries. _____ * - Conferences with over 30 attendees require approval by the Assistant Secretary, Land and Minerals Management Source: 5 U.S.C. 5403 Date of Last Review: 3/24/10	●	●	●	●	●	●
	Approve memberships in associations up to $2500. _____ Source: BLM Manual 1510-1.602-1 Date of Last Review: 3/24/10	●	●	●	●	●	●
1510	Suspend a Contracting Officer's warrant pending completion of corrective actions or while investigating procurement abuses or other potential causes for termination. _____ 1 - Chief of the Contracting Office (State Procurement Analyst, Chief (OR-952)) or the Contracting Officer's supervisor. Date of Last Review: 3/24/10	1			1		
1510.03D1	Approves requisitions. *All supervisors Date of Last Review: 3/24/10	*	*	*	*	*	*

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			DSD				
		SD	920	930	950	DM	FM
1510-1.602-3	Ratify unauthorized procurements up to the office's delegated acquisition authority by the Chief of the Contracting Office only with concurrence by the State or Center Director. This authority may not be re-delegated Note: Legal review is required on ratifications in excess of the micro-purchase threshold as per the Department of the Interior Acquisition Policy Release (DIAPR) 2001-3. _____ 2 - State, Chief (OR-952) and Branch Chief (OC- 660) - Cannot be re-delegated. Date of Last Review: 3/24/10	●			◘2		
1510-13	Purchase card acquisition authority more than the micro-purchase threshold. Receipt of personalized card is the authority. Fixed-price indefinite delivery contract ordering authority may be delegated by the cognizant Contracting Officer at the National Operations Center or Oregon State Office to either a District/Field Contracting Officer. Assign purchase cards. _____ * - Contracting officer. 1 – All Supervisors. Source: BLM Manual 1510-13 Date of Last Review: 3/24/10	* 1	* 1	* 1	* 1	* 1	 1
1510, 1511	Authority to award/administer stewardship contracting projects, including those entered into by agreement (all contracts over $100,000 using this authority shall be conducted as performance-based acquisitions). _____ * - Contracting Officers who have been specifically delegated Stewardship Contracting Authority in writing by the BLM Procurement Chief. National Operations Center Level II and Level III Contracting Officers and the BLM Oregon State Office. Source: BLM Manual 1510-1.671 Date of Last Review: 3/24/10	●			*		
1510-1.671	Authority not to exceed the $100,000 simplified acquisition threshold for open market acquisitions, the maximum order limitation in existing Government contracts, and unlimited from required sources. Note: States without Procurement Analysts are limited	●			●[1]		

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		SD	920	930	950	DM	FM
	to $25,000. Special purpose space leasing authority is limited to $25,000. [1] - Contracting Officers in State Offices, Assistant Director, Fire and Aviation and the WO with Procurement Analysts - Cannot be re-delegated. Date of Last Review: 3/24/10						
1510	The ability to retain any excess offset values for reinvestment into other stewardship contracting projects without further appropriations. _____ * - Contracting Officer's with Stewardship Authority. Source: Section 323 Public Law 108-7 and BLM Manual 1510-1.671 Date of Last Review: 3/24/10	●			*		
1510	The authority to enter into stewardship contracts up to 10 years in length. _____ * - Contracting Officer who have been specifically delegated Stewardship Contracting Authority in writing by the BLM Procurement Chief. National Operations Center Level II and Level III Contracting Officers and the BLM Oregon State Office. Source: IM No. 2004-081 and BLM Manual 1510-1.671 Date of Last Review: 3/24/10	●			*		
1510-6.304	Approve Justification for other than Full and Open Competition. - up to $500,000. [1] - Contracting Officers within their warrant limits. Date of Last Review: 3/24/10	●			◘[1]		
1511	Award assistance agreements and reimbursable law enforcement agreements by Grants Management Officers having completed assistance agreement training requirements. For assistance agreements, the Chief of the Contracting Office's approval is required on the Statement of Programmatic Involvement/Instrument Selection Determination (SPI/ISD). Assistance agreements that are expected to exceed $100,000 over the life of the agreement, including all modifications, require approval of the SPI/ISD by WO-850. _____ * - Grants Management Officers who have been delegated the authority by the BLM Procurement Chief.	●			*		

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	Date of Last Review: 3/24/10						

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		SD	920	930	950	DM	FM
1512	Approve requests to use a corporate charge card account to purchase transportation tickets for a cardholder whose account is suspended or canceled. _____ Source: BLM Manual 1512.4 Date of Last Review: 3/24/10	●	●	●	●	●	
1515 PL 93-638 PL 103-413	Approve Indian Self Determination 638 contracts and Indian Self Governance Annual Funding Agreements. Includes the authority to approve, negotiate, and administer both 638 Contracts and Annual Funding Agreements. The obligation of funds will correspond to existing procurement delegations. [1] - The authority to negotiate and administer funding agreements may be re-delegated to State Office Technical and/or Procurement leads only. Date of Last Review: 3/24/10	●			●[1]		
1520	Acquire, safeguards, maintains, uses, reassigns, and disposes of personal property under their jurisdiction. (Please see BLM Manual Sections 1521-1529 for specific delegations and limitations related to personal property management.) *-Accountable Officers can not be redlegated. Date of Last Review: 3/24/10	*	*	*	*	*	*
1521	Designated Bureau Receiving Offices are authorized to sign receiving reports for Personal Property and Services after inspection and acceptance. This signature serves as the basis for the expenditure of Government funds. Date of Last Review: 3/24/10	●			◘	●	◘
1522	Serves as Bureau accountable officers. Date of Last Review: 3/24/10	●			◘	●	◘
1522	Serve as Property Management Officer. Deputy State Director for Support Services serves at State Office. Support Services Supervisor, serves at District Office. 1-ADM Support Services Date of Last Review: 3/24/10	●			◘	◘[1]	
1520, 1525	Approves requests from Law Enforcement Officers under their jurisdiction to domicile government owned or leased vehicles. An approved copy of Form 1520-10 is sent to the appropriate Washington Office unit. _____ Cannot be re-delegated Source: BLM Manual 1520.10 Date of Last Review: 3/24/10	◘					
1520,	Domiciling of Government Vehicles						

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		SD	920	930	950	DM	FM
1525	Approves requests to domicile Government-owned or leased vehicles in connection with official travel. Source: BLM Manual 1520.27 Date of Last Review: 3/24/10	●	●	●	●	●	●
1523	Authorizes temporary storage of personal property for another Federal Agency, a contractor in connection with a Federal contract or cooperative agreement, State or local government, or an employee. A written agreement is required with the exception of the employee. Associate State/National Operations Center Director, Deputy State Directors, NOC Division Chiefs or Field Managers - Cannot be re-delegated. Date of Last Review: 3/24/10	●			◘	●	◘
1523	Accountable Officers, certifies accuracy of all inventories assigned prior to departure. Source: BLM Manual 1520 Date of Last Review: 3/24/10	●			◘	●	◘
1523	Approves reassigning property within the State, except reassignment of motor vehicles and equipment in the Working Capital Fund must be coordinated with the appropriate National Business Center Unit. Date of Last Review: 3/24/10	●			◘	●	●
1523	Approves rental or loan of BLM-owned vehicles/equipment. Source: BLM Manual 1520 Date of Last Review: 3/24/10	●			◘	●	◘
1524	Performs as Property Officer and makes appropriate recommendations on all Reports of Survey and Certificates of Loss or Damage for which the State Director is the reviewing authority. Date of Last Review: 3/24/10	●			◘	●	●
1524	Appoints standing board of survey to act on Reports of Survey originating in State/District/Field/National Operations Center. Date of Last Review: 3/24/10	●			◘		
1524	Appoints three-member special board of survey to act on Reports or Survey originating in State /District/ Field/ National Operations Center Office.	◘					

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	_____ Cannot be re-delegated. Source: 1520 Chapter 5, Personal Property Manual. Date of Last Review: 3/24/10						

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1524	Approves all Reports of Survey and Certificates of Loss or Damage originating in the Field Offices and other offices under the State Director. Date of Last Review: 3/24/10	●			◘	◘	
1524	Sign as reviewing authority on all Report of Survey and Certificates of Loss or Damage originating in the District and Field Offices. (Note: BC is reviewing authority for SO reports.) Date of Last Review: 3/24/10	●			◘	◘	
1525	Signs and certifies requisitions to purchase motor vehicles. (Requisitions are sent to the National Business Center.) Date of Last Review: 3/24/10	●			◘	●	◘
1525	Approves reimbursement of personal credit card use by Law Enforcement Officers. Date of Last Review: 3/24/10	●				●	◘
1525	Approves repairs exceeding the maximum single-job repair percentage and all repairs percentage and all repairs to vehicle/equipment exceeding replacement standards (years, miles, hours). However, all must contact the appropriate National Business Center for approval prior to repair. Date of Last Review: 3/24/10	●			◘	●	◘
1525	Approves incidental use involving ―unofficial passengers‖ in extra space in motor vehicles and boats in cases of emergency or disaster situations to transport persons with injuries or in pain and to prevent death or serious damage to persons or property. Date of Last Review: 3/24/10	●	◘	◘	◘	●	◘
1526	Approve renting of Bureau-owned equipment to meet written stipulations of a construction contract or a Cooperative Agreement for use on government programs. Date of Last Review: 3/24/10	●			◘	●	●
1526	Approve loaning of Bureau-owned equipment on a temporary basis in furtherance of government programs. Date of Last Review: 3/24/10	●			◘	●	◘
1526	Approve loaning of Bureau-owned equipment to provide disaster assistance in emergencies. Date of Last Review: 3/24/10	●			◘	●	◘
1527	Approves as Reviewing Authority decisions to scrap, salvage, or cannibalize a vehicle or equipment (must be coordinated with the National Operations Center). [1] - 951- Business Manager [2] – Support Services Supervisor	●			●[1]	●[2]	

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1527	Sign available property reports, Form 1520-34. The delegation of authority is to Accountable Property Officers (Washington Office, NOC Director, State Director and District Managers). Re-delegated as follows: 1) For the WO, the delegation is specific to the WO property manager (WO-851). 2) For the NOC, the delegation is specific to the NOC property manager. 3) For the State Office, the delegation is specific to the State Office Property Manager (and the Deputy State Property Manager as backup). 4) For Districts, the delegation is specific to the District Property Manager for each District. 5) Assistant Director, Fire and Aviation. May not be further re-delegated. See also Subject Code 1384 regarding designation of accountable property officers. _____ Source: 410 DM and BLM Manual 1520 [1] - Date of Last Review: 3/24/10	●			◘[3]	◘[4]	
1529	Approve Transfer Orders, Excess Personal Property, SF-122, or other documents for acquiring personal property except motor vehicles and heavy equipment. Approve authorization to screen excess property lists, inspect property, and place freeze requests. _____ * - State Office delegation is specific to the DSD for Support Services and Chief, Administrative Services. Source: 410 DM and BLM Manual 1520 Date of Last Review: 3/24/10	●			◘ ◘	●	
1530	Reserve public easements in any conveyance of the public lands. _____ Source: Public Law 92-303, 43 CFR 2650.4-7 and ANCSA Easements 17(b). Date of Last Review: 3/24/10	●				●	◘
1530	Approves abandonment, destruction, or donation to public bodies real property and related personal property having no commercial value. Date of Last Review: 3/24/10	●			◘	●	◘
1530, 1532	Approves safeguarding, maintaining, utilizing, and recording accountability for BLM-owned real property.	●			◘	●	◘

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1530	Approve utilizing real property, properly, maintaining records, and directing real property management programs. Date of Last Review: 3/24/10	●			◘	●	◘
1530	Authorizes the disposal of surplus real property and related personal property having fair market value of less than $1,000. _____ * - State Office delegation is specific to the DSD for Support Services and Chief, Administrative Services. Date of Last Review: 3/24/10	●			◘	●	◘
1534	Assigns and terminates Government quarters for employees. Date of Last Review: 3/24/10	●			◘	●	◘
1535	Approves Reimbursable Work Authorizations (GSA Form 2957) for alterations costing less than $10,000 to GSA with proper coordination of the National Operations Center (Space Leasing Branch). Reimbursable work authorization is a budget process. [1] - State Procurement Analyst Date of Last Review: 3/24/10	●			●[1]		
1535	Serves as the primary contact with GSA from the time GSA receives the Request for Space (SF-81) until the time GSA requires office design and layout information. [1] - State Procurement Analyst Date of Last Review: 3/24/10	●			●[1]		
1535	Approvals for alterations costing less than $2,500 to WSO (951). Approvals involving changes or installations of ceiling-high partitions, regardless of dollar amount, must be submitted to BC (670A) through WSO (951) with proposed plans for review, approval , and forwarding to BLM BC (670A). [1] – Business Manager [2] - Request for alteration only. Date of Last Review: 3/24/10	●			●[1]	●[2]	◘[2]
1535	Issue special purpose leases up to $25,000 as delegated by GSA and WO. [1] - Delegated to Procurement Analyst in (951). Date of Last Review: 3/24/10	●			●[1]		
1536	Approves flying flags at half staff when the situation arises within their respective states Date of Last Review: 3/24/10	●					
1541	Sign correspondence addressed to State and Federal	◘					

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	Congressional members requiring State Director's action. Date of Last Review: 3/24/10						
1541	Sign correspondence addressed to Field Solicitor, Regional Solicitor, and Solicitor that requests or furnishes information. Date of Last Review: 3/24/10	●	◘	◘	◘	●	◘
1541	Sign correspondence addressed to State and Federal Congressional members requiring Field Office action. Date of Last Review: 3/24/10	◘					
1541	Sign correspondence addressed to the Secretary of Interior. Date of Last Review: 3/24/10	◘					
1541	Sign correspondence addressed to the public and other Federal and State agencies which establishes procedure. Date of Last Review: 3/24/10	●	◘	◘	◘	●	◘
1541	Sign correspondence addressed to the public, Federal and State agencies which furnishes information. All subactivity program leaders and major administrative activity leaders (i.e., Personnel, contracting, procurement, property, records, and management analysis) have authority in the State Office. Date of Last Review: 3/24/10	●	●	●	●	●	●
1541	Sign correspondence addressed to the BLM Director which establishes policy and/or procedure. Policy includes allocating funds, disciplinary actions, controversial or sensitive issues. Correspondence committing expenditure of Bureau funds must be signed by a warranted contracting officer. [1] – 951 Date of Last Review: 3/24/10	◘[1]					
1542	Order pre-printed envelopes and Bureau stationary. Exercised only by authorized Printing Specialist or designated Printing Coordinator whose signature is on file with the U.S. Government Printing Office. [1] - Printing Specialist Date of Last Review: 3/24/10	●[1]					
1550	Approve all State level publications under the cost of $25,000. In addition to actual printing costs, this figure includes any contracted services for graphics, typesetting, layout, design, and pre-press services.	●[1]					

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	[1] - Printing Specialist Date of Last Review: 3/24/10						
1550	Approve procurement requests (Form DI-1866, revised 09/82) for reprographic equipment. [1] - Printing Specialist Date of Last Review: 3/24/10	●[1]					
1551.2	Approves issuance of site specific general purpose publications (471 DM 4.3) under $20,000 Source: IM No. 2005-15 and BLM Manual 1551.2 Date of Last Review: 3/24/10	◘				●	
1551.4	Approves printing through GPO and other authorized Federal sources. Date of Last Review: 3/24/10 [1] - Printing Specialist	●[1]					
1601	Decisions regarding staffing, management and protection of components of the National Landscape Conservation System. Approval of Resource Management Plans for components of the National Landscape Conservation System. Date of Last Review: 3/24/10	● ●		●		●	
1601	Approve and conduct public participation activities. _____ Source: 43 CFR 1610.2 Date of Last Review: 3/24/10	●				●	●
1601	Approve and publish plans and amendments. _____ Cannot be re-delegated. Source: 43 CFR 1610.5-1 Date of Last Review: 3/24/10	◘					
1601, 2300	Decisions related to specific sections of the Military Lands Withdrawal Act of 1999 pertaining to the Barry M. Goldwater Range, Section 3031(a)(5) pertaining to changes in use, Section 3031(b)(2) pertaining to access restrictions, Section 3031(b)(1)(C) pertaining to the Integrated Natural Resources Management	●					

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	plan and pertaining to the transfer of responsibility for the natural and cultural resources, Section 3031(c) through (f) pertaining to management and administration of the withdrawal itself, Section 3031(b)(7) pertaining to the transfer of management responsibility (limitations noted below) and Section 3031(g) pertaining to management of natural and cultural resources in accordance with the Integrated Natural Resources Management Plan and under the subsequent management plan developed in accordance with the Federal Land Policy and Management Act (limitations noted below*). Decisions to accept transfer, relinquishment, or jurisdiction of lands under Section 3031 and to open such lands to operation of the public land laws. Decisions to transfer management responsibility from or to a military department pursuant to subsection (b) (7). Sign Memorandum of Understanding (MOU) and Cooperative Agreements for purposes of implementing this Act. (Wyoming State Director, - Cannot be re-delegated) _____ * - Cannot be re-delegated. Source: Public Law 106-65 Date of Last Review: 3/24/10						

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1601	Approve management and quality control procedures with a State to achieve the BLM planning documentation and process standards. Approve activity plans to protect and prevent irreparable damage to important historical, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards. _____ Source: Section 202, FLPMA, 43 CFR 1601 and BLM Manual 1601.4 Date of Last Review: 3/24/10	●				●	●
1610	Approve supplemental guidance and planning criteria for preparation of Resource Management Plans (RMPs). Source: IM No. 2006-046 and 43 CFR 1610 Date of Last Review: 3/24/10	●	◘	◘			
1601	Issue Record of Decision for RMP-related EIS. (State Director only - may not be redelegated). Date of Last Review: 3/24/10	◘					
1610, 1617	Approve and publish draft and final Resource Management Plans, amendments, and amendments to Management Framework Plans, revisions, and file RMP-related Environmental Impact Statements. The approval of an RMP, plan revision, or plan amendment constitutes formal designation of any Area of Critical Environmental Concern (ACEC) involved. _____ Source: 43 CFR 1610 and BLM Manual 1617.1 Date of Last Review: 3/24/10	◘					
1601, 1611	Issue supplemental guidance for planning. _____ Source: 43 CFR 1610.1 and BLM Manual 1601.04 Date of Last Review: 3/24/10	●	◘	◘			
1610	Approve National Environmental Policy Act (NEPA) compliance documents to the level of the specific delegation of authority for approving the proposed action. _____ * - After consultation with the District Manager. Source: 40 CFR 1500 Date of Last Review: 3/24/10	●*	●	●	●	●	●

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1610	Approve Record of Decision (ROD) for land use plans - related environmental impact statements. _____ Source: 40 CFR 1505 and 43 CFR 1610 Date of Last Review: 3/24/10	◘					
1615.1	Coordinates planning with other Federal agencies, State, and local governments, and Indian tribes (43 CFR 1610.3-1) Date of Last Review: 3/24/10	●	●	●	●	●	◘
1615.2	Determines consistency of plans and amendments (43 CFR 1610.3-2) Date of Last Review: 3/24/10	●	◘	◘		●	◘
1617.1	Approves and publishes plans and amendments (43 CFR 1610.5-1). Date of Last Review: 3/24/10	◘					
1617	Determine conformity of resource management authorizations and actions, including proposals to higher level officials, to approved plans. _____ Source: 43 CFR 1610.5-3 and BLM Manual 1617.3 Date of Last Review: 3/24/10	●				●	◘
1617	Adopt another agency's plan. (43 CFR 1610.5-7) _____ Cannot be re-delegated. Source: 43 CFR 1610.5-7 and BLM Manual 1617.5 Date of Last Review: 3/24/10	◘				◘	
1617	Review for designation areas unsuitable for surface mining. _____ Source: 43 CFR 1610.7-1 and BLM Manual 1617.7 Date of Last Review: 3/24/10	●				◘	
1617.8	Designate Areas of Critical Environmental Concern. _____ Cannot be re-delegated. Source: 43 CFR 1610.7-2 and BLM Manual 1617.8 Date of Last Review: 3/24/10	◘					
1618	Approves the validity of Resource Management Plans as a basis for considering proposed actions (43 CFR 1601.8) Date of Last Review: 3/24/10	●				●	◘
1620	Approve supplemental guidance as necessary to maintain and use existing land use plans. Date of Last Review: 3/24/10	●				●	●

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			DSD				
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1610	Approve the schedule of a plan or amendment and arrange for the preparation. _____ Source: BLM Manual 1601.4 Date of Last Review: 3/24/10	◘					
1680	Waive or reduce administrative surcharge on reimbursable projects. _____ Date of Last Review: 3/24/10	●					
1681, 1323	Waive or reduce administrative surcharge on contributed fund projects. Date of Last Review: 3/24/10	●			◘		
1681	Approve exceptions to the Indirect Cost Rate-Trust Fund Projects (request on Form 1380-11a). _____ Source: BLM H-1681-1 Date of Last Review: 3/24/10	●				●	
1681	Approve Manual Reimbursable Work Authorization. Date of Last Review: 3/24/10	●			◘		
1702	Approve prospectus on all projects likely to have a total cost - Under $50,000. Approve implementation of an R&D or study project with estimated total cost - Under $50,000. Date of Last Review: 3/24/10	● ●				◘ ◘	
1703	Approve Level 1 hazardous waste contaminant surveys with negative findings. _____ Source: 602 DM 2.6 d-f Date of Last Review: 3/24/10	●		◘		◘	
1703	Approve participation with other BLM staff in natural resource damage assessment and restoration activities including signature of designation of a BLM. _____ Source: 207 DM 6 Date of Last Review: 3/24/10	◘					
1703	Request the DOI for approval of designation of BLM as Departmental Authorized Official for Natural Resource Damage Assessment and Restoration activities. _____ Cannot be re-delegated. Source: 207 DM 6 Date of Last Review: 3/24/10	◘					

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1703	Approve natural resource damage assessment and restoration reports, plans and agreements, consistent with the National Contingency Plan and appropriate regulations. - Approval of Memorandum of Understanding /Agreement. - Approval of Pre-Assessment Screen Report, Assessment Plan, Report of Assessment and Restoration Plan. - Approval of Restoration Completion Report. _____ * - Cannot be re-delegated. Source: 521 DM 3 Date of Last Review: 3/24/10	◘					
1703	General authority to implement natural resource damage assessment and restoration activities for sites within their jurisdiction. _____ Source: 521 DM 2 Date of Last Review: 3/24/10	●				●	
1703	Set policy for hazardous materials management and natural resource damage assessment and restoration within area of jurisdiction. _____ Source: 521 DM 2 Date of Last Review: 3/24/10	◘					
1703	Set program and site action priorities within area of jurisdiction. _____ Source: 521 DM 2 Date of Last Review: 3/24/10	●		◘		●	
1703	Interagency coordination on policy and legal issues within area of jurisdiction. _____ Date of Last Review: 3/24/10	●					
1703	Conduct specific reporting of hazardous materials risks and management activities required by CERCLA Section 103, Resource Conservation and Recovery (RCRA) Act Sections 3005 and 3010, RCRA manifests and summaries, small quantity generator reports provision, other generator reports provisions, and other Federal and State laws for sites and action within their own jurisdiction. Date of Last Review: 3/24/10	●		◘			

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1703	Conduct specific reporting and contingency planning required by Emergency Planning and Community Right-To-Know Act within their own jurisdiction. Date of Last Review: 3/24/10	●				●	◘
1703	Conduct contingency planning and emergency response decisions (and contracting) with appropriate reporting and coordination with Federal and State or local requirements. _____ Source: E.O. 13016 1 – Hazardous Materials Specialist Date of Last Review: 3/24/10	●		●[1]			
1703	Conduct inventories of known or suspected hazardous substance release sites on public lands. Prepare appropriate land status assessments on each site discovered. Date of Last Review: 3/24/10	●				●	◘
1703	Initiate and manage Expanded Site Investigation Contracts or plan Remedial Investigation and Feasibility Studies. [1] - Hazardous Materials Specialist Date of Last Review: 3/24/10	●		●[1]			
1703	Initiate and prepare the administrative records required for all sites of emergency response or removal actions or any other Comprehensive Environmental Response Compensation and Liability Act (CERCLA) action after completion of a site investigation on a site in compliance with Section 113(k) of CERCLA and the National Contingency Plan. _____ Source: 40 CFR 300 and BLM Manual 1703.06 1-Hazardous Materials Specialist 2 – Coordination with State District Hazardous Materials Specialist. Date of Last Review: 3/24/10	●		●[1]		●[2]	◘[2]
1703	Negotiate and recommend to the Secretary allocation agreements with other parties on costs of restoration actions, consistent with the Justice Department or Solicitor guidance or concurrence. _____ Cannot be re-delegated. Source: BLM Manual 1703.06 Date of Last Review: 3/24/10	◘					
1703	Establish procedures for control of hazardous materials risks and liability for all programs within their jurisdiction. _____ Source: BLM Manual 1703.06	●		●		●	

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	Date of Last Review: 3/24/10						

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1703	Approve any authorized activities involving hazardous materials as being subject to appropriate laws and permits at all applicable levels. Cosign Resource Conservation and Recovery Act permits. _____ Cannot be re-delegated. Source: BLM Manual 1703.06 Date of Last Review: 3/24/10	◘					
1703	Ensure appropriate coordination between the BLM hazardous materials management and all other related BLM programs and designate hazardous materials management Program Leaders and Coordinators at appropriate locations in the organization and within areas of jurisdiction. _____ Source: BLM Manual 1703.06 Date of Last Review: 3/24/10	●		●		●	
1703	Inventorying, managing and audit the BLM's internal waste streams within each BLM facility and meeting required reporting and minimization provisions for any hazardous wastes with their jurisdiction. Sources: BLM Manual 1703.06 Date of Last Review: 3/24/10	●		◘		◘	
1703	Signatory and certification authority for hazardous waste disposal manifests and permits required within their jurisdiction. Source: BLM Manual 1703.06 Date of Last Review: 3/24/10	●		◘		●	◘
1703	Provide adequate opportunities for hazardous materials training for personnel within their jurisdiction. Date of Last Review: 3/24/10	●	●	●	●	●	●
1703	Request funding for multi-year hazardous materials management projects. Date of Last Review: 3/24/10	●		●	●	●	●
1703.04 & .06	Authorize decision to prepare Record of Decision, recommend action to the Secretary, on remedy selection (under Remedial Investigation and Feasibility Studies or corrective action, or on approval of a consent decree, order or agreement for cleanup of a site). _____ Source: BLM Manual 1703.06 1-Hazardous Materials Specialist Date of Last Review: 3/24/10	●		●[1]			
1703	Authorize decision to prepare a Record of Decision and recommendation to the Solicitor/Secretary on	●		●[1]			

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	Indemnification Agreements. [1] - Hazardous Materials Specialist Source: BLM Manual 1703.06 Date of Last Review: 3/24/10						
1703	Decision to prepare a Record of Decision and recommend action to the Director or Assistant Secretary on Natural Resource Damage Assessments. [1] - Hazardous Materials Specialist Date of Last Review: 3/24/10	●		●[1]			
1703	Negotiate draft Indemnification Agreements, remedial or corrective action agreements or consent decrees, in consultation with the Solicitor, for recommendation to the Director or the DOI. _____ Source: BLM Manual 1703.06 [1-] Hazardous Materials Specialist Date of Last Review: 3/24/10	●		●[1]			
1703	Approve sub-agreements on Secretarially-approved Remedial Investigation and Feasibility Studies, Remedial Design and Remedial Action, or major removal. (e.g., safety plan agreements, public participation plan, penalty negotiations, etc.) [1] - Hazardous Materials Specialist Date of Last Review: 3/24/10	●		●[1]			
1703	Initiate and manage Remedial Investigation and Feasibility Study as approved by Director consistent with the National Contingency Plan. Sources: 900 DM2 [1] - Hazardous Materials Specialist [2] - Coordination with State or District Hazardous Materials Specialist. Date of Last Review: 3/24/10	●		●[1]		●[2]	◘[2]
1703	Initiate and manage Remedial Design and Remedial Action as approved by the Department of the Interior, and as necessary, the Environmental Protection Agency and applicable states, consistent with the National Contingency Plan. [1] - Hazardous Materials Specialist [2] - Coordination with State Hazardous Materials Specialist. Date of Last Review: 3/24/10	●		●[1]		●	◘[2]

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		SD	920	930	950	DM	FM
1703	Approve hazardous materials surveys for land disposals and acquisitions by BLM by purchase, exchange, condemnation, donation, etc. [1] - State Directors may approve Level I surveys which indicate no hazardous materials or where it will cost less than $250,000 to mitigate. Date of Last Review: 3/24/10	◘[1]					
1703	Negotiate and recommend allocation agreements with other parties to the Secretary on costs of remedial or removal actions or corrective actions consistent with the National Contingency Plan and the Department of Justice or Solicitor guidance or concurrence. _____ Source: BLM Manual 1703.06 [1]-Hazardous Materials Specialist Date of Last Review: 3/24/10	●		●[1]			
1734	Approve all actions under Sect. 201 of the Federal Land Policy and Management Act necessary to coordinate the preparation and maintenance of an inventory of the public lands and their resources and related monitoring activities. Date of Last Review: 3/24/10	●				●	●
1742	Normal and Emergency Stabilization and Burned Area Rehabilitation - Approve. - Approve funding for less than $500,000. Source: 620 DM 3 Date of Last Review: 3/24/10	● ●			◘ ◘	●	◘
1742	Approve Normal Fire Rehabilitation Plan. _____ Source: BLM H-1742-1 Date of Last Review: 3/24/10	●				●	●
1745	Approve reintroduction, transplant, and augmentation of species. Date of Last Review: 3/24/10	●				●	●
1760	Authority to sign and publish Federal Register Notices for: - Official filing of plats of survey, resurvey, supplemental plats and protraction (diagrams); - General Meetings;	●			◘1	●	●

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	- Advisory Committee Meetings;	●				●	●
	- Reinstatements of Terminated Oil and Gas Leases; and	●	●2				
	_____ 1 – State Office Chief Cadastral Surveyor Cannot be re-delegated. 2 - 923 Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
1760	Authority to sign and publish Federal Register Notices. Level 1 Notices: - Intent to prepare Resource Management Plans, Environmental Impact Statements, and Environmental Assessments (May require Regional Solicitor Review); - Coal Lease Sales; - Realty Actions; - Notice of Intent, Coal Exploration Licenses; - Expression of Leasing Interest for Coal; - Hearing for Fair Market Value for Coal and Coal Lease Exchanges; - Application for Withdrawal for Non-Interior Agency Lands; and - Closure-Emergency/Safety (less than 6 months). _____ NOTE: If Level 1 notice has a higher level of controversy or public interest, the SO must send to WO for review. Source: WO Instruction Memorandum No. 2007-167 Date of Last Review: 3/24/10	● ● ● ● ● ● ● ●					
1786	Approve Memorandum of Understanding after appropriate reviews and consultations. NOTE: Federal funds may not be obligated in a Memorandum of Understanding. Authorities for awarding Assistance and Law Enforcement Agreements under the Grants and Cooperative Agreements Act with non-Federal parties are included under Subject Code 1511. Authorities for other Agreements are included under the appropriate Subject Code references. The authority for transferring funds to other Federal agencies is included in Subject Code 1510-17.5. See Subject Code 9260 for agreements that confer or accept law enforcement authority to and from other agencies. 1-State Procurement Analyst Date of Last Review: 3/24/10	●			●[1]	●	◘

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		SD	920	930	950	DM	FM
1790	Approve determination that an action is categorically excluded under the National Environmental Policy Act. _____ Source: 40 CFR 1500.4, 516 DM 6 and Appendix 5 1 - no lower than AFM Date of Last Review: 3/24/10	●				●	●[1]
1790	Approve finding of no significant impacts with associated environmental assessment. _____ Source: 40 CFR 1501.4, 516 DM 6 and Appendix 5 1 – no lower than AFM Date of Last Review: 3/24/10	●				●	●[1]
1791	Approves Environmental Assessments findings of no significant impacts, and categorical exclusion reviews (516 DM, Appendix 5) [1] - no lower than Assistant Field Manager Date of Last Review: 3/24/10	●				●	●[1]
1793	Publish, file, and approve draft and final environmental impact statements and associated records of decisions, consistent with Assistant Secretaries delegations (40 CFR 1502.9, 516 DM Appendix 5). [1] - Authority for Legislative Environmental Impact Statement's (i.e., Wilderness or Wild and Scenic Rivers) and associated reports and transmittals has not been delegated to the BLM. 2 – Non RMP related – project evaluation only analysis with concurrence of SD Date of Last Review: 3/24/10	●[1]				◘[2]	
1813	Approval of site studies. Approval of the design narrative and action plan, except where reserved for the State Director (large buildings and recreational developments.) _____ * - Delegated through the State Director to the District/Field Manager except at the National Interagency Fire Center. Date of Last Review: 3/24/10	● ●				● ●	● ●
1813	Approve Notations and publications to Public Land Status Records. _____ NOTE: Except Cadastral Survey Records. 1-921 Date of Last Review: 3/24/10	●	●[1]				

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		SD	920	930	950	DM	FM
1813	Approve publication of Federal Register notices. _____ NOTE: Except Cadastral Survey Records *(see 1760 and 9650)*. Date of Last Review: 3/24/10	●				●	
1813.1 (See also 9650)	Approves filing of survey plats. Performs all functions pertaining to the filing of approved survey plats. [1] - State Office Chief Cadastral Surveyor Date of Last Review: 3/24/10	●			●[1]		
1813.2	Approval and inspection of serial register [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	◘
1813.3	Produces records in Court Date of Last Review: 3/24/10	◘					
1821	Execution and filing of forms. All functions. Date of Last Review: 3/24/10	●	◘	◘	◘	●	◘
1822	Approves payments and repayments Sec. 304, 43, FLPMA U.S.C. 1734 [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	◘
1823	Approves Proofs and Testimony. Touhy request and subpoena functions. All functions [1] – 921 Date of Last Review: 3/24/10	●	●[1]	◘		●	◘
1824	Publication and posting of notices. All functions. Note: Excludes Federal Register notices: see 1760 for FR delegations. [1] – 921 Date of Last Review: 3/24/10	●	●[1]	●	●	●	●
1825	Approves relinquishments. All Functions. [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	
1825	Approves rights-of-way relinquishments. All functions. Date of Last Review: 3/24/10	●	●			●	●

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1826	Reinstatement of canceled entries; All functions Date of Last Review: 3/24/10	●	●			●	●
1850	Acts on government contests Date of Last Review: 3/24/10	●				●	
1850	Approve Hearing procedures for other than Interior Board of Land Appeals Cases. Date of Last Review: 3/24/10	●				●	
1850	Approval of Reservations, Reverters or Reversionary Clauses, Covenants, and Condition of Conveyance documents. _____ Source: 43 CFR 1860 and BLM H-1860-1 Date of Last Review: 3/24/10	●				●	
1860	Issues conveyance documents [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	
1860, 1862	Patent preparation and issuance. All functions. Issue Certificate of Allotment, rust Patent, and Fee Patent. Source BLM H-1860-1 [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	
1860	Issue Clear Lists and other conveyance documents Date of Last Review: 3/24/10	●	●			●	
1862	Prepare and issue patents and amendments of patents or their equivalent for grants of land under the authority of the Government in the name of the United States other than conveyance which require the approval or signature of the President of the United States. All functions. Date of Last Review: 3/24/10	●	●				
1863	Approve other title conveyances. All functions Date of Last Review: 3/24/10	●	●				
1864	Assume all actions relating to the issuance of recordable disclaimers of interest subject to Regional or District/Field Solicitor review and concurrence. _____ Source: Section 315, FLPMA and 43 CFR 1864 1-921 Date of Last Review: 3/24/10	●	●[1]				
1865	Issue correction documents of conveyance subject to Regional or District/Field Solicitor review and concurrence.	●	●[1]				

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	_____ Source: 43 CFR 1865 and Section 316, FLPMA 1-921 Date of Last Review: 3/24/10						

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1870.1-1	Cases subjected to equitable adjudication; all functions. [1] – 921 Date of Last Review: 3/24/10	●	●[1]				
1871	Authority for adjudication. All Functions. [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	◘
1872	Disposition, Records and Testimony Deny or approve Touhy requests for employee testimony or production of records (Subpoena Duces Tecum) related to court proceedings in which the United States in not a party. _____ NOTE: See 1823 for authority when U.S. Government is a party to the proceedings. * - Cannot be re-delegated. Must consult with the Office of the Solicitor. Source: 43 CFR 2.80et seq. Date of Last Review: 3/24/10	◘*					
1881	Approve payments in lieu of taxes. All functions Date of Last Review: 3/24/10	●					
2091	Segregate and open lands. All functions. [1] – 921 Date of Last Review: 3/24/10	●	●[1]	●	●	●	●
2091	Approval of segregating lands by NORA publication [1] – 921 Date of Last Review: 3/24/10	●	●[1]	●	●	●	●
2100	Authorize payment to cover certain costs in relocating (moving) a private party when the private property that is occupied is acquired by the BLM. _____ Source: 42 U.S.C. 4601 et seq; 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762. Date of Last Review: 3/24/10	◘					
2100	Approve acquisitions, including donations (gifts), purchases, exchanges and eminent domain/declaration of taking (approval of negotiated settlements in exceeding $2,000 above the appraised value cannot be re-delegated). In addition, all negotiated settlements under the Land and Water Conservation Fund require congressional approval. Delegation includes all functions under the Uniform Relocation Assistance and Property Acquisition Act, (PL 91-646) as amended. (Refer also to Subject Function Code 2200). Must have concurrence from the Office of Solicitor	●	●[1]		●[2]	●	◘

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	[1] - 921 [2] – 951 Date of Last Review: 3/24/10						
2100, 2120	Approve Leases (Pierce Act-Grazing). All Actions Date of Last Review: 3/24/10	●		●		●	●
2100, 1703	Approve Acquisitions. Acquisitions more than $2,000 over the appraised value. Approve surveys for hazardous substances where no hazardous materials exists or where the cost to remove and otherwise mitigate does not exceed $250,000. _____ 1 - State Director - Cannot be re-delegated. Date of Last Review: 3/24/10	◘[1] ●					
2110	Release or cancel rights acquired for access easements in perpetuity. Make partial or complete cancellation. (Does not include Land and Water Conservation Fund acquisitions; authority lies with Secretary of the Interior.) _____ Source: 43 U.S.C. 1715, 1737, 1762; 42 U.S.C. 4601 et seq.; 1241 et seq.; 16 U.S.C. 1271 et seq.; 23 U.S.C. 214; 69 stat. 374; 43 U.S.C. 1181a et seq., 315 et seq.; 40 U.S.C. 257 and 43 CFR 2110, 2130 Date of Last Review: 3/24/10	●					
2110	Accept as a gift, on behalf of the United States, any land or interests therein where such action promotes the purposes of the BLM or facilitates the administration of the public land and resources. _____ Source: 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762 Date of Last Review: 3/24/10	●				●	
2120	Release or cancel contract leases, permits, and temporary access easements. Make partial or complete cancellation. _____ Source: 43 CFR 2120, 2800; 43 U.S.C. 315, et seq.; 16 U.S.C. 590a; 66 Stat 597; 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762 Date of Last Review: 3/24/10	●				●	
2133	Negotiate fee or partial interest through a mutual agreement between the Owner of Record and the BLM, which would also include payment. _____ Source: 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762	●				●	

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2137	Approve fee or partial interest by BLM through court action. _____ Source: 40 U.S.C. 257; 40 U.S.C. 258a; 90 Stat 2743 and 43 U.S.C. 1715, 1737, 1748, 1762	●					
2200	Approve all actions, subject to the title opinion of the District/Field or Regional Solicitor, in all matters relating to exchange of lands and issuing conveyance documents under the Federal Land Policy and Management Act or other authority. Bargaining and other appropriate negotiating processes are acceptable means of determining final value settlements. Date of Last Review: 3/24/10	●					
2201, 2710, 2740, 2920, 2912	Accept real estate appraisal services (see note 1) for purposes of setting minimum bid values, offer of market value, rents, and recommendations regarding disputes. _____ * - Real Estate appraisals are prepared by the US Department of the Interior, Appraisal Services Directorate. Source: IM 2004-190. Date of Last Review: 3/24/10	●				●	
2300	Sign requests to Federal Energy Regulatory Commission (FERC) for concurrence before issuance of a permit or lease within a powersite classification or reservation. _____ Source: 43 CFR 2300 Date of Last Review: 3/24/10	●				●	
2300	Sign requests to FERC for concurrence before issuance of Right-of-Way within powersite classification or reservation. _____ Source: 43 CFR 2300 Date of Last Review: 3/24/10	●				●	
2300	Approve requests for land segregation. Approve applications for licenses, permits, cooperative agreements, etc., on lands segregated by publication of a withdrawal notice. Conduct public meetings. Prepare findings and recommendations on withdrawal actions. Also prepare proposed order or notice of denial.	● ● ●	●[1] ●[1] ●[1]		● ● ●		

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2300	Determining with the concurrence of the Administrator of the General Services Administration that lands withdrawn or reserved from the public domain and subsequently declared excess to the needs of the agency are suitable or not suitable for return to the public domain for management under the general public land laws. Determine suitability for disposition under the mineral leasing laws minerals in lands or portions of lands withdrawn or reserved for the needs of the agency. [1] – 921, 922 Date of Last Review: 3/24/10	● ●	●[1] ●[1]			●	●
2320	Request a determination (or vacation of a power project withdrawal) under Section 24 of the Federal Power Act. _____ * - State Directors, Associate State Directors and Deputy State Directors - Cannot be re-delegated. Source: 43 CFR 2320 Date of Last Review: 3/24/10	●	◘				
2320	Provide the Federal Energy Regulatory Commission an opportunity to comment on all the BLM reports which justify the modification, revocation, or termination of waterpower resource withdrawals by the Secretary of the Interior. _____ * - State Directors, Associate State Directors and Deputy State Directors - Cannot be re-delegated. Source: 43 CFR 2320 Date of Last Review: 3/24/10	●	◘				
2320	Prepare reports and recommendations to the Federal Energy Regulatory Commission relating to applications for interim use (Rights-of -Way, mineral lease, etc.) of power-site lands. _____ Source: 43 CFR 2320 Date of Last Review: 3/24/10	●					
2320 2091	Notation of records upon receipt of a notice (43 CFR 2091) from the Federal Energy Regulatory Commission of a new power project withdrawal or the vacation of a power project withdrawal. [1] – 921 Date of Last Review: 3/24/10	●	●[1]				
2320	Authority to provide the Notice to the Governor as required by Section 24 of the Federal Power Act. Date of Last Review: 3/24/10	◘					

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2320	Approve reports and recommendations to FERC relating to applications received for outright revocation or revocation subject to the provision of Section 24 of the Federal Power Act for Waterpower Withdrawals. Date of Last Review: 3/24/10	●	◘				
2400	Issue notices of realty action, proposed and initial classification decisions and classification terminations. Source: 43 CFR 2400 Date of Last Review: 3/24/10	●	●	●		●	●
2520	Issues classification decision on reclamation and desert land entries. Date of Last Review: 3/24/10	●	●	●		●	◘
2520	Approve and reject desert land applications; approve field report, environmental assessments, cultural resource reports, and issue notice of allowance. Approve annual proofs. Take final proofs. [1] – 921 Date of Last Review: 3/24/10	●	●[1]	●		●	●
2530	Assume all actions relating to Indian allotments on the public lands with the concurrence of the Commissioner of Indian Affairs as to applicant eligibility. Source: 43 CFR 2530 Date of Last Review: 3/24/10	●				●	◘
2530	Adjudicates, Issues certificates, rejects or allows entry on Indian allotments, issue patents. [1] – 921 Date of Last Review: 3/24/10	●	●[1]				
2540	Assume all actions relating to Color-of-Title and riparian claims. Source: 43 CFR 2540 [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	●
2540	Issue Conveyance of Title document. [1] – 921 Date of Last Review: 3/24/10	●	●[1]				
2610	Issue classification decisions on Carey Act applications. Date of Last Review: 3/24/10	●				●	◘

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
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2611	Approve Carey Act development plans and contracts for transmittal to Director. Date of Last Review: 3/24/10	◘					
2611, 2620	Assume all actions on State grants and selections, including actions under Public Law 108-452. Issue classification decisions on Carey Act applications. Source: 43 CFR 2611 and 2620 Date of Last Review: 3/24/10	◘				◘	
2630 , 2400	Adjust railroad grants and claims subject to approval of the validity of the grant rights. Assume all actions on State grants and selections, including actions under Public Law 108-452. Source: 43 CFR 2620 Date of Last Review: 3/24/10	●				●	
2630,	Adjusts railroad grants and claims within such grants subject to approval of the validity of the grant rights. Date of Last Review: 3/24/10	●				●	
2640	Approve all actions under the Airport and Airway Improvement Act of 1982, subject to the Department of Justice concurrence. Source: 43 CFR 2640 Date of Last Review: 3/24/10	◘					
2710	Assume all actions on public land sales pursuant to Section 203 of the Federal Land Policy and Management Act (43 U.S.C. 1712) subject to congressional review for sales of more than 2,500 acres. [1] – 921 Date of Last Review: 3/24/10	●	●[1]	●		●	●
2720	Approve all actions relating to the conveyance of Federal owned mineral interests as provided in Section 209 of the Federal Land Policy and Management Act. Source: Section 209, FLPMA and 43 CFR 2720 [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	●
2740	Takes all actions with respect to conveyances and reversions pursuant to 43 CFR Part 2740, Recreation & Public Purpose Grant (43 U S.C. 869), subject to resource evaluation by	●	●[1]			●	●

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			DSD				
		SD	920	930	950	DM	FM
	FM (for patent issuances see 1860). [1] – 921, 922 Date of Last Review: 3/24/10						
2740	Issue transfers and change of use documents [1] – 921 Date of Last Review: 3/24/10	●	●[1]			●	
2740	Approve all actions with respect to conveyances for recreation and public purposes to Federal, State and local Government units and nonprofit associations and corporations. _____ Source: 43 U.S.C. 869-4, as amended and Section 212 FLPMA. Date of Last Review: 3/24/10	●				●	●
2760	Approves townsite public reserve on reclamation project lands. Patent issuance actions, only. 1-921 Date of Last Review: 3/24/10	●	●[1]				
2800	Determine cost recovery fees for processing and monitoring a ROW application or grant (except for reduction or waiver of cost recovery fees for hardship). _____ Source: 43 CFR 2800 (Title V of FLPMA) and 43 CFR 2880 (Section 28 of the Mining Law Act (MLA)) Date of Last Review: 3/24/10	●				●	
2800	Reduce or waive of cost recovery fees for processing and monitoring a ROW application or grant because of hardship. _____ Source: 43 CFR 2800 (Title V of FLPMA) and 43 CFR 2880 (Sec. 28 of the MLA) Date of Last Review: 3/24/10	●				●	●
2800	Approve all actions required for the granting and management of Rights-of –Way: - Title V of the Federal Land Policy and Management Act (FLPMA). - Sec. 28 of the Minerals Leasing Act, as amended. - Appropriations under Title 23 of the Federal Highway Act. - Administration of grants issued under authorities repealed by Title VII of FLPMA.	● ● ● ●	● ● ●			● ● ●	● ● ●

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	- Determinations of assertions under R.S. 2477.	●					
	- Issuance of perpetual Right-of -Way grants and temporary use permits.	●				●	●
	- Interstate Right-of -Way Grants.	1					
	- Interdistrict of Right-of -Way grants and temporary use permits.	1					
	-Within District Right-of -Way grants.	1					
	- All activities under the Agreement and Grant of Right-of Way for TAPS necessary to carry out the Operations, Maintenance and Termination of the Rights-of -Way.	●				●	
	_____ 1– Delegation of Lead State by Director - Cannot be re-delegated. Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
2800	Determine the rental charge for land within the Right-of-Way boundary for grants under the Linear ROW Schedule (Except for reduction or waiver of rent for hardship, or decision not to use Communication Use Rent Schedule). Source: Title V of FLPMA and 43 CFR 2880 (Sec. 28 of the MLA) Date of Last Review: 3/24/10	●				●	
2800	Reduction or waiver of rent for hardship, or decision not to use Communication Use Rent Schedule to determine rental charge. Source: Title V of FLPMA and 43 CFR 2880 (Sec. 28 of the MLA). Date of Last Review: 3/24/10	●				●	●
2800	Approve cost-share and road-use agreement -consummate agreements for the construction and use of roads on land owned or controlled by the parties involved and the sharing of construction cost. Source: Section 502(a) of FLPMA Date of Last Review: 3/24/10	●				●	
2800	Approve site-specific proposals under terms of each cost-share and road-use agreement. Source: Section 502 (a), FLPMA Date of Last Review: 3/24/10	●				●	
2800	Require user(s) of roads or trails to maintain them on a pro-rata basis or to accept funds to provide for maintenance. Expend these deposited funds for the maintenance of any road or trail under the BLM jurisdiction. Source: 43 U.S.C. 1382. Date of Last Review: 3/24/10	●	●			●	●
2800	Approve all actions pertaining to the granting and management of rights-of-way issued for power project facilities developed after 1992, located on the BLM administered lands and licensed by Federal Energy Regulatory Commission (FERC). Date of Last Review: 3/24/10	●				●	●
2810	Rights-of -Way and Road Use Agreements (Timber Management only, 43 CFR 28 12). - Approve permits and agreements. Consummate reciprocal	● ●	● ●			● ●	● ●

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	permits and agreements for the construction and use of roads on lands owned or controlled by the parties involved and the sharing of construction costs. - Assume actions under the terms of reciprocal permits and agreements approving site specific proposals under the terms of each permit and agreement. Date of Last Review: 3/24/10	●	●			●	●

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			DSD				
		SD	920	930	950	DM	FM
2911	Approves and issues airport leases; all actions. Date of Last Review: 3/24/10	●	●			●	●
2912	Accept real estate appraisal services* for purposes of setting minimum bid values, offer of market value, rents, and recommendations regarding disputes. _____ * - Real Estate appraisals are prepared by the US Department of the Interior, Appraisal Services Directorate. Source: (IM No. 2004-190) Date of Last Review: 3/24/10	●				●	
2912, 2740	Approve Recreation and Public Purpose Act Leases. _____ Source: See 43 CFR 2740, 2912 Date of Last Review: 3/24/10	●	●			●	●
2920	Approves leases, permits, and easements, all actions (Section 302 of FLPMA). Date of Last Review: 3/24/10	●	●			●	●
2920	Sign requests to FERC for concurrence prior to issuance of permit of lease within a powersite classification or Reservation. Date of Last Review: 3/24/10	●	●			●	●
2930, 2920, 1786	The Federal Lands Recreation Enhancement Act (Public Law 108.447): Approve Recreation Fee Site communication, marketing, and business plan. Submit proposal for Recreation Fee Sites and fee increases for Recreation Resource Advisory Committee review. Approve Recreation Fee Sites and Fee Increases. Use authorizations for recreation and concession leases. Date of Last Review: 3/24/10	 ● ● ● ●				 ● ● ● ●	
2932	Establish the conditions where special recreation permits are required. _____ Source: 43 CFR 2932.13 Date of Last Review: 3/24/10	●				●	
2932	Accept Special Recreation Permit Application earlier than 180 days prior to use. _____	●				●	

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	Source: 43 CFR 2932.22 Date of Last Review: 3/24/10						
2932	Approve maximum time by which Special Recreation Permit applications will be accepted. _____ Source: 43 CFR 2932.22 Date of Last Review: 3/24/10	●				●	
2932	Approve issuing and administration of Special Recreation Permits. _____ Source: 43 CFR 2932.26 Date of Last Review: 3/24/10	●				●	
2932	Establish and maintain fees for commercial Special Recreation Permits. Establish and maintain fees for all other Special Recreation Permits. _____ Source: 43 CFR 2932.31 Date of Last Review: 3/24/10	●				●	
2933	Approve issuing and administration of Recreation Use Permits. _____ Source: 43 CFR 2933 Date of Last Review: 3/24/10	●				●	
3000*	Act on minerals management activities, including fair market value determinations and all mandatory prerequisites for minerals actions. Classify Mineral Lands. *Solicitor's opinion. Date of Last Review: 3/24/10	● ●				● ●	
3000	Act on protests and appeals. _____ Source: 43 CFR 4. Date of Last Review: 3/24/10	●	●				
3060	Prepare Mineral Reports Date of Last Review: 3/24/10	●	●			●	●
3100	Act on oil and gas leases. _____ 1- 921, 923, 924 Sources: Act of February 25, 1920 (30 U.S.C. 181, et seq.), as amended and supplemented, the Act of August 7, 1947 (30 U.S.C. 351-359), as amended, the Act of May 21, 1930	●	●[1]				

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	(30 U.S.C. 301-305), the Attorney General's Opinion of April 2, 1941 (Vol. 40 Op. Atty. Gen. 41)and other statutory Date of Last Review: 3/24/10						

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3100	Execute drainage agreements. _____ 1 - 924 Source: 43 CFR 3100.2-1 Date of Last Review: 3/24/10	●	●[1]				
3100, 3162	Authorize payment of compensatory royalty. _____ 1-921, 924 Source: 43 CFR 3100.2-2 and 3162.2 Date of Last Review: 3/24/10	●	●[1]				
3101, 3162	Require reasonable measures to minimize adverse impacts to other resource values within listed specifications. _____ Source: 43 CFR 3101.1-2 and 3162.2 Date of Last Review: 3/24/10	●	●				
3103	Approve royalty rate reductions. _____ * - WO Concurrence, - Cannot be re-delegated. Source: 43 CFR 3103.4 Date of Last Review: 3/24/10	◘*					
3100	Approves oil and gas competitive, non-competitive and simultaneous leases. [1] – 923 Date of Last Review: 3/24/10	●	●[1]				
3100	Concurring with subsurface use plans for oil and gas explorations. Date of Last Review: 3/24/10	●	●			●	●
3100	Prepare first/last production memos. Date of Last Review: 3/24/10	●				●	●
3100	Approve cooperative operations for secondary recovery. [1] – 924 Date of Last Review: 3/24/10	●	●[1]				
3100	Make commercial well determinations under approved units. [1] – 924 Date of Last Review: 3/24/10	●	●[1]				
3100	Make royalty determination under Act of August 8, 1946. Date of Last Review: 3/24/10	●	◘				
3100	Approve amendments to unit agreements, grant extensions of time to drill unit obligation wells, and determine the	●	●[1]				

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	propriety of extension or termination of unit terms. [1] – 924 Date of Last Review: 3/24/10						
43 CFR 3100.2	Approves drainage determination; requires drilling or compensatory royalty. [1] – 924 Date of Last Review: 3/24/10	●	●[1]				
3103	Approve actions associated with granting and lifting suspensions of operations and/or production. Source: 43 CFR 3103.4 [1] – 923 Date of Last Review: 3/24/10	●	●[1]			●	●
3104, 3474, 3154	Approve bonds. Source: 43 CFR 3474 [1] – 922, 923 Date of Last Review: 3/24/10	●	●[1]				
3104, 3154.2	Increase bond amounts. 1-923 2 Recommendation to 923 Source: 43 CFR 3104.5 Date of Last Review: 3/24/10	●	●[1]			●[2]	●[2]
3104, 3154	Terminate period of bond liability. 1-923 FM consulted before bond is terminated or cancelled Source: 43 CFR 3104.8 Date of Last Review: 3/24/10	●	●[1]			●	●
43 CFR 3104	Collection of land for assessments and penalties for noncompliance on Federal and Indian oil and gas leases. Date of Last Review: 3/24/10	●	◘			●	●
43 CFR 3105.2	Approves oil and gas communitization agreements and unit agreements. [1] - 923 924 Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3105.3	Approve oil and gas development contracts. [1] – 924	●	●[1]				

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	Date of Last Review: 3/24/10						

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3105	Approve combinations for joint operations or for transportation of oil applications. _____ 1-924 Source: 43 CFR 3105.4 Date of Last Review: 3/24/10	●	●[1]				
3105	Approve subsurface storage agreements and related activities. _____ Source: 43 CFR 3105.5 [1] – 924 Date of Last Review: 3/24/10	●	●[1]				
3105	Act on lease actions associated with unit agreements - Invalidations - Expansions - Consolidations - Joinders - Contractions - Participating Areas 1-923 Added on 3-10 Source: 43 CFR 3105 and 3105 Handbook Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3106	Approves assignments, transfers and extensions of competitive and non-competitive oil and gas leases. [1] – 923 Date of Last Review: 3/24/10	●	●[1]				
3106	Approve general transfers. _____ 1-923 Source: 43 CFR 3106.1 Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3107	Approves continuation, extension or termination of oil and gas leases. [1] – 923 Date of Last Review: 3/24/10	●	●[1]			●	●
3107	Approve diligent drilling extensions. _____ 1-923 Source: BLM Manual 3107 Date of Last Review: 3/24/10	●	●[1]			●	●

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		SD	920	930	950	DM	FM
3107	Make Natural Gas Policy Act determination recommendations to Department of Energy. _____ 1-924 Source: 18 CFR 274.501 Date of Last Review: 3/24/10	●	●[1]				
3107	Issue determinations that leases may be extended due to drilling operations. _____ 1-923 Source: 43 CFR 3107.1 Date of Last Review: 3/24/10	●	●[1]				
3107	Issue determinations that leases in their extended term are considered either capable or no longer capable of production in paying quantities. _____ Source: 43 CFR 3107.2 [1] – 924 Date of Last Review: 3/24/10	●	●[1]			●	●
3107	Issue order to place well in production. _____ Source: 43 CFR 3107.2-3 Date of Last Review: 3/24/10	●				●	●
3107.3-2	Segregation of leases committed in part to Unit Agreements 1-923 Added on 3-10 Source: 43 CFR 3107 and 3105/3107 Handbooks Date of Last Review: 3/24/10	●	●1				

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		SD	920	930	950	DM	FM
43 CFR 3108	Accepts relinquishments; terminate or cancel leases. [1] – 923 Date of Last Review: 3/24/10	●	●[1]				
3108	Assume action on lease relinquishments. _____ 1-923 Source: 43 CFR 3108.1 Date of Last Review: 3/24/10	●	●[1]				
3108	Assume action on lease termination and reinstatements. _____ 1-923 Source: 43 CFR 3108.2-1 Date of Last Review: 3/24/10	●	●[1]				
3108	Assume action to cancel leases for noncompliance. _____ 1-923 Source: 43 CFR 3108 .3 Date of Last Review: 3/24/10	●	●[1]				
3109	Issue leases under Special Acts 1-923 Added 3-10 Source: 43 CFR 3109 and 3109 Handbook Date of Last Review: 3/24/10	●	●[1]				
3110	Issue noncompetitive leases. 1-923 Added 3-10 Source: 43 CFR 3110 and 3110 Handbook Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3120	Issue competitive leases. [1] – 923 Date of Last Review: 3/24/10	●	●[1]				
3140, 3141	Approve Tar Sands plan of operations. Approve Tar Sands hydrocarbon lease. _____ Source: 43 CFR 3141 Date of Last Review: 3/24/10	● ●				● ●	● ●
3150	Act on oil and gas geophysical exploration permits. 3154 bonding issues see 3104	●				●	●

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	_____ Source: 432 CFR 3150 Date of Last Review: 3/24/10						

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			DSD				
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43 CFR 3160	Approves purchasing the casings of oil or gas wells and/or water-source wells that are no longer useful for carrying out the original purpose of the lease but are capable of producing water of such quantity and quality as to be valuable and usable for agricultural, domestic, or other purposes. (30 CFR 241.6) Date of Last Review: 3/24/10	●	◘				
43 CFR 3160	Approves leasing acquired water wells (former oil and gas wells or water - source wells) or just selling the water from such wells. (30 CFR 241.6) Date of Last Review: 3/24/10	●				●	●
3161	Approve unitization, communitization, gas storage and other contracts for Federal lands. _____ 1-924 Source: 43 CFR 3161 Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3161.2	Issues order for placing shut-in oil and gas wells in producing status. Date of Last Review: 3/24/10	●				●	●
43 CFR 3161.2	Makes O&G drainage determinations and requires operators to protect Federal and Indian lands from drainage, including executing compensatory royalty determinations [1] – 924 Date of Last Review: 3/24/10	●	●[1]				
3162, 3251, 3261	Approve Geothermal plans of: - Exploration off lease. - Exploration on lease. _____ Source: 43 CFR 3162.7-2, 43 CFR 3251.13 and 43 CFR 3261.20 Date of Last Review: 3/24/10	 ● ●				 ●	 ●
3162	Monitor drilling obligations. Monitor producing obligations. _____ Source: 43 CFR 3162 Date of Last Review: 3/24/10	● ●				 ●	 ●
3162	Make drainage determinations and require operators to	●	●[1]				

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			DSD				
		SD	920	930	950	DM	FM
	protect Federal and Indian lands from drainage, including the payment of compensatory royalty. 1-924 Source: 43 CFR 3162 Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
3162	Make diligence determinations to assure diligent development of producing Indian leases. _____ 1-924 Source: 43 CFR 3162 Date of Last Review: 3/24/10	●	●[1]				
3162	Approve drilling applications and plans. _____ Source: 43 CFR 3162.3-1 Date of Last Review: 3/24/10	●	●			●	●
3162	Approve subsequent well operations (reenter, workover, production facilities plug and abandonment). _____ Source: 43 CFR 3162.3-2 Date of Last Review: 3/24/10	●	●			●	●
3162	Approve additional surface disturbance. _____ Source: 43 CFR 3162.3-3 Date of Last Review: 3/24/10	●				●	●
43 CFR 3162.3-4	Approves temporary abandonment of depleted oil and gas well. Date of Last Review: 3/24/10	●				●	●
3162	Approve well abandonment. _____ Source: 43 CFR 3162.3-4 Date of Last Review: 3/24/10	●				●	●
3162	May require lease records. _____ 1-923 Source: 43 CFR 3162.4-1 Date of Last Review: 3/24/10	●	●[1]			●	●
3162	Require samples, tests, and surveys. _____ Source: 43 CFR 3162.4-2 Date of Last Review: 3/24/10	●				●	●
43 CFR 3162.3-4	Releases abandoned oil and gas well for production of water. Date of Last Review: 3/24/10	●				●	●
43 CFR 3162.4-2	Approves industry operations to test oil and gas wells. Date of Last Review: 3/24/10	●				●	●
3162	Approve method of water disposal.	●				●	●

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			DSD				
		SD	920	930	950	DM	FM
	_____ Source: 43 CFR 3162.5 Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
3162	Sets standards for disposition of production, including: - Approve surface commingling between leases; - Approve oil and gas measurement devices; - Approve off-lease storage and/or measurement; and - Approve applications for venting of produced gas. Source: 43 CFR 3162.7 Date of Last Review: 3/24/10	● ● ● ●				● ● ● ●	● ● ● ●
3162	Stop and inspect motor vehicles carrying oil from Federal or Indian Leases. Source: 43 CFR 3162.7 Date of Last Review: 3/24/10	●				●	●
3162	Determine commercially-productive wells for variable royalty rate leases. Source: 43 CFR 3162.7-4 Date of Last Review: 3/24/10	●				●	●
3162	Approve variances from minimum site security standards. Source: 43 CFR 3162.7-5 Date of Last Review: 3/24/10	●				●	●
3162	Oil or gas production verification. Source: 43 CFR 3162.7-5/3192.2-3 Date of Last Review: 3/24/10	●				●	●
3163	Issue incidents of noncompliance. (Shut-in operations or perform operations for compliance.) Source: 43 CFR 3163.1 Date of Last Review: 3/24/10	● ●				● ●	● ●
3163	Determine and charge assessments. Source: 43 CFR 3163.1 Date of Last Review: 3/24/10	●				●	●
3163	Determine and levy civil penalties. Source: 43 CFR 3163.2 Date of Last Review: 3/24/10	●				●	●

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			DSD				
		SD	920	930	950	DM	FM
3163	Compromise or reduce civil penalties. _____ Source: 43 CFR 3163.2 (h) Date of Last Review: 3/24/10	◘					
3163	Bring civil action. _____ * - Attorney General of U.S. or designee. Source: 43 CFR 3163.6 Date of Last Review: 3/24/10	◘*					
43 CFR 3164.2	Issues oil and gas Notices To Lessees (NTLs). _____ Source: 43 CFR 3164.2 Date of Last Review: 3/24/10	●				●	◘
3165	Act on requests for administrative review. _____ 1-921 Source: 43 CFR 3165.3 Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3180	Approve all actions associated with fluid mineral unit agreements, including: - Make paying quantities determinations under approved units. - Designate logical areas for unit agreement. - Approve successor unit operator. - Approve unit agreements. - Approve expansion/contraction of unit area. - Approve participating area and modifications. - Approve unit plan of development. _____ Source: 43 CFR 3180 [1] – 924 Date of Last Review: 3/24/10	● ● ● ● ● ● ● ●	●[1] ●[1] ●[1] ●[1] ●[1] ●[1] ●[1] ●[1]				
3191	Grant delegation of inspection and enforcement authority to States. _____	◘					

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			DSD				
		SD	920	930	950	DM	FM
	Source: 43 CFR 3191.1 Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
3191	Sign letter of authorization and issue special identification cards to qualified Federal Oil and Gas inspectors and State and Indian tribal inspectors working under cooperative agreements. _____ Source: FOGRMA Section 101(b) (1) and 108(a)&(b) Date of Last Review: 3/24/10	●	◘			◘	
3191	Authorize comprehensive inspection system and procedures to inspect oil and gas lease sites. _____ Source: FOGRMA Section 101 (a)&(b)(l) and 43 CFR 3191.2 Date of Last Review: 3/24/10	●				●	●
3191	Authorize training program to assure that oil and gas inspectors are trained in methods and techniques of inspection. _____ Source: FOGRMA Section 101 (b) (2) and 43 CFR 3191.2 [1] – 922 Date of Last Review: 3/24/10	●	●[1]			●	●
3191	Approve entering into agreements with Indian tribes for inspection of oil and gas producing operations. _____ Source: FOGRMA Section 202 (a) and 43 CFR 3191.2 Date of Last Review: 3/24/10	●	◘				
3191	Require affidavits, administer oaths, and require testimony and materials by subpoena related to oil and gas theft investigations. 1-LEO _____ Source: FOGRMA 30 U.S.C. 1717 and 43 CFR 3191.2 Date of Last Review: 3/24/10	1				1	1
3200	Act on matters involving Geothermal resources leases pursuant to the Act of December 24, 1970 (84 Stat. 1566, 30 U.S.C. 1001 through 1025and 43 CFR 3200). _____ 1- 923 Source: 43 CFR 3200 Date of Last Review: 3/24/10	●	●1				
3203	Identify other lands subject to competitive leasing for Geothermal resources.	●				●	

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
	_____ Source: 43 CFR 3203.11 Date of Last Review: 3/24/10						

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
43 CFR 3204, 3205	Approves competitive and noncompetitive geothermal leases including mandatory requirements for issuance. 1-923 Date of Last Review: 3/24/10	●	●[1]				
3203	Act on additional term requests. _____ 1- 923 Source: 43 CFR 3207.10 Date of Last Review: 3/24/10	●	●[1]				
3207	Act on lease extension requests. _____ 1-923 Source: 43 CFR 3208.10 Date of Last Review: 3/24/10	●	●[1]				
3208, 3244	Issue determinations that leases in extended term are considered no longer capable of production in paying quantities. _____ 1-923, 924 Source: 43 CFR 3208.11 Date of Last Review: 3/24/10	●	●[1]			●	●
3210	Makes geothermal drainage determinations and requires operators to protect Federal and Indian lands from drainage. including compensatory royalty [1] – 924 Date of Last Review: 3/24/10	●	●[1]			●	●
43 CFR 3211	Accepts charges and advance rentals for geothermal leases 1-923 Date of Last Review: 3/24/10	●	●[1]		●		
3212	Approve royalty rate reductions. _____ Source: 43 CFR 3212.15 Date of Last Review: 3/24/10	●	◘			●	●
3212	Approves suspensions of geothermal operations and production (entire lease) Date of Last Review: 3/24/10	●	◘			●	●
43 CFR 3212	Approves suspension of operations/production where lease status is not affected 1-923 Date of Last Review: 3/24/10	●	●1			●	●

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
43 CFR 3213	Approves terminations and expirations 1-923 Date of Last Review: 3/24/10	●	●1			●	●
3214, 3250, 3261, 3271	Bonding. Source: 43 CFR 3214, 3251, 3261.18, 3271.12 Date of Last Review: 3/24/10	●	◘			●	●
3216	Approves lease assignments and transfers Date of Last Review: 3/24/10	●	●[1]				
3217	Approves geothermal communitization agreements Source: 43 CFR 3217.13 [1] – 924 Date of Last Review: 3/24/10	●	●[1]			●	●
3217	ADD 3217 Act on lease actions associated with unit agreements - Invalidations - Expansions - Consolidations - Joinders - Contractions - Participating Areas 1-923 Added 3-10 Source: Effective December 3, 1982, references to leases and agreements was changed to part 3200, which is the successor regulation to 30 CFR 270. Date of Last Review: 3/24/10	●	●[1]				
3250, 3260	Approve exploration operations. Source: 43 CFR 3250, 3260 Date of Last Review: 3/24/10	●	●			●	●
3250	Approves geothermal Notice of Intent (NOl), subject to consultation with zone specialist Source: 43 CFR 3250.11 Date of Last Review: 3/24/10	●	◘			●	●
43 CFR 3251, 3261	Approves geothermal plans of exploration, development, injection and production Date of Last Review: 3/24/10	●				●	●

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
43 CFR 3252	Approves geothermal Notice of Intent and Permit to Conduct Exploration Date of Last Review: 3/24/10	●	◘			●	●
3256	Variances to Exploration. Date of Last Review: 3/24/10	●	●			●	●
3260	Issue Notice to Lessees. _____ Source: 43 CFR 3260.12 Date of Last Review: 3/24/10	●	●			●	●
3261, 3264	Approves industry geothermal drilling permit (GDP) _____ Source: 43 CFR 3261.15, 3264.2 Date of Last Review: 3/24/10	●				●	●
43 CFR 3261.22	Approves Sundry Notices Date of Last Review: 3/24/10	●				●	●
3261	Approves industry operations to test geothermal wells _____ Source: 43 CFR 3261.15 Date of Last Review: 3/24/10	●				●	●
3261	Approve variances to orders. _____ Source: 43 CFR 3261.17 Date of Last Review: 3/24/10	●				●	●
3261, 3262	Approve subsequent well operations to: - Re-enter. - Workover. - Construct production facilities. - Plug and abandon. _____ Source: 43 CFR 3261.22 Date of Last Review: 3/24/10	 ● ● ● ●				 ● ● ● ●	 ● ● ● ●
3262, 3261	Approve well spacing. _____ Source: 43 CFR 3261.6 Date of Last Review: 3/24/10	●				●	●
3263, 3212	Approve plugging and abandonment of wells. _____ Source: 43 CFR 3263.12, 3212.5-5 Date of Last Review: 3/24/10	●				●	●

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		SD	920	930	950	DM	FM
3263, 3264	Authorizes releasing abandoned geothermal wells for production of water _____ Source: 43 CFR 3263.15, 3242.2-3 Date of Last Review: 3/24/10	●				●	●
43 CFR 3263.14	Issues determinations that geothermal leases in extended term are considered no longer capable of production in paying quantities in consultation with zone specialist. [1] – 924 Date of Last Review: 3/24/10	●	●[1]			●	●
43 CFR 3264.10	Approves geothermal plan of baseline data collection Date of Last Review: 3/24/10	●				●	●
3265	Issues geothermal Incidents of Non-compliance (INC) (downhole) _____ Source: 43 CFR 3265.12 Date of Last Review: 3/24/10	●				●	●
3265	Shut down operations. _____ Source: 43 CFR 3265.12 Date of Last Review: 3/24/10	●				●	
3272, 3262	Approves geothermal utilization permit _____ Source: 43 CFR 3272, 3262.4-1 Date of Last Review: 3/24/10	●	◘			●	●
3272, 3262	Approve Geothermal plan of baseline data collection. _____ Source: 43 CFR 3272.13, 3262.4 Date of Last Review: 3/24/10	●				●	●
3272	Approve Facility Construction Permit. _____ Source: 43 CFR 3272.14 Date of Last Review: 3/24/10	●				●	●
3273, 3250	Approve site license applications for utilization of Geothermal resources. _____ Source: 43 CFR 3273, 3250 Date of Last Review: 3/24/10	●	◘			●	●
3274	Approve Commercial Use Permit. _____ Source: 43 CFR 3274	●				●	●

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			DSD				
	Activity	SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
3275	Approves geothermal metering systems _____ Source: 43 CFR 3274.12 Date of Last Review: 3/24/10	●				●	●
3274, 3280	Approve all actions associated with fluid mineral unit agreements. _____ 1-923, 924 Source: 43 CFR 3274.12, 3280 Date of Last Review: 3/24/10	●	●1				
3275, 3286, 3262, 3212	Approve limited suspension, waivers, reduction of royalty for pilot facilities and testing. _____ Source: 43 CFR 3275.10, 3286.2, 3212, 3262.9 Date of Last Review: 3/24/10	●	●			●	●
3275	Approves surface commingling between/among geothermal leases _____ Source: 43 CFR 3275.19 Date of Last Review: 3/24/10	●				●	●
43 CFR 3275.21	Issues order for placing shut-in geothermal wells in producing status Date of Last Review: 3/24/10	●				●	●
3280	Approve all actions associated with Geothermal unit agreements. _____ Source: 43 CFR 3280 [1] – 923, 924 Date of Last Review: 3/24/10	●	●[1]			●	●
3281	Designates logical area for geothermal unit agreements [1] – 924 _____ Source: 43 CFR 3281.2 Date of Last Review: 3/24/10	●	●[1]			●	●
3282	Approves geothermal successor unit operator [1] – 924 _____ Source: 43 CFR 3282.1 Date of Last Review: 3/24/10	●	●[1]			●	●
3283, 3276	Makes commercial geothermal well determinations under approved units	●	●[1]			●	●

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			DSD				
		SD	920	930	950	DM	FM
	[1] – 924 _____ Source: 43 CFR 3283.1, 3276 Date of Last Review: 3/24/10						
43 CFR 3283.3	Approves and acts participating geothermal areas and modifications [1] – 923, 924 Date of Last Review: 3/24/10	●	●[1]			●	●
43 CFR 3283.4	Approves geothermal unit plan of development [1] – 924 Date of Last Review: 3/24/10	●	●[1]			●	●
3400	Act on coal leases, licenses and exchanges (43 CFR 3400-3453). _____ Source: 43 CFR 3400 Date of Last Review: 3/24/10	●					
3410	Assume all necessary action to process and approve exploration licenses. _____ Date of Last Review: 3/24/10 Source: 43 CFR 3410.3	●	◘				
43 CFR 3420.1-4	Approve Land Use Plans covering lands containing Federal coal. Date of Last Review: 3/24/10	◘					
3420	Approve preliminary tract delineations. _____ * – Chair, Regional Coal Team. Source: 43 CFR 3420.3 Date of Last Review: 3/24/10	◘*					
3420	Approve regional tract ranking, selection and scheduling. _____ * – Chair, Regional Coal Team. Source: 43 CFR 3420.3-4 Date of Last Review: 3/24/10	◘*					
3422	Approve and execute competitive coal leases in coal production regions. _____ Source: 43 CFR 3422.4 Date of Last Review: 3/24/10	●					
3425.1-4	Approve applications for coal lease sales under the emergency leasing criteria.	◘					

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			DSD				
		SD	920	930	950	DM	FM
	_____ Source: 43 CFR 3425.1-4 Date of Last Review: 3/24/10						

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
3425.1-5	Approve applications for coal lease sales outside coal production regions Source: 43 CFR 3425.1-5 Date of Last Review: 3/24/10	●	◘				
3432	Approve coal lease modifications. Source: 43 CFR 3432 Date of Last Review: 3/24/10	●	◘				
3435	Approve coal lease exchanges. Source: 43 CFR 3435 Date of Last Review: 3/24/10	◘					
3436	Approve Alluvial Valley Floor coal lease and coal land exchanges. Source: 43 CFR 3431 Date of Last Review: 3/24/10	◘					
3440	Approve licenses to mine coal. Source: 43 CFR 3440 Date of Last Review: 3/24/10	●	◘				
3451	Approve coal lease readjustments. * – State Director - Cannot be re-delegated. Source: 43 CFR 3451 Date of Last Review: 3/24/10	◘					
3452	Cancel or terminate, or accept relinquishment of coal leases. * – State Director - Cannot be re-delegated. Source: 43 CFR 3452 Date of Last Review: 3/24/10	◘					
3453	Approve coal lease transfers. * – State Director - Cannot be re-delegated. Source: 43 CFR 3453 Date of Last Review: 3/24/10	◘					
3461	Approve lands as unsuitable for surface mining as a result of application of unsuitability criteria. Source: 43 CFR 3461 Date of Last Review: 3/24/10	◘					
3461	Respond to OSM on petition to declare lands unsuitable for	●	◘				

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO: SD	DSD 920	DSD 930	DSD 950	DM	FM
	mining. Source: 43 CFR 3461 Date of Last Review: 3/24/10						
3472	Determine if lessees meet qualification requirements. Source: 43 CFR 3472, 3502 Date of Last Review: 3/24/10	●	◘				
43 CFR 3473	Approve waiver, suspension, reduction of the rental or royalty on producing leases. Date of Last Review: 3/24/10	◘					
3473	Prescribe rents and royalties. Source: 43 CFR 3473 Date of Last Review: 3/24/10	●					
43 CFR 3474	Approve bonds. 1-922 Date of Last Review: 3/24/10	●	●1				
43 CFR 3480.0-6	Reviews and makes recommendations to OSM on approval of resource recovery and protection plans for new coal leases. Date of Last Review: 3/24/10	●	◘			●	●
3482	Approve modifications to a lease or exploration license. Source: 43 CFR 3482 .2(1) Date of Last Review: 3/24/10	●					
3482	Approve Resource Recovery and Protection Plans and modifications on Federal land. Source: 43 CFR 3482 .2(2) Date of Last Review: 3/24/10	●	●			●	●
43 CFR 3482.2 25 CFR 216.7	Approve resource recovery and protection plan modifications on Indian lands. Date of Last Review: 3/24/10	●	●			●	◘
43 CFR 3482.1	Approve exploration plans on federal leased lands. Date of Last Review: 3/24/10	●				●	●
43 CFR 3482.1 25 CFR	Approve exploration plans on leased Indian lands. Date of Last Review: 3/24/10	●				●	◘

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			DSD				
		SD	920	930	950	DM	FM
216							
3483.1	Approve commercial quantities and monitor diligent development and continued operation. [1] – 922 _____ Source: 43 CFR 3483.1 Date of Last Review: 3/24/10	●	●[1]			●	●
3483.2	Terminate leases or initiate cancellation of leases. * – State Director - Cannot be re-delegated. Source: 43 CFR 3483.2 Date of Last Review: 3/24/10	◘					
3483.3	Approve suspensions. Date of last change: 10/08/96 * – State Director - Cannot be re-delegated. Source: 43 CFR 3483.3 Date of Last Review: 3/24/10	◘					
3483.4	Approve advance royalty payments. 1-922 _____ Source: 43 CFR 3483.4 Date of Last Review: 3/24/10	●	●[1]				
3484	Approve temporary or final abandonment with respect to the coal resources for all or part of a mine deposit. _____ Source: 43 CFR 3484.2 Date of Last Review: 3/24/10	●	◘			●	◘
3485	Approve waiver, suspension, or reduction of the rental or royalty on producing leases. _____ * – State Director - Cannot be re-delegated. Source: 43 CFR 3485.2 Date of Last Review: 3/24/10	◘					
3486	Authorize inspections. _____ Source: 43 CFR 3486.1 Date of Last Review: 3/24/10	●				●	●
3486.3	Issue notices of noncompliance with regulations and license or lease terms, and provisions of the R2P2.	●	●			●	●

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
	Source: 43 CFR 3486.3 Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
3487.1	Approve Logical Mining Units and Logical Mining Units Modifications. LMU reserves, hearing and published notices. _____ * – State Director - Cannot be re-delegated. Source: 43 CFR 3487.1 Date of Last Review: 3/24/10	◘					
3500, 3501	Approve all action on matters related to the noncompetitive and competitive leasing of Phosphate, Sodium, Potassium, Sulphur (in Louisiana and New Mexico and Acquired Lands), ―Gilsonite‖ (including all vein-type Solid Hydrocarbons) and Hardrock Minerals. _____ Source: 43 CFR 3500, 3501 Date of Last Review: 3/24/10	●					
3500-3517	Approve all steps necessary for complete adjudication of applications submitted for non-energy permits and leases. _____ Source: 43 CFR 3500-3517, 3501.1 [1] – 922 Date of Last Review: 3/24/10	●	●[1]				
3501	Approve all actions on permits and leases for minerals pursuant to Sec. 402, Reorganization Plan No. 3 of 1946 (60 Stat. 1099), which transferred the functions of the Secretary of Agriculture to the Secretary of the Interior in certain Acquired Lands. _____ 1-922 Source: 43 CFR 3501.1(b)(1) Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3503.2-4	Approve applications for waiver, suspension, or reduction of leasable mineral rental or minimum royalty or reductions of royalty Date of Last Review: 3/24/10	◘					
43 CFR 3503.3-2	Approves applications for suspension of leasable mineral operations Date of Last Review: 3/24/10	◘					
3504	Prescribe rents and royalties. _____ Source: 43 CFR 3504 Date of Last Review: 3/24/10	●					
3540, 3505,	Approve all action matters related to issuance of prospecting permits and exploration licenses on Public Domain and	●				●	

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			DSD				
		SD	920	930	950	DM	FM
3506, 3512, 3515, 3522	Acquired Lands. _____ Source: 43 CFR 3504, 3505, 3506, 3512, 3515, 3522 Date of Last Review: 3/24/10						
3507, 3508, 3510, 3511, 3513, 3515	Approve all actions necessary to issue preference right and competitive leases of mineral lands and deposits on Public Domain and Acquired Lands. _____ Source: 43 CFR 3507, 3508, 3510, 3511, 3513, 3515 Date of Last Review: 3/24/10	●	◘				
3509	Approve all actions on matters relating to fractional and future interest permits and leases on Public Domain and Acquired Lands. _____ Source: 43 CFR 3509 Date of Last Review: 3/24/10	●	◘				
43 CFR 3508	Approve mineral lease exchanges Date of Last Review: 3/24/10	◘					
43 CFR 3509	Approve mineral relinquishments, terminations, expirations, and cancellations Date of Last Review: 3/24/10	◘					
3511, 3517, 3527	Approve all actions required to issue use permits under appropriate terms and conditions. _____ Source: 43 CFR 3511, 3517, 3527 Date of Last Review: 3/24/10	●	●				
3513,3503	Approve applications for waiver, suspension, or reduction of rental or minimum royalty or reduction of royalty. _____ * – State Director - Cannot be re-delegated. Source: 43 CFR 3513, 3503.3.2 Date of Last Review: 3/24/10	◘					
3513	Approve applications for suspensions of operations. _____ * – State Director - Cannot be re-delegated. Source: 43 CFR 3513 Date of Last Review: 3/24/10	◘					
3515, 3508	Approve all actions on matters relating to mineral lease exchange. _____ Source: 43 CFR 3515	●	●				

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			DSD				
	Activity	SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
3511.4	Approves phosphate lease readjustments 1-922 Date of Last Review: 3/24/10	●	●[1]				
3507	Approves phosphate preference right leases 1-922 Date of Last Review: 3/24/10	●	●[1]				
3506	Approve phosphate exploration licenses 1-922 Date of Last Review: 3/24/10	●	●[1]				
3508	Approve phosphate competitive leases 1-922 Date of Last Review: 3/24/10	●	●[1]				
3510	Approve phosphate fringe acreage leases and modifications 1-922 Date of Last Review: 3/24/10	●	●[1]				
3516	Approve phosphate use permits 1-922 Date of Last Review: 3/24/10	●	●[1]				
3507	Approve sodium prospecting permits 1-922 Date of Last Review: 3/24/10	●	●[1]				
3507	Approve all actions necessary to issue preference rights of sodium mineral lands and deposits on public domain and acquired lands 1-922 Date of Last Review: 3/24/10	●	●[1]				
3506	Approve sodium exploration licenses 1-922 Date of Last Review: 3/24/10	●	●[1]				
3508	Approve sodium competitive leases 1-922 Date of Last Review: 3/24/10	●	●[1]				
3510	Approve sodium fringe acreage leases and modifications 1-922 Date of Last Review: 3/24/10	●	●[1]				
3516	Approve sodium use permits 1-922 Date of Last Review: 3/24/10	●	●[1]				
3511	Approve sodium lease renewals 1-922 Date of Last Review: 3/24/10	●	●[1]				
3511	Approve potassium lease readjustments 1-922 Date of Last Review: 3/24/10	●	●[1]				

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			DSD				
		SD	920	930	950	DM	FM
3505	Approve potassium prospecting permits 1-922 Date of Last Review: 3/24/10	●	●[1]				
3506	Approve potassium exploration licenses 1-922 Date of Last Review: 3/24/10	●	●[1]				
3508	Approve potassium competitive leases 1-922 Date of Last Review: 3/24/10	●	●[1]				
3510	Approve potassium fringe acreage leases and modifications 1-922 Date of Last Review: 3/24/10	●	●[1]				
3505	Approve hardrock mineral prospecting permits 1-922 Date of Last Review: 3/24/10	●	●[1]				
3507	Approve hardrock mineral preference right leases 1-922 Date of Last Review: 3/24/10	●	●[1]				
3508	Approve hardrock mineral competitive leases 1-922 Date of Last Review: 3/24/10	●	●[1]				
3510	Approve hardrock mineral fringe acreage leases and modifications 1-922 Date of Last Review: 3/24/10	●	●[1]				
3511	Approve hardrock mineral lease renewals 1-922 Date of Last Review: 3/24/10	●	●[1]				
3517	Approve hardrock mineral development contracts Date of Last Review: 3/24/10	●	◘				
3500 All	Issue permits and leases for minerals pursuant to Section 402, Reorganization Plan No. 3 of 1946 (60 Stat. 1099), which transferred the functions of the Secretary of Agriculture and Department of Agriculture to the Secretary of the Interior in certain acquired lands. Date of Last Review: 3/24/10	●	◘				
3590	Approve exploration and mining operations in accordance with the regulations. Source: 43 CFR 3590.2 Date of Last Review: 3/24/10	●				●	●
3590	Inspect and regulate prospecting, exploration testing, development, mining and processing operations.	●	●			●	●

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			DSD				
		SD	920	930	950	DM	FM
	Source: 43 CFR 3590.2 (b), (c), (d) Date of Last Review: 3/24/10						
3590	Require operators to be in compliance with regulations, lease or permit terms and approved plans Date of Last Review: 3/24/10	●				●	●
3590	Obtain and check records of production of minerals and verify production. Date of Last Review: 3/24/10	●				●	●
3590	Act on applications for suspension of operations or production. _____ * – State Director - Cannot be re-delegated. Date of Last Review: 3/24/10	◘					
3590.2	Inspect and report on the cessation and abandonment of operations. Date of Last Review: 3/24/10	●				●	●
3590.2	Report to the agency having administrative jurisdiction any trespass involving removal of mineral deposits. Date of Last Review: 3/24/10	●					
3590.2	Implement General Mining Orders and issue other orders, determinations, comments and approvals to implement or assure compliance with the 43 CFR 3590 operating regulations. Date of Last Review: 3/24/10	●					
3590	Approve all actions related to operating regulations for exploration, development and production for solid minerals other than coal Date of Last Review: 3/24/10	●	●			●	●
3590	Approve Sundry Notices for solid minerals other than coal Date of Last Review: 3/24/10	●	●			●	◘
3592.1	Approve or reject operating plans for prospecting permits for solid minerals other than coal Date of Last Review: 3/24/10	●				●	●
3592.1	Approve major mining plans or modifications for operations Date of Last Review: 3/24/10	●				●	●
3592,	Approve exploration plans, mining plans and major modifications on Federal and Indian lands. _____ Source: 43 CFR 3592.1 Date of Last Review: 3/24/10	●				●	●

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			DSD				
		SD	920	930	950	DM	FM
25 CFR 216.7	Approves mining plans and plan modifications on Indian Lands Date of Last Review: 3/24/10	●				●	◘
3592	Receive certified maps of mining operations drawn to an acceptable scale. Source: 43 CFR 3592.2 Date of Last Review: 3/24/10	●				●	●
3592	Receive production maps which show all excavations in such a manner that production for any royalty reporting period can be accurately determined. Source: 43 CFR 3592.3(a) Date of Last Review: 3/24/10	●				●	●
3592	Authorize surveys if operator fails to submit proper maps. Source: 43 CFR 3592.3(b) Date of Last Review: 3/24/10	●				●	●
3593	Authorize the collection of logs, cores, samples, or cuttings for exploration or development drilling and approve conversion of any drill hole to surveillance wells. Source: 43 CFR 3593.1(a),(c) Date of Last Review: 3/24/10	●				●	●
3594	Approve mining methods which will achieve ultimate maximum recovery of the resource and approve mining of isolated blocks or boundary pillars. Source: 43 CFR 3594.1(a) 3594.2 Date of Last Review: 3/24/10	●				●	●
3595, 3596	Approve methods of abandonment and waste disposal to ensure protection against mining hazards. Source: 43 CFR 3595, 3596 Date of Last Review: 3/24/10	●				●	●
3597	Authorize production verification to ensure that production allocations are reported accurately, making volumetric measurements or other determinations to verify production. Source: 43 CFR 3597 Date of Last Review: 3/24/10	●				●	●
3598.4	Approves exploration and mining operations inspections to	●				●	●

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	assure compliance with regulations, lease terms, and conditions of plan approval and issues notices of noncompliance for solid minerals other than coal. Source: 43 CFR 3598.1 43 CFR 3598.2-.4 Date of Last Review: 3/24/10						
3600, 3630	Approve all actions relating to any contract for the sale or disposal of mineral materials, including approvals, modifications and cancellations, designations, modifications and cancellations of community pits and common use areas and authorizations of exploration and sampling activities. Approve designation, modification or cancellation of free use areas for petrified wood on lands under the jurisdiction of other Federal departments or agencies, other than the Department of Agriculture, with the consent of the other departments or agencies involved. Approve mineral material appraisal reports. Source: 43 CFR 3600, 3630 Date of Last Review: 3/24/10	● ● ●				● ●	● ●
3601.40-44	Reviews and Approves Mine and Reclamation Plans or Plan modifications Date of Last Review: 3/24/10	●				●	●
3601.70	Identifies and resolves unauthorized use cases except: - For cases estimated to be over $100,000 in revenue Date of Last Review: 3/24/10	●	●			●	◘
3603	Establishes community pits and common use areas Date of Last Review: 3/24/10	●				●	●
3602.13 1-2	Appraises and reappraises mineral materials Reviews and approves appraisals and reappraisals Date of Last Review: 3/24/10	● ●	◘ ◘				
3602.14	Determines bond amounts Date of Last Review: 3/24/10	●				●	●
3602	Conducts competitive and non-competitive sales, performs inspections, and production verification, issues cancellations and extensions	●				●	●

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			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
3604	Issues free-use permits Date of Last Review: 3/24/10	●				●	●
3700-3746	Approve all actions necessary under Group 3700 - multiple use; mining. _____ Source: 43 CFR 3700-3746 Date of Last Review: 3/24/10	●				●	●
3715	Enforce Use and Occupancy Regulations. Date of Last Review: 3/24/10	●				●	●
3800 except 3860	Adjudicate all cases, perform mineral examinations, initiate mineral contest actions and accept conditional relinquishments under Public Law 108-452. Approve letters, notices, and decisions. Date of Last Review: 3/24/10	● ●					
3802	Assume all actions as necessary to approve Plan of Operation Wilderness Review Program. _____ Source: 43 CFR 3802 Date of Last Review: 3/24/10	●				●	◘
3809	Assume all actions as necessary for Plans of Operation and Notices for the Surface Management Program. _____ Source: 43 CFR 3809 Date of Last Review: 3/24/10	●				●	●
3809. 311 and .411	Accepts notices and approves plans of operation or modifications thereto for exploration and mining Date of Last Review: 3/24/10	●				●	●
3809 .500-.599	[In concert with WDEQ-LQD] Approves the amount and type of Financial Guarantee as well as the partial or total release of the financial guarantee. Date of Last Review: 3/24/10	●				●	●
3809. 601	Issues noncompliance or suspension orders. Date of Last Review: 3/24/10	●				●	●
3809.4, 3809.807	Within 21 days of receipt, accepts or declines requests for State Director review of decision issued by the District or Field Manager. _____ Issues a written decision [once the SD agrees to the request	●	●				

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			920	930	950		
	to review] Date of Last Review: 3/24/10						
3838	Record and Adjudicate Stockraising Homestead Act (SRHA) Notice of Intent to Locate (NOITL). _____ Source: 235 DM 1.1K [1] – 922 Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3833	Record the filing of proof of annual assessment work and intention to hold mining claims, mill or tunnel sites. Adjudicate filings and approve letters, notices, and decisions. Date of Last Review: 3/24/10	●	●				
43 CFR 3833.1	Adjudicates recordation of mining claims [1] – 922 Date of Last Review: 3/24/10	●	●[1]				
43 CFR 3833.1-3	Adjudicates and accepts rental, maintenance, and location fees [1] – 922 Date of Last Review: 3/24/10	●	●[1]				
3835	Assessment work. Date of Last Review: 3/24/10	●	●				
3860	Adjudicate Mineral Patent Applications. _____ * – Cannot be re-delegated. Date of Last Review: 3/24/10	◘					
43 CFR 3860	Sign all mineral patents. Date of Last Review: 3/24/10	◘					
43 CFR 3870	Process all adverse claims. Date of Last Review: 3/24/10	●	●			●	●
3900	Approve all oil shale actions. _____ Source: 235 DM 1.1K Date of Last Review: 3/24/10	●	●				
4110.1 4110.2	Determines qualifications of applicants for grazing use, and requirements of land and water base properties	●				●	●

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	Date of Last Review: 3/24/10						
4110	Specify permitted use. Date of Last Review: 3/24/10	●				●	●
4110	Approve transfers and relinquishments of grazing preference. Date of Last Review: 3/24/10	●				●	●
4110.2	Allocates grazing preference, increases, and decreases Date of Last Review: 3/24/10	●				●	●
4110	Change permitted use levels. Date of Last Review: 3/24/10	●				●	●
4110.2-2	Designates allotments for livestock grazing Date of Last Review: 3/24/10	●				●	●
4110.3-2	Approves decreases in forage allocations (permanent reduction plans or temporary suspension) Date of Last Review: 3/24/10	●				●	●
4110, 4120	Close public lands to grazing when needed - permanent closure. Date of Last Review: 3/24/10	◘					
4110, 4120	Close public lands to grazing when needed - temporary closure. Date of Last Review: 3/24/10	●				●	◘
4110	Assume grazing management actions that address changes in public land acreage. Date of Last Review: 3/24/10	●				●	●
4120	Implement grazing management through allotment management plans resource activity plans and grazing systems Date of Last Review: 3/24/10	●				●	●
4120	Implement range improvements through permits and cooperative agreements and determine their value. Approve assignment of range improvement interest and maintenance responsibility. Date of Last Review: 3/24/10	●				●	●
4120.3-2 4120.3-3	Approves Cooperative Agreements and Permits for Range Improvements	●				●	●

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	Date of Last Review: 3/24/10						
4120.3-5	Authorizes removal of range improvements, requires removal, or determines compensation value Date of Last Review: 3/24/10	●				●	●
4120	Enter into Memorandum of Understanding or Cooperative Agreement to manage other agency lands. Date of Last Review: 3/24/10	●				●	
4120	Cooperate with State, county and Federal agencies in the administration of laws and regulations relating to livestock diseases, sanitation and noxious weeds. Date of Last Review: 3/24/10	●		●		●	●
4130	Accepts contributions for range improvements Date of Last Review: 3/24/10	●				●	●
4130	Adjudicates conflicting applications Date of Last Review: 3/24/10	●				●	●
4130	Issue, modify and renew grazing permits and leases and exchanges-of-use agreements. Specify numbers and kinds of livestock, periods of use, places of use and other grazing management terms and conditions in grazing permits and leases and exchanges-of-use agreements. Date of Last Review: 3/24/10	●				●	●
4130	Collect and deposit fees for grazing use and approve refunds. Date of Last Review: 3/24/10	●				●	●
4150	Issues notices of violations and other actions Date of Last Review: 3/24/10	●				●	●
4150	Assume corrective and disciplinary actions as necessary on violations, initiating remedial actions to abate unauthorized grazing use as necessary, including livestock impoundment, accepting settlements. Date of Last Review: 3/24/10	●				●	●
4150	Issue order to impound unauthorized livestock. Date of Last Review: 3/24/10	●				●	
4150	Issue order to sell impounded livestock (after consultation with the Director and Solicitor). _____ Cannot be re-delegated.	◘					

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	Date of Last Review: 3/24/10						
4160	Issues proposed and final decisions on matters of grazing administration and management Date of Last Review: 3/24/10	●				●	◘
4180	Assume appropriate action to assure attainment of rangeland health fundamentals. Date of Last Review: 3/24/10	●				●	●
4180	Develop regional standards and guidelines for grazing administration for Secretarial approval. _____ Cannot be re-delegated Date of Last Review: 3/24/10	◘					
4180	Determine that grazing practices or levels of grazing use are significant factors in failing to achieve standards and conform to the guidelines. Date of Last Review: 3/24/10	●				●	●
4180	Implement actions to make significant progress toward fulfillment of the standards and significant progress toward conformance with the guidelines. Date of Last Review: 3/24/10	●				●	●
4700	Authority to sign Bill of Sale for Wild Horses and Burros. [1] – 930 NRS [2] – DM and Corral Facility Manager Date of Last Review: 3/24/10	●		●[1]		●[2]	
4700	Enters into Memoranda of Understanding for the purpose of managing, protecting, and controlling wild horses and burros Date of Last Review: 3/24/10	●		●		●	◘
4710	Establish Wild Horse and/or Burro Herd Management Areas. Date of Last Review: 3/24/10	●		●		●	
4710	Close public land to use by domestic livestock - permanent closure. Date of Last Review: 3/24/10	◘					
4710	Close public lands to use by domestic livestock - temporary closure.	●				●	◘

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	Date of Last Review: 3/24/10						
4710	Establish conditions for removal of unauthorized livestock from areas occupied by Wild Horses and Burros. Date of Last Review: 3/24/10	●				●	●
4710	Authorize removal of unauthorized livestock in or near areas occupied by wild horses and burros. Date of Last Review: 3/24/10	●				●	◘
4710	Approve relocating wild horses and burros. Date of Last Review: 3/24/10	●		●		●	●
4720	Authorize the removal excess Wild Horses and Burros from the public lands. Date of Last Review: 3/24/10	●				●	●
4720.5	Approves the removal of wild horses and/or burros from private land Date of Last Review: 3/24/10	●		●		●	●
4730	Sign Herd Management Area Plan. Date of Last Review: 3/24/10	●				●	
4730	Destroy old, sick and lame Wild Horses and Burros. Date of Last Review: 3/24/10	●		●		●	●
4740	Direct the use of helicopters and motor vehicles in the management and transport of Wild Horses and Burros. Date of Last Review: 3/24/10	●				●	●
4740	Approve and supervise use of motor vehicles and aircraft for capture, holding, and transportation of wild horses and burros. Date of Last Review: 3/24/10	●				●	●
4750.4-1	Issues Notices of Intent to impound unauthorized livestock and takes action to impound Date of Last Review: 3/24/10	●				●	◘
4750.4-2	Make healthy excess Wild Horses and Burros available for private maintenance through adoption. [1] - Range Management Specialist Wild Horse and Burro and Wild Horse and Burro Compliance Inspector. Date of Last Review: 3/24/10	●		●[1]		●	●

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4750	Approve applications for adoption of Wild Horses and Burros. Date of Last Review: 3/24/10	●		●		●	●
4750	Replace adopted Wild Horses and Burros that died within six months of adoption. Date of Last Review: 3/24/10	●		●		●	●
4750	Approve adjustments in adoption fees for otherwise unadoptable animals. Date of Last Review: 3/24/10	●				●	●
4750.5	Issue Certificates of Title to Wild Horses and Burros. [1] - Range Management Specialist Wild Horse and Burro and Wild Horse and Burro Compliance Inspector. Date of Last Review: 3/24/10	●		●[1]		●	●
4760	Certify the proper care and humane treatment of adopted Wild Horses and Burros for purposes of compliance with the Private Maintenance and Care Agreement. Date of Last Review: 3/24/10	●		●		●	●
4770	Repossess adopted Wild Horses and Burros if the adopter fails to comply with the Private Maintenance and Care Agreement. Date of Last Review: 3/24/10	●		●		●	●
5003	Implement General Forest Management full force and effect Decisions/Wildfire Management full force and effect management decisions. _____ Source: 43 CFR 5003.1 Date of Last Review: 3/24/10	●		●		●	●
5041	Declare the annual productive capacity of commercial forest land. _____ Source: 43 CFR 5041.1 Date of Last Review: 3/24/10	●		●		●	●
5043	Hold hearings in connection with each proposed sustained yield unit. _____ Source: 43 CFR 5043.2 Date of Last Review: 3/24/10	●		●			
5043	Approve action on appropriate recommendations concerning sustained (yield) units. _____	●				●	

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	Source: 43 CFR 5043.2 Date of Last Review: 3/24/10						

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5400, 1815	Timber Sale Contracts. - Determinations of U.S. Share of Cost. - Cancellation of Timber Sale Contracts. _____ Source: 43 CFR 1815.1-1 Date of Last Review: 3/24/10	● ●				◘ ◘	
5400	Disposes of timber and other vegetative resources including those on unpatented mining claims located after July 23, 1955. _____ Source: 43 CFR 5400.0-3 (B) Date of Last Review: 3/24/10	●				●	●
5400	Makes timber disposal on lands withdrawn for other public functions with the consent of the other public agencies _____ Source: 43 CFR 5400.0-3 (B)2 Date of Last Review: 3/24/10	●				●	◘
5400	Make reports of timber disposals to Congress, BLM Offices and others. ____ * – State Office Personnel State Forester- Cannot be re-delegated. Source: 43 CFR 5400 Date of Last Review: 3/24/10	●		*			
5402	Act on matters involving Rights-of -Way acquisition and the approval of road construction projects to provide access to timber. _____ Source: 43 CFR 5402.0-6 Date of Last Review: 3/24/10	●				●	
5402	Dispose of timber and other vegetative resources where values do not exceed $2,499 using Form 5450-5. _____ Source: 43 CFR 5402.0-2 Date of Last Review: 3/24/10	●				●	●
5402	Approve sale of negotiated stewardship contracts of less than 250,000 board feet. Special justification is needed to exceed 250,000 board feet. _____ Source: 43 CFR 5402.0-6. IM 2005-009	●				●	◘

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	Date of Last Review: 3/24/10						
5410	Develop an annual timber sale plan, including any subsequent changes, alterations, or amendments. _____ Source: 43 CFR 5410.0-6 Date of Last Review: 3/24/10	●				●	●
5410	Approves timber sale plans Date of Last Review: 3/24/10	●				●	●
5420	Establish minimum selling values by species and/or products. ____ * – State Office Personnel – State Forester Cannot be re-delegated. Source: 43 CFR 5420.0-6 Date of Last Review: 3/24/10	◘		*			
5420	Determine a form of measurement of timber or other vegetative resources to be in the public interest. _____ Source: 43 CFR 5420.0-6 Date of Last Review: 3/24/10	●		◘		●	●
5422	Authorizes scale sales IM Coord State Forester _____ Source: 43 CFR 5422.2 Date of Last Review: 3/24/10	◘				●	◘
5422	Determines when to use scaling for administrative reasons _____ Source: 43 CFR 5422 .2(A) Date of Last Review: 3/24/10	●		●		●	◘
5422	Determines when to use third party scaling _____ Source: 43 CFR 5422 .2(B) Date of Last Review: 3/24/10	◘				●	◘
5424	Determines provisions for timber sale contracts Date of Last Review: 3/24/10	●				●	◘
5424	Signs timber sale contracts See 5450 for limitations. Date of Last Review: 3/24/10	●				●	◘
5430	Determines when to use longer (or shorter) than usual	●				●	◘

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			DSD				
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	advertising periods Date of Last Review: 3/24/10						
5441	Confirms qualifications of bidders Date of Last Review: 3/24/10	●				●	●
5441	Initiate action on Small Business Administration road construction loan applications. Source: 43 CFR 5441.1-2 Date of Last Review: 3/24/10	●				●	◘
5441	Manage BLM's Small Business Administration set aside preferential timber sale program. Source: 43 CFR 5441.1-3 Date of Last Review: 3/24/10	●				●	◘
5442	Selects sealed bids, written bids, oral bids, or a combination of bidding methods for advertised sales Source: 43 CFR 5442.1 Date of Last Review: 3/24/10	●				●	●
5442	Conducts a sale and determines the high bidder Source: 43 CFR 5442.1 Date of Last Review: 3/24/10	●				●	●
5442	Rejects any or all bids Source: 43 CFR 5442.3 Date of Last Review: 3/24/10	●				●	●
5443	Determines when to keep a no-bid sale open for 90 days Source: 43 CFR 5443.1 Date of Last Review: 3/24/10	●				●	●

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5450	Authority to award timber sale contract to successful purchaser - Less than or equal to 10 MMBF - More than 10 MMBF, less than or equal to 25 MMBF - More than 25 MMBF Date of last change: 4/14/08 1 – May be re-delegated to all District, Field and Resource Area Managers. Additional sales to existing contract up to 50 MBF maybe re-delegated to any employee designated only by the authorized officer. 2 – May be re-delegated to all District, Field and Resource Area Managers. 3 – State Director - Cannot be re-delegated. Date of Last Review: 3/24/10	●[1] ●[2] ◘[3]				●[1] ●[2]	◘ ◘
5450	Confirms performance qualifications and awards contract Source: 43 CFR 5450.1 Date of Last Review: 3/24/10	●				●	◘
5451	Determines whether to require a bond for cash sales less than $2,500 Date of Last Review: 3/24/10	●				●	●
5451	Approves completed performance bond forms Date of Last Review: 3/24/10	●				●	●
5451.3	Authorizes a reduction in the amount of a performance bond Date of Last Review: 3/24/10	●				●	◘
5451.4	Approves payment bonds prior to cutting or removal of any timber covered by the bond Date of Last Review: 3/24/10	●				●	◘
5451.4	Approves the allocation of a single payment bond to two or more contracts with the same purchaser in the same BLM administrative Field Office. Date of Last Review: 3/24/10	●				●	◘
5461	Determines the amount of installment payments Date of Last Review: 3/24/10	●				●	◘
5473	Grants an extension of contract time for cutting or removing	●				●	◘

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	of timber Date of Last Review: 3/24/10						
5473	Require the reappraised contract price be paid in full as a condition of granting an extension. Source: 43 CFR 5473.4-1 Date of Last Review: 3/24/10	●				●	◘
5474	Approves a contract assignment Date of Last Review: 3/24/10	●				●	◘
5500.1	Issues free use permits on BLM lands Date of Last Review: 3/24/10	●				●	◘
5510	Issue free use permits to citizens, corporations, public agencies, nonprofit organizations and certain citizens in Alaska. Source: 43 CFR 5510.0-3 Date of Last Review: 3/24/10	●				●	●
5511	Prescribes provisions for cutting and removing free use timber Date of Last Review: 3/24/10	●				●	◘
5511	Cancels a permit for non-compliance or if the permit was issued erroneously Date of Last Review: 3/24/10	●				●	◘
5921	Approve Stewardship Projects Date of Last Review: 3/24/10	●				●	●
6250, 6260	National Historic and Scenic Trails (National Trail System Act): - Approve findings of congressionally authorized feasibility study conducted through another agency where BLM lands involved, forward to responsible agency (NTSA, Sec. (5b)). - Approve Comprehensive Management Plan where BLM is trail administrator/co-administrator when one State with affected BLM lands/RMPs involved (NTSA, Sec. (5e), (5f)).	● ●					

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	- Approve Comprehensive Management Plan where BLM lands involved when BLM is not trail administrator (NTSA. Sec. (5e), (5f)).	◘					
	- When assigned administration role, establish advisory council (NTSA, Sec. (5d).	◘					
	- Approve statewide plan affecting designated National Scenic or Historic Trails or amends RMPs with provisions (NTSA, Sec. (7c), FLPMA).	●					
	_____ Source: 710DM1 Date of Last Review: 3/24/10						

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6250, 6260	- Approve RMP/amendment containing provisions for National Scenic or Historic Trails (NTSA, Sec. (7c), FLPMA.	●					
	- Approve inventories/assesses significant sites or segments or trail locations (NTSA, Sec. (7c)).	●				●	●
	- Approve or deny actions affecting high potential sites or segments or trail location (NTSA, Sec. (7c), (7i), NHPA).	●				●	●
	- Approve or deny actions affecting trail corridor area (NTSA, Sec. (7c), NHPA, FLPMA).	●					
	- Approve or deny trail land management transfer to/from other Federal agencies under memorandum (NTSA, Sec. (7a, 1b), FLPMA).	●					
	- Approve or deny LWCF acquisitions, related disposals, exchanges, easements or other lands actions affecting trail corridor area (NTSA, Sec. (7g), (9e, 3-4), (7f), (9b), (9c-d), (7k), (10c), FLPMA).	●		●		●	●
	- Approve a uniform marker for the national trail system appropriate to each trail, in cooperation with other agencies (NTSA, Sec. (3a4), (7c)).	●		●			
	*Lead State Director responsible for trail administration when more than one State with BLM lands involved. Date of Last Review: 3/24/10						
6300	Management of designated Wilderness areas: - Assume all approval or denial actions in designated Wilderness areas. _____ * - Delegated through State Directors to the District/ Field Managers - Cannot be re-delegated. Source: 43 CFR 6300 Date of Last Review: 3/24/10	●				●	◘
6350, 1601	Approve or deny interim management actions in Wilderness Study Areas to avoid impairment. _____ * - Delegated through State Directors to the District/ Field Managers - Cannot be re-delegated.	●				●	◘

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	Source: Sec. 603 (c), FLPMA Date of Last Review: 3/24/10						

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6361, 1601	Approve Wilderness Management Plans. Date of Last Review: 3/24/10	●				●	
6400	Identification and Studies of Wild and Scenic Rivers (FLPMA, Wild and Scenic Rivers (WSR) Act, USDI Final Revised Guidelines, and, BLM Manual Section 8351): - Approve eligibility/non-eligibility findings, assessments and evaluations. - Approve suitability/non-suitability findings, assessments and evaluations. - Release eligible river segments determined non-suitable in the land-use planning/NEPA process and sign the ROD. _____ Source: 710 DM 1 Date of Last Review: 3/24/10	● ● ●					
6400	Approve or deny proposed projects in eligible river corridors to protect identified outstandingly remarkable values. _____ *- Delegated through State Directors to the District/ Field Managers or monument manager. - Cannot be re-delegated. Source: BLM Manual 8351 Date of Last Review: 3/24/10	●				●	◘
6400, 8351	Approve maps, boundaries and classification descriptions of designated WSRs and make available for public inspection (Section 3(c) of the WSRA). Approve comprehensive WSR management plan(s) and publish a notice of completion and availability in the FR (Section 3(d)(1) of the WSRA). _____ * - Delegated through State Directors to the District/ Field Managers - Cannot be re-delegated. Date of Last Review: 3/24/10	● ●				● ●	◘ ◘
6400, 8351	Management of designated WSRs. Approve or deny proposed projects in designated WSRs to protect and enhance values for which the river was designated. _____ * - Delegated through State Directors to the District/ Field	●				●	◘

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
	Managers - Cannot be re-delegated. Source: 36 CFR 297 and 43 CFR 8351 Date of Last Review: 3/24/10						

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
6500	Authorizes protecting and/or reestablishing wildlife habitat pursuant to the Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et. seq.) Date of Last Review: 3/24/10	●				●	◘
6500	Approve planning and implementing needed wildlife habitat research studies: - State. Date of Last Review: 3/24/10	●		◘		●	◘
6500	Approves developing and implementing rangeland improvements for wildlife pursuant to Public Rangelands Improvement Act and Taylor Grazing Act Date of Last Review: 3/24/10	●				●	●
6500	Approve protective provisions (stipulations) in leases, licenses, permits and grants issued by BLM to safeguard wildlife habitat per Federal Land Policy and Management Act, Surface Mining Control and Reclamation Act, and other applicable authorities. Date of Last Review: 3/24/10	●				●	●
6520	Approves developing and implementing cooperative programs for habitat management. including Cooperative Management Agreements. with non-governmental entities Date of Last Review: 3/24/10	●				●	◘
6525	Authorizes developing, signing, and implementing cooperative management programs. including cooperative management agreements jointly with State wildlife agencies pursuant to the Sikes Act, as amended 74 Stat. 1052; 88 Stat 1369. 92 Stat 921 Date of Last Review: 3/24/10	●				●	◘
6602	Approves developing and implementing inventory monitoring plans Date of Last Review: 3/24/10	●				●	●
6780	Approves habitat management plans Date of Last Review: 3/24/10	●				●	◘
6820	Approves introducing or transplanting - Animal - Plants	◘ ●				●	◘

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			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
6830	Approve animal damage control plans where the BLM is the action agency. Date of Last Review: 3/24/10	●				●	◘
6840	Conducts endangered species consultation per Section 7 of Endangered Species Act of 1973. as amended Date of Last Review: 3/24/10	●		●		●	◘
6840	Designate BLM Sensitive Species _____ State Director - Cannot be re-delegated. Date of Last Review: 3/24/10	◘					
7250	Water rights filing. [1] - 951 Engineering Date of Last Review: 3/24/10	●			●[1]	●	●
8000.0-4	Authorize recreation use and specify terms and conditions of such use (exceptions are provided for in the regulations). _____ Source: 16 U.S.C. 4601-6A Date of Last Review: 3/24/10	●		●		●	●
8000.0-6 (d)	Establishes reasonable fees in accordance with 43 CFR 8370 (recreation use authorizations) Date of Last Review: 3/24/10	●		●		●	●
8000.0-6 (d)	Collects reasonable fees in accordance with 43 CFR 8370 (recreation use authorizations) Date of Last Review: 3/24/10	●				●	●
8120	Approve matters of responsibility of BLM relating to determination of eligibility for nomination to the National Register. _____ Source: 8000.0-4 16 U.S.C. 4601-6A and 36 CFR 63 Date of Last Review: 3/24/10	●				●	●
8120	Approve matters of responsibility of BLM relating to nomination to the National Register. _____ Source: 36 CFR 60 Date of Last Review: 3/24/10	●		●		●	
8130, 8131	Approves cultural management plan	●				●	◘

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
8140	Approve repatriations under Native American Graves Protection and Repatriation Act. _____ * – State Director - Cannot be re-delegated. Date of Last Review: 3/24/10	◘					
8140	Performing functions of "Agency Official" under 36 CFR 800 (Protection of Historic and Cultural Properties) Date of Last Review: 3/24/10	●		●		●	●
43 CFR 7 8140	Carry out responsibilities of "agency" under Archaeological Resources Protection Act. Date of Last Review: 3/24/10	●		●		●	●
8151, 8270	Approve cultural and Paleontological use permits. _____ * – Delegated through State Director to Deputy State Director with oversight for their State's Cultural Heritage Program only. Date of Last Review: 3/24/10	●		●			
8120	Carry out responsibility of Federal Land Manager to consult with Native Americans for coordination per American Indian Religious Freedom Act, Archaeological Resources Protection Act, National Historic Preservation Act, Native American Graves Protection and Repatriation Act, National Environmental Policy Act, and Federal Land Policy and Management Act. Date of Last Review: 3/24/10	●		◘		●	◘
8223	Establishes rules for use of research natural areas. Date of Last Review: 3/24/10	●				●	◘
8270	Approves paleontological use permits. Initial issuance by State Office. Field Office validation prior to start of field work. * Delegated to the Regional paleontologist Date of Last Review: 3/24/10	●		*		●	◘
8322	Approve Recreation Management Plan development. Date of Last Review: 3/24/10	●				●	◘
8341.1	Approve restrictions on the use of Off Highway Vehicles on BLM land (regarding conditions of use).	●		◘		●	◘

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			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
8341.2	Approve closing areas to Off Highway Vehicle use. _____ Source: 43 CFR 8341.2(a) Date of Last Review: 3/24/10	●				●	◘
8341.2	Approve closing portions of the public lands for use by Off Highway Vehicles. _____ * - State Director - Cannot be re-delegated. Source: 43 CFR 8341.2(b) Date of Last Review: 3/24/10	◘					
8342.1	Designate all public lands as open, limited, or closed to Off Highway Vehicles. Date of Last Review: 3/24/10	●				●	◘
8343	Issues Notice of Violations on spark arrester requirements Date of Last Review: 3/24/10	●				●	●
8357	Designate Back Country Byways in consultation with State and local authorities and other interest groups. Date of Last Review: 3/24/10	●					
8360.6	Approves request for Uniform Allowance All Supervisors Date of Last Review: 3/24/10	●	●	●	●	●	●
8364	Approve closing areas and access to areas. _____ Source: 43 CFR 8364 Date of Last Review: 3/24/10	●				●	◘
8365	Approve actions such as posting rules, denying use, and taking other actions as appropriate concerning use of developed recreation sites and facilities. Date of Last Review: 3/24/10	●				●	◘
8365.1	Establishes supplemental rules to protect the public health, safety, and resources in undeveloped areas Date of Last Review: 3/24/10	●		◘		●	◘
8365	Establish reasonable fees for recreation use. Date of Last Review: 3/24/10	●				●	●

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			DSD				
		SD	920	930	950	DM	FM
8381	Designation of significant caves. _____ * – Delegated through State Directors to the District/ Field Managers. Date of Last Review: 3/24/10	●				●	●
8400	Administration of Visual Resource Management. Implement BLM VRM policy and provide statewide program coordination and guidance. Date of Last Review: 3/24/10	● ●		● ●		●	●
8431	Approve permit stipulations as necessary for program compliance for visual resource contrast ratings Date of Last Review: 3/24/10	●		●		●	◘
8510, 1601	Approve wilderness management inventory decisions. Date of Last Review: 3/24/10	●				●	●
8702	Evaluates state application of standards, program direction, adequacy; prepares regular and special reports as needed Date of Last Review: 3/24/10	●		◘			
8704	Approves and carries out state research requisite for adequate protection and preservation of historic, cultural, or scenic values, fish and wildlife resources, and natural systems or processes; or protection of life and safety from natural hazards. (FLPMA, Sec. 301) Date of Last Review: 3/24/10	●		◘		●	◘
8705	Approve plans for public participation in the Areas of Critical Environmental Concern (ACEC) process. [1] – 912 Date of Last Review: 3/24/10	●[1]				●	◘
8740	ACEC Designation (FLPMA. Sec 202)c)(3), 43 CFR 1601). - Concurs in ACEC designations - Approves ACEC designations - Effects protest procedures Date of Last Review: 3/24/10	 ● ● ◘				 ● ●	 ◘ ◘
8750	Management of Designated ACECs (43 CFR 1601 5-9.1061.6-2). - Develops special management requirements - Implements special management requirements - Monitors management practices	 ● ● ●				 ● ● ●	 ◘ ◘ ◘

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
9011	Approve submitted Pesticide Use Proposals. _____ * - Only States with certified applicators reviewing Pesticide Use Proposals. This authority may not be re-delegated below the District /Field Manager. Date of Last Review: 3/24/10	●		●		●	◘
9102	Design approval for major structures which affect public safety is delegated through the line to any level; however, the signing official is required to be a registered professional engineer experienced in that particular type of structure. All engineering designs (construction and maintenance) are approved technically as outlined in the BLM Manual Section 9102. The responsibility for determining the level at which approval will occur for each office lies with the State Engineer who retains technical responsibility for all designs. [1] – 951 Date of Last Review: 3/24/10	● ●			●[1] ●[1]		
9014	Approve submitted Biological Control Agent Release Proposals except those retained by the Department. Date of Last Review: 3/24/10	●		●		●	●
9100, 9601, 9614	Technical approval of easement surveys, easement plans and legal descriptions for acquisitions. _____ * - Delegated through the State Director and the District/Field Manager to the District/Field Office Engineer and the State Office Chief Cadastral Surveyor. If there are no qualified District/Field Office Engineers, then delegation of authority goes to the next highest organizational level in engineering. Date of Last Review: 3/24/10	●			●	●	
9101	Approval of site studies except at the National Interagency Fire Center. Approval of the design narrative and action plan, except where reserved for the State Director (large buildings and recreational developments). _____ * - Delegated through the State Director to the District/Field Manager Date of Last Review: 3/24/10	● ●				● ●	● ●

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			DSD				
		SD	920	930	950	DM	FM
9102	Design approval for major structures which affect public safety is delegated through the line to any level, however, the signing official is required to be a registered professional engineer experienced in that particular type of structure. All engineering designs (construction and maintenance) are approved technically as outlined in the BLM Manual Section 9102. The responsibility for determining the level at which approval will occur for each office lies with the State Engineer who retains technical responsibility for all designs. _____ * - Assistant Director, Fire and Aviation. NOTE: Authority to construct a facility or expend funds is delegated through the State Director to the District/Field Manager, except at the Office of Fire and Aviation and National Operations Center. Date of Last Review: 3/24/10	● ●				●	
9113	Approval of road standards, that are within the limits outlined in BLM Manual Section 9113, _____ * - Delegated through the State Director to the District/Field Manager [1] – 951 Date of Last Review: 3/24/10	●			●[1]	●	●
9114	Authority to approve a trail location. * - Delegated through the State Director to the District/Field Manager. [1] – 951 Date of Last Review: 3/24/10	●			●[1]	●	●
9172	Authority to approve a water control or water development structure. _____ * - Delegated through the State Director to District/Field Manager, however, signing official is required to be a registered professional engineer experienced in that particular type of structure [1] – 951 Date of Last Review: 3/24/10	●			●[1*]	●[*]	●[*]
9200	Provides wildfire suppression on BLM administered lands, coordinating and establishing priority on uncommitted fire suppression resources during periods of shortages within the appropriate areas of responsibility.	●		●		◘	

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			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
9200	Implement Wildland Fire management decisions. _____ *- Field Manager - Can be re-delegated to an Incident Commander Date of Last Review: 3/24/10	●		●		●	●
9210	Enters into agreements to facilitate mutual assistance for prevention. training, pre-suppression and suppression (31 U.S.C 585: 42 U.S.C. 1855a, 43 U.S.C. 1701). - Approves agreements committing funds and/or manpower - Coordinates fire logistics suppression operation [1] Coordination with FMO Date of Last Review: 3/24/10	● ●		● ●	●	● ●	◘[1] ◘[1]
9210	Authority to expend up to $300,000 for State short-term fire severity needs. _____ * - Cannot be re-delegated. Date of Last Review: 3/24/10	◘					
9210	Enter into fire agreements to provide for the housekeeping functions of combined agency-operated facilities. Date of Last Review: 3/24/10	●		●		◘	
9211	Approve Fire Management Plans. Date of Last Review: 3/24/10	●				●	
9211	Approve Wildland Fire Decision Support System (WFDSS) when a wildfire escapes initial attack. Approval is subject to the following fire cost limits: - Up to $2,000,000 - $2,000,000 to $5,000,000 _____ * - Cannot be re-delegated. 1 – Delegated through the State Director to the District/Field Manager - Cannot be re-delegated. Date of Last Review: 3/24/10	●				●	◘
9211	Approve Wildland Fire Decision Support System (WFDSS) for Use of Wildland Fire events, consistent with Fire Management Plans. Date of Last Review: 3/24/10	●					
9211	Develop and approve prescribed fire plans. Approval can be	●				●	

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			DSD				
		SD	920	930	950	DM	FM
	re-delegated if a qualified, independent plan review can be made. Date of Last Review: 3/24/10						

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			DSD				
		SD	920	930	950	DM	FM
9212	Closes areas under the administration of the Bureau during periods of high hazard to prevent fires. (4 CFR 8354.1.) [1] Coordination with FMO Date of Last Review: 3/24/10	●				●	◘[1]
9212	Issue fire prevention orders that close entry to, or restrict use of, designated public lands. Source: 43 CFR 9212.2 Date of Last Review: 3/24/10	●				●	◘
9214	Approves prescribed fire plans. Approval can be re-delegated if (1) a qualified, independent plans review can be made and (2) the approving official is one administrative level above where the plan was developed. Date of Last Review: 3/24/10	●				●	◘
9230	Disposes of resources recovered from trespass on public lands Date of Last Review: 3/24/10	●				●	◘
9230	Determine liability for unauthorized use on public lands. Accept payment in full. Dispose resources and recover funds. Date of Last Review: 3/24/10	●				●	
9230	Approves actions necessary to prevent or abate the authorized use of public lands Date of Last Review: 3/24/10	●				●	●
9230	Issues order to seize Government property Date of Last Review: 3/24/10	●				●	◘
9230	Develops and implements a prevention plan to control unauthorized use Date of Last Review: 3/24/10	●				●	●
9230.3	Conducts inventories and investigations of suspected unauthorized use of public lands. Date of Last Review: 3/24/10	●	●	●	●	●	◘
9230.4	Issues Notices of Demand (Demand Letters) Date of Last Review: 3/24/10	●	●	●	●	●	◘
9230.6	Approves liability and damages for trespass on the public lands Date of Last Review: 3/24/10	●	●	●	●	●	◘

Subject Function Code	Legend: ● = Position with authority ◘ = Authority may not be redelegated Activity	AUTHORITY DELEGATED TO:					
			DSD				
		SD	920	930	950	DM	FM
9230.6	Accepts damages and/or liabilities for unauthorized use - Accepts full payment - Approves writing off uncollectible accounts up to $600 with concurrence of Field Solicitor - Approves writing off uncollectible accounts from $600 up to $2,500 with concurrence of Solicitor - Approves the compromising claim or debt owed the government up to $20,000 with concurrent of Field Solicitor Date of Last Review: 3/24/10	● ● ● ●			◘ ◘ ◘ ◘	●	◘
9230.6	Recommends acceptance of Real Property Offered for Settlement of Unauthorized Use Date of Last Review: 3/24/10	●				●	◘
9260	Approve Law Enforcement Agreements - Reimbursable: Reimburse State and local law enforcement agencies for work outside of the normal scope of that agency's activities on public lands. _____ * - Requires State Director and warranted contracting officer approval (see Subject Code 1511). Assigned to LE Date of Last Review: 3/24/10	*					
9260	Approve Law Enforcement Agreements – Non-reimbursable: Confer State and local law enforcement authority upon BLM law enforcement officers for better cooperation and collaboration in utilizing the resources of both agencies while providing for more adequate protection of persons and property on the public lands. _____ * - State Director - Cannot be re-delegated. Date of Last Review: 3/24/10	◘					
9260	Authorize setting aside and expenditures of a specific amount of baseline appropriations to be used for the acquisition of information or evidence (i.e., purchase of evidence, payment to informants, rewards, etc.) concerning violations of laws enforced by the BLM. Date of Last Review: 3/24/10	●				●	●
9261.2	Authorizes BLM non-law enforcement employees to carry firearms in performance of their official duty State Director –Cannot be re-delegated Source: BLM H1112-2	◘					

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			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
9300	Request appraisals for all actions involving sale, exchange or conveyance of public lands and interest in lands and acquisition of private property for a Federal project. (NOTE: All appraisal functions are in the Departmental Office of Appraisal Services). Approve fair market rent for non-rental schedule rights of-way or permits. _____ 1– Delegated through the State Director to the District/Field Manager - Cannot be re-delegated. 2 – State Director - Cannot be re-delegated. 3 – 921, 922 Date of Last Review: 3/24/10	● ◘2	●[3]			●	◘[1] ◘
9400	Approve aircraft use for transportation of passengers and cargo in accordance with Office of Management and Budget Circular A-126 (Revised), January 18, 1989. Ensure official travel on Government aircraft is properly authorized, justified and documented. Date of Last Review: 3/24/10	●		●		●	
9600	Issue correspondence to Federal, state and local government(s) and members of the public pertaining to routine matters involving Cadastral Survey. _____ * - State Office Chief Cadastral Surveyor Date of Last Review: 3/24/10	●			●*		
9600,9601, 9610,9650	Approve, accept, suspend, and cancel surveys, resurveys, supplemental plats and protraction diagrams of the lands within the jurisdiction of the office. _____ * - This authority is delegated from the Director, BLM, to the State Office Chief Cadastral Surveyor and cannot be re-delegated. Source: 43 CFR 9180, 43 U.S.C. 2, 52 and 1201 Date of Last Review: 3/24/10				*		
9610	Approves applications for extension of original surveys or lands omitted from original surveys. * - State Office Chief Cadastral Surveyor - Cannot be re-delegated. Source: 43 CFR 9185.1-1, 43 U.S.C. 2				*		

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			DSD				
		SD	920	930	950	DM	FM
	Date of Last Review: 3/24/10						
9600, 9601, 9610	Approves applications for resurveys. _____ * - State Office Chief Cadastral Surveyor – Cannot be re-delegated. Source: 43 CFR 9185.1-2, 43 CFR 9180.0-3 (c) (2), 43 U.S.C. 772 , 773, and 1737 (c). Date of Last Review: 3/24/10				*		
9601	Determination of Survey Requirement. _____ * - WO Chief Cadastral Surveyor and SO Chief Cadastral Surveyors. Date of Last Review: 3/24/10				*		
9601, 9623	Verify accuracy of legal descriptions for acquisitions and exchanges. _____ * - State Office Chief Cadastral Surveyor Date of Last Review: 3/24/10				*		
9605, 3861	Issue and cancel survey order for the survey of a mining claim. _____ * - State Office Chief Cadastral Surveyor - Cannot be re-delegated. Source: 43 CFR 9185.1-3 (a), 43 CFR 3861.1-1, 30 U.S.C. 39 Date of Last Review: 3/24/10				*		
9621, 9622	Sign and issue Special and Assignment Instructions for surveys. _____ * - State Office Chief Cadastral Surveyor – Cannot be re-delegated. Date of Last Review: 3/24/10				*		
9650	Prepare plat filing instructions to appropriate offices. File Survey Plats. _____ * - State Office Chief Cadastral Surveyor – Cannot be re-delegated. Date of Last Review: 3/24/10				*		
9650, 1760	Prepare and publish in the Federal Register notices of the official filing of plats of survey, resurvey, supplemental plats and protraction diagrams.				*		

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			DSD				
		SD	920	930	950	DM	FM
	* - State Office Chief Cadastral Surveyor – Cannot be re-delegated Source: 43 U.S.C. 2 and 52 Date of Last Review: 3/24/10						
9660, 9661, 9662	Issue formal decisions of Protest and Appeals involving Cadastral Surveys. _____ Cannot be re-delegated. Source: 43 CFR 9180 and 9185 Date of Last Review: 3/24/10	◘					
9672	Signs Certifications for Standards for Indian Trust lands Boundary Evidence of lands within the jurisdiction of the office. _____ * - State Office Chief Cadastral Surveyor – Cannot be re-delegated. Source: 303 DM 7 Date of Last Review: 3/24/10				*		
9691	Establishing and providing geographic positions of certain land corners as they related to national mapping program and other public and federal needs. [1] - State Office Chief Cadastral Surveyor Date of Last Review: 3/24/10	●			●[1]		

Exhibit 7

WILDEARTH GUARDIANS

187 IBLA 349 Decided May 6, 2016

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
801 N. Quincy St., Suite 300
Arlington, VA 22203

703-235-3750 703-235-8349 (fax)

WILDEARTH GUARDIANS

IBLA 2014-155 Decided May 6, 2016

Appeal from a decision by the Field Manager for the Uncompahgre Field Office of the Colorado Bureau of Land Management authorizing the lease of coal. COC-75916.

Set aside and remanded.

1. Administrative Procedure: Decisions;
Bureau of Land Management: Delegation of Authority

If a decision is not issued by a BLM employee with delegated authority to issue it, then the action does not bind the Department. The purported decision has no legal effect, and the Board properly sets it aside and remands it for further action. Opining on the merits of an unauthorized BLM decision would constitute an advisory opinion, which the Board will not issue.

APPEARANCES: Samantha Ruscavage-Barz, Esq., Santa Fe, New Mexico, for WildEarth Guardians; Michael Drysdale, Esq., and William Prince, Esq., Dorsey & Whitney LLP, Minneapolis, Minnesota, for Bowie Resources, LLC; Kristen C. Guerriero, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Lakewood, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE RIECHEL

WildEarth Guardians appeals a Decision Record (DR) issued by the Field Manager for the Uncompahgre Field Office of the Colorado Bureau of Land Management (BLM) authorizing the lease of coal in the Spruce Stomp Lease by Application (LBA) tract. Because we find that the Field Manager was not authorized to approve the coal lease sale, the DR has no legal effect. We set aside the DR and remand for further action consistent with this decision.

Background

Bowie Resources, LLC (Bowie), submitted the LBA on October 12, 2012.[1] The application area contains nearly 1,800 acres of land managed by the U.S. Forest Service and BLM and private land with federal minerals.[2] The application area is adjacent to the Bowie No. 2 Mine, an underground coal mine northeast of Paonia, Colorado.[3] If approved, the LBA might supplement the Bowie No. 2 Mine's reserves.[4]

BLM and the Forest Service prepared an Environmental Assessment (EA) to identify potential environmental impacts related to the LBA.[5] On February 4, 2014, the Field Manager for BLM's Uncompahgre Field Office issued a Finding of No Significant Impact (FONSI) and a DR documenting her "decision to offer for lease the B seam in the Spruce Stomp LBA tract COC-75916 as described in [the EA]."[6]

WildEarth Guardians appealed the DR, arguing that the BLM Field Manager lacked authority to approve the proposed lease and that the EA supporting the DR is inadequate.[7] Because we resolve this appeal based on the absence of authority for the Field Manager to approve the LBA, we do not address the arguments about the adequacy of the EA.

Authority to Approve Coal Lease Sales

The Mineral Leasing Act authorizes the Secretary of the Interior to issue coal leases, in her discretion, upon request by any qualified applicant.[8] The regulations implementing the Mineral Leasing Act empower an "authorized officer" to act for the Secretary.[9] "Authorized officer" is defined as "any employee of the [BLM] delegated the authority to perform the duty described in the section in which the term is used."[10]

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[1] Administrative Record (AR) 2.01-1.
[2] AR 2.01-1 at 4, 6.
[3] AR 6.02-2 at 4.
[4] AR 1.01-6 at 1 (Notice of Availability of the EA and Notice of Public Hearing).
[5] AR 6.02-2 at 7 (DOI-BLM-CO-S050-2013-0010 EA).
[6] AR 6.03-3 at 4, 6.03-4 at 1, 12.
[7] Notice of Appeal; Statement of Reasons (SOR) at 2.
[8] 30 U.S.C. § 201(a)(1) (2012). *See also* 43 C.F.R. Subpart 3425 (Leasing on Application).
[9] *See, e.g.*, 43 C.F.R. §§ 3425.1-8, 3425.3(a).
[10] 43 C.F.R. § 3400.0-5(b).

To determine which BLM employee has authority to approve LBAs, we consult the Department's and BLM's written delegations of authority.[11]

The Secretary has delegated her authority to implement the Mineral Leasing Act to the Assistant Secretary – Land and Minerals Management.[12] The Assistant Secretary, in turn, delegated her authority to the Director of BLM.[13]

Delegations from the Director of BLM to other BLM employees are documented in the BLM Manual, which reflects that the BLM Director delegated his authority to grant LBAs to the State Directors.[14] Delegations from the State Director are documented in State Office supplements to the BLM Manual.[15]

In the Colorado State Office Supplement to the BLM Manual, the Colorado State Director and Associate State Director delegated the authority to approve applications for coal lease sales outside of coal production regions under 43 C.F.R. § 3425.1-5 (LBAs) to the Deputy State Director and the Solid Minerals Branch Chief, Colorado State Office.[16] Because the Colorado State Director delegated authority to "approve" National Environmental Policy Act (NEPA)[17] compliance documents "to the level of the specific delegation of authority for approving the proposed action," the Deputy State Director and Solid Minerals Branch Chief also have delegated authority to approve NEPA documents for LBAs.[18]

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[11] *See* 200 Departmental Manual (DM) 1.3 (delegations from the Secretary are issued in the Delegation Series of the DM), 2.3 ("Redelegations of authority within a bureau or office will be issued as part of the bureau or office directives system."); BLM Manual Section 1203, Delegation of Authority (Internal) (Nov. 16, 2006).

[12] 209 DM 7.1.

[13] 235 DM 1.1K.

[14] BLM Manual Section 1203, App. 1 at 66-67.

[15] BLM Manual Section 1203 at .22.

[16] Colorado State Office Supplement to the BLM Manual, Section 1203 (Colo. Supp.), at .04H (the Associate State Director "has the full delegated authority" of the State Director); *id.*, App. 1 at 80 (authority to approve LBAs delegated to the Deputy State Director and Solid Minerals Branch Chief) (Feb. 4, 2011).

[17] 42 U.S.C. §§ 4231-4370h (2012).

[18] Colo. Supp., App. 1 at 40.

Discussion

The FONSI and DR for the Spruce Stomp LBA were signed by the Field Manager for the Uncompahgre Field Office of BLM.[19] The FONSI is based in part on the Spruce Stomp Coal LBA EA, which is the NEPA compliance document for the Spruce Stomp LBA.[20] The Field Manager also signed the DR, in which she states, "It is my decision to offer for lease the B seam in the Spruce Stomp LBA tract COC-75916 as described in [the Spruce Stomp LBA EA]."[21] The Field Manager's signature is identified as the "signature of authorized official."[22] The DR describes the right to appeal the "BLM decision to offer the coal LBA," which must be filed within "30 days from this decision."[23]

While these facts appear to show that the Field Manager acted without appropriate delegations of authority when she issued the FONSI and DR, BLM asserts that "the Field Manager's approval of the NEPA document and issuance of the FONSI and Decision are appropriately delegated and constitute a recommendation to the Colorado State Office."[24] BLM first argues that the Field Manager could approve the EA by issuing the FONSI because she is authorized to approve NEPA documents.[25] But the Colorado State Director delegated approval of NEPA compliance documents only "to the level of the specific delegation of authority for approving the proposed action," which, in the case of LBAs, is the Deputy State Director and Solid Minerals Branch Chief.[26] Although there is an "X" in the column for the Field Manager under "Authority Delegated To," we read this as indicating only that Field Managers can approve NEPA documents if they also have authority to approve the proposed action. Here, only the Deputy State Director and Solid Minerals Branch Chief have delegated authority to approve LBAs, so only those officials have delegated authority to approve a NEPA document supporting approval of an LBA.

In any event, the FONSI is not the document on appeal in this case, nor could it be, because only agency decisions may be appealed.[27] WildEarth Guardians properly

[19] AR 6.03-3 at 5; 6.03-4 at 12.
[20] AR 6.03-3 at 5 (the Field Manager signed her name after "Approved:").
[21] AR 6.03-4 at 1.
[22] *Id.* at 12.
[23] *Id.*
[24] Answer at 5 (citing the Colo. Supp.).
[25] Answer at 5-6.
[26] Colo. Supp., App. 1 at 40.
[27] *See* 43 C.F.R. §§ 4.1(b)(2), 4.410(a).

appeals the DR, which authorizes the lease of coal in the Spruce Stomp LBA tract. In this regard, BLM claims that because only the State Director, Deputy State Director, or Solid Minerals Branch Chief can issue a lease, it necessarily follows that the DR and FONSI can only be a "recommendation to the Colorado State Office" where these individuals are located.[28] BLM's argument is contrary to the plain language of the DR, however, which documents the Field Manager's "decision to offer" the LBA.[29] Moreover, the word "recommendation" does not appear in the DR.

The BLM NEPA Handbook explains BLM's decision-making process: "BLM has chosen to use the 'decision record' (DR) to document the decision regarding the action for which the EA was completed."[30] The decision-maker signs and dates the DR, and the action must be implemented in accordance with the DR.[31] This is exactly what BLM purported to do here: the Field Manager signed and dated the DR, declaring her "decision to offer" the LBA.

[1] Based on BLM delegations of authority, we find that the Field Manager was not authorized to approve the LBA in the DR. If a decision is not issued by an employee with delegated authority to issue it, then the action does not bind the Department and is not properly considered a decision of the BLM.[32] The purported decision therefore has no legal effect, and the Board properly sets it aside and remands it for further action.

We recognize that remanding this case to BLM could delay the ultimate resolution of this case, but opining on the merits of an unauthorized BLM decision would be an advisory opinion, which the Board will not issue. *See, e.g., Uintah County*, 182 IBLA 191, 197 (2012); *Robert L. Bayless Producer*, 177 IBLA 83, 85 (2009); *Robert C. Lewis v. BLM*, 173 IBLA 284, 294 (2008).

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[28] Answer at 5-6.
[29] AR 6.03-4 at 1, 12.
[30] BLM NEPA Handbook H-1790-1 at 84 (Jan. 2008). *See also id.* at 83 ("The FONSI is not the authorizing document for the action: the decision record is the authorizing document.").
[31] *Id.* at 85, 86.
[32] *See* BLM Manual Section 1203, Glossary of Terms (defining "authority" as "[t]he ability to make the final, binding decision or to take specific action, or both, as an official representing the United States Government. Such authorities have a legal basis in statute or regulation.").

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 C.F.R. § 4.1, we set aside and remand BLM's decision for further action consistent with this opinion.

/s/
Silvia M. Riechel
Administrative Judge

I concur:

/s/
James K. Jackson
Administrative Judge

Exhibit 8

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
801 N. Quincy St., Suite 300
Arlington, VA 22203

703-235-3750 703-235-8349 (fax)

August 25, 2016

IBLA 2016-79	)	WYW-154595
	)	
WILDEARTH GUARDIANS	)	Coal Lease
	)	
	)	Motion to Supplement
	)	Administrative Record Denied;
	)	Set Aside and Remanded

ORDER

Appellant has appealed from a December 29, 2015, decision record (DR) issued by the field manager for the Rock Springs Field Office (Wyoming) Bureau of Land Management (BLM). The field manager approved Bridger Coal Company's application to modify Federal coal lease WYW-154595 to include 120.02 acres of unleased contiguous Federal coal lands.

Appellant filed a statement of reasons in support of its appeal. Appellant's main argument is that the bureau violated the National Environmental Policy Act (NEPA)[1] by failing to prepare an environmental impact statement. Bridger Coal Company and the State of Wyoming are intervenors in this appeal.[2] The intervenors and BLM have filed respective answers and the matter is ripe for final disposition.

BLM's Motion for Leave to Submit Ratification

BLM has filed with the Board a Motion for Leave to Submit Ratification (Motion). BLM moves the Board to accept documentation into the administrative record, which shows that on May 25, 2016 -- after WildEarth Guardians appealed the field manager's DR -- BLM Wyoming's Acting Deputy State Director for Minerals and Lands ratified the DR. BLM asks to supplement the administrative record with the ratification document in response to *WildEarth Guardians*.[3] In that case, appellant appealed from a BLM Colorado field manager's decision to approve a coal lease. We

[1] 42 U.S.C. §§ 4321-4370h (2012).
[2] *See* Order dated Feb. 29, 2016.
[3] 187 IBLA 349 (2016).

found that the field manager was not authorized to approve the coal lease, and therefore we set aside the DR and remanded the matter back to BLM.

Although BLM states that, in this case, the field manager did not actually approve the coal lease modification, which has not yet been issued or signed by the Deputy State Director, BLM considers it appropriate to submit the ratification for acceptance into the administrative record to alleviate the need to address any issues that may be raised by *WildEarth Guardians*.[4] BLM states that record supplementation is appropriate since the ratification "in no way changes the substance of the decision on appeal."[5]

BLM Did Not Have Jurisdiction to Ratify the DR

BLM's ratification document purports to ratify a decision that was on appeal to the Board and therefore over which BLM had lost jurisdiction.[6] We reject BLM's argument that it could ratify a decision that was no longer before it. The validity of a decision goes directly to the "substance of the decision on appeal." Because BLM did not have jurisdiction to ratify or otherwise modify a decision on appeal, we find that the ratification document has no legal effect, and we deny BLM's Motion.

The DR is Set Aside and Remanded

BLM states in its Motion that the field manager was "authorized to sign decision records and findings of no significant impact for NEPA analyses, and the Deputy State Director is authorized to sign the lease modification itself."[7] BLM's position implies that a DR is part of the bureau's NEPA compliance process. This characterization is incorrect. The purpose of the NEPA process is to gather and analyze information to support decision making. A decision occurs at the end of the NEPA process; it is not part of it. As the Council on Environmental Quality stated in its regulations implementing NEPA, "NEPA procedures must insure that environmental information is available to public officials and citizens *before decisions are made* and before actions are taken."[8]

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[4] Motion at 2.
[5] *See id.*
[6] *See Chipmunk Grazing Association, Inc.*, 188 IBLA 35, 43 (2016); *McMurry Oil Co.*, 153 IBLA 391, 393 (2000).
[7] Motion at 2.
[8] 40 C.F.R. § 1500.1(b) (emphasis added).

BLM's NEPA Handbook recognizes this distinction between NEPA documents and decisions and explains that a DR is the document that authorizes an action.[9] In fact, the field manager expressly authorized Bridger Coal Company's coal lease modification in the DR, stating, "[I]t is my decision to approve the Proposed Action to modify the existing federal coal lease WYW-154595 . . . ."[10] Once the decision is made, execution of the approved document becomes ministerial.

But BLM has not demonstrated that the field manager possessed the requisite authority to authorize coal lease modifications. If a decision is not issued by an employee with delegated authority to issue it, then the action does not bind the Department and is not properly considered a decision of the BLM.[11] Because the DR is not a BLM decision, it cannot be appealed to the Board.[12]

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior,[13] we set aside and remand BLM's DR.

I concur:

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[9] BLM NEPA Handbook H-1790-1 at 83 (Jan. 2008).
[10] DR at 1; *WildEarth Guardians*, 187 IBLA at 353
[11] *WildEarth Guardians*, 187 IBLA at 353; *Gateway Coal Co. v. Office of Surface Mining Reclamation and Enforcement*, 84 IBLA 371, 374-75 (1985).
[12] 43 C.F.R. §§ 4.1(b)(2), 4.410(a).
[13] 43 C.F.R. § 4.1.

Exhibit 9

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
801 N. Quincy St., Suite 300
Arlington, VA 22203

703-235-3750 703-235-8349 (fax)

August 25, 2016

IBLA 2016-80	)	COC-54608
	)	
WILDEARTH GUARDIANS	)	Coal Lease
	)	
	)	Motion to Supplement
	)	Administrative Record Denied;
	)	Set Aside and Remanded

ORDER

Appellant has appealed from a December 31, 2015, decision record (DR) issued by the field manager for the Little Snake Field Office (Colorado) Bureau of Land Management (BLM). The field manager approved Twentymile Coal LLC's application to modify Federal coal lease COC-54608 to include 310 acres of unleased contiguous Federal coal lands.

BLM's Motion for Leave to Submit Ratification

BLM has filed with the Board a Motion for Leave to Submit Ratification (Motion). BLM moves the Board to accept documentation into the administrative record, which shows that on May 25, 2016 -- after WildEarth Guardians appealed the field manager's DR -- BLM Colorado's Deputy State Director for Energy, Lands, and Minerals ratified the DR. BLM asks to supplement the administrative record with the ratification document in response to *WildEarth Guardians*.[1] In that case, appellant appealed from a BLM Colorado field manager's decision to approve a coal lease. We found that the field manager was not authorized to approve the coal lease, and therefore we set aside the DR and remanded the matter back to BLM.

BLM considers it appropriate to submit the ratification for acceptance into the administrative record to alleviate the need to address any issues that may be raised

[1] 187 IBLA 349 (2016).

by *WildEarth Guardians*.[2] BLM states that record supplementation is appropriate since the ratification "in no way changes the substance of the decision on appeal."[3]

BLM Did Not Have Jurisdiction to Ratify the DR

BLM's ratification document purports to ratify a decision that was on appeal to the Board and therefore over which BLM had lost jurisdiction.[4] We reject BLM's argument that it could ratify a decision that was no longer before it. The validity of a decision goes directly to the "substance of the decision on appeal." Because BLM did not have jurisdiction to ratify or otherwise modify a decision on appeal, we find that the ratification document has no legal effect, and we deny BLM's Motion.

The DR is Set Aside and Remanded

BLM has not demonstrated that the field manager possessed the requisite authority to authorize coal lease modifications.[5] If a decision is not issued by an employee with delegated authority to issue it, then the action does not bind the Department and is not properly considered a decision of the BLM.[6] Because the DR is not a BLM decision, it cannot be appealed to the Board.[7]

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior,[8] we set aside and remand BLM's DR.

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[2] Motion at 2.
[3] *See id.*
[4] *See Chipmunk Grazing Association, Inc.*, 188 IBLA 35, 43 (2016); *McMurry Oil Co.*, 153 IBLA 391, 393 (2000).
[5] DR at unpaginated 1 ("It is my decision to . . . authoriz[e] the modification of coal lease COC54606 by adding 310 acres of federal coal resources."); *see WildEarth Guardians*, 187 IBLA at 353.
[6] *WildEarth Guardians*, 187 IBLA at 353; *Gateway Coal Co. v. Office of Surface Mining Reclamation and Enforcement*, 84 IBLA 371, 374-75 (1985).
[7] 43 C.F.R. §§ 4.1(b)(2), 4.410(a).
[8] 43 C.F.R. § 4.1.

I concur:

From: Michael Saul
To: BLM_WY_HDD_May_Parcels@blm.gov
Subject: Comments on EA DOI-BLM-WY-D000-2018-0001-EA
Date: Tuesday, November 21, 2017 12:12:55 PM
Attachments: FINAL CBD June 2018 Wyoming High Desert lease sale comment letter 11 20 2017.pdf

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Please find attached the comments of the Center for Biological Diversity, American Bird Conservancy, The Sierra Club, Western Watersheds Project, and Wildearth Guardians on the BLM High Desert District's Environmental Assessment for the proposed June 2018 oil and gas lease sale.

Michael Saul

Center for Biological Diversity

November 20, 2017

Via Electronic Delivery and Federal Express

BLM High Desert District
Attn: Phillip Blundell
280 Highway 191 N.
Rock Springs, WY 82901
blm_wy_hdd_may_parcels@blm.gov

Re: Wyoming High Desert District Lease Auction: Second Quarter, June 2018 Lease Parcels

Dear Mr. Blundell:

The Center for Biological Diversity (the "Center"), American Bird Conservancy, Western Watersheds Project, and Wildearth Guardians write to submit the following comments on the Environmental Assessment ("EA"), DOI DOI-BLM-WY-D000-2018-0001-EA, for the proposed June 21, 2018 Competitive Oil and Gas Lease Sale. The Bureau of Land Management ("BLM") Wyoming State Office is offering 178 parcels in southwest Wyoming encompassing approximately 227,502.319 acres of federal lands in the Rock Springs, Lander, Kemmerer, Pinedale, and Rawlins Field Offices.

The Center for Biological Diversity is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has over 1.1 million members and on-line activists, including those living in southwest, Wyoming who have visited public lands in the region for recreational, scientific, educational, and other pursuits and intend to continue to do so in the future. Our members are particularly interested in protecting the many native, imperiled, and sensitive species and their habitats that may be affected by the proposed oil and gas leasing.

American Bird Conservancy's mission is to conserve native birds and their habitats throughout the Americas. ABC believes unequivocally that conserving birds and their habitats benefits all other species — including people.

Since 1892, Sierra Club has worked to help people enjoy, explore and protect the planet. Many Sierra Club members, both in Wyoming as well as from across the country, are inspired by and treasure the beauty and largely undeveloped nature of the Wyoming high desert, and have a strong interest in fully participating in proposals for energy development on public lands in the state. Sierra Club is America's largest and most influential grassroots environmental organization, with more than 3 million members and supporters nationwide. Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives.

Western Watersheds Project is a non-profit organization with more than 5,000 members and supporters. Our mission is to protect and restore western watersheds and wildlife through education, public policy initiatives and legal advocacy. Western Watersheds Project and its staff and members use

and enjoy the public lands and their wildlife, cultural and natural resources for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes. Western Watersheds Project also has a direct interest in mineral development that occurs in areas with sensitive wildlife populations and important wildlife habitat.

WildEarth Guardians is a nonprofit environmental advocacy organization dedicated to protecting the wildlife, wild places, wild rivers, and health of the American West. On behalf of our members, Guardians has an interest in ensuring the BLM fully protects public lands and resources as it oversees the oil and gas industry's plans to lease publicly-owned minerals. More specifically, Guardians has an interest in ensuring the BLM meaningfully and genuinely takes into account the air, water, and climate implications of its oil and gas decisions, including objectively and robustly weighing the costs and benefits of authorizing the release of more greenhouse gas emissions known to contribute to global warming.

This comment letter outlines BLM's failure to adequately analyze and assess the environmental impacts of the reasonably foreseeable oil and gas development that will result from this oil and gas lease sale in accordance with the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4331, et seq., and regulations promulgated thereunder by the White House Council on Environmental Quality ("CEQ"), 40 C.F.R. § 1500, et seq. Here, BLM fell short of complying with NEPA with regards to analyzing and assessing the potentially significant impacts of oil and gas leasing in the EA. The EA fails to analyze the reasonably foreseeable air quality impacts, greenhouse gas emissions, and climate impacts that would result from selling the oil and gas lease parcels, as well as failed to address potentially significant impacts to greater sage grouse and sagebrush habitat. The agency's proposed Finding of No Significant Impact (FONSI) is therefore unsupported and any decision to sell and issue the aforementioned lease parcels cannot be sustained. Either the BLM must prepare a legally adequate NEPA document, or it cannot proceed with the lease sale as proposed. Below, we detail how BLM's proposal fails to comply with NEPA.

I. The EA Fails to Adequately Disclose or Analyze the Leasing Decision's Harm to Air Quality.

Oil and gas operations emit numerous air pollutants, including volatile organic compounds (VOCs), NOX, particulate matter, hydrogen sulfide, and methane. Hydraulic fracturing ("fracking") operations are particularly harmful, emitting especially large amounts of pollution, including air toxic air pollutants. Permitting fracking and other well stimulation techniques will greatly increase the release of harmful air emissions in these and other regions. BLM failed to analyze air quality impacts from new development in conjunction with the existing air quality landscape for the lease parcels. BLM must analyze increased emissions from foreseeable oil and gas development for these lease parcels in order to prevent further degradation of local air quality, respiratory illnesses, premature deaths, hospital visits, as well as missed school and work days.

The EA provides a cursory review of air monitoring for criteria pollutants to establish compliance with health-based federal Clean Air Act standards called the National Ambient Air Quality Standards (NAAQS), and state-based Wyoming Ambient Air Quality Standards (WAAQS). The EA does acknowledge that air emissions from future oil and gas development could increase, but provides absolutely no mitigation plan or additional analysis as to the impact these increased emissions will have on meeting the NAAQS and WAAQS in the future, especially on ozone non-attainment areas in the

Upper Green River Basin. Studies have shown that oil and gas drilling activities, particularly fracking and horizontal drilling techniques, can pollute air hundreds of miles from the well pad. For example, ethane pollution in Baltimore, Maryland and Washington, D.C, has been attributed to the rapidly increasing natural gas production in the upwind, neighboring states of Pennsylvania and West Virginia.[1] The EA states that:

> There are no direct effects from the proposed oil and gas lease sale because it is primarily an administrative action that only conveys the mineral rights to the potential lessee. Subsequent development proposals by lease holders will require to submittal of plans for any exploration or development that may occur and a site specific EA would be prepared to identify mitigation measures necessary to avoid undue degradation to the environment prior to approval any development activities.[2]

According to data collected between 2011-2015 at 9 southern Wyoming monitoring stations, ozone NAAQS/WAAQs were exceeded at a number of Upper Green River Basin monitoring stations that are representative of the existing air quality landscape for lease parcels in this sale.[3] Current development trends could lead to additional exceedances of the ozone standards, but BLM makes no attempt to quantify or forecast potential increased emissions from oil and gas development spurred by this leasing decision because "…it is unknown how many wells or what type (oil, gas or both)may be proposed for development, the types of equipment needed if a well were to be put into production (e.g., compressor, separator, dehydrator), or what technologies may be employed by a given company. The degree of impact will also vary according to the characteristics of the geologic formations from which production occurs."[4]

Contrary to BLM's unsupported reasoning, forecasting air quality impacts from the leasing and resource management of fossil fuel development is required by well-established law. *WildEarth Guardians v. United States Office of Surface Mining Reclamation & Enforcement,* 104 F. Supp. 3d 1208, 1227-1228 (D.Colo. 2015).[5] Further, such faulty logic would always circumvent a cumulative emissions analysis. Based on this flawed reasoning, the only time the cumulative impacts of oil and gas development projects could be analyzed is when the last oil and gas well in a given area is proposed—a result that contravenes NEPA's intent, to study and analyze potential significant and cumulative environmental effects of a proposed action before they occur.

BLM must review both (a) the foreseeable site-specific emission sources for ozone from the proposed lease parcels and (b) the sources of ozone emissions from existing, permitted, and other leased sources, and analyze how increased emissions from future oil and gas development will impact, cause or contribute to exceedances of the NAAQS.

Additionally, because a number of parcels are in or near the Upper Green River Basin ozone non-attainment area, BLM must perform a General Conformity analysis pursuant to the Clean Air Act (CAA)

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[1] Vinciguerra,Timothy et al., Regional Air Quality Impacts of Hydraulic Fracturing and Shale Natural Gas Activities: Evidence From Ambient VOC Observations, 110 Atmospheric Environment 144 (2015).
[2] EA at 63.
[3] *Id*. at 59-60.
[4] *Id*. at 107.
[5] "The question posed by the plaintiff is not whether the increased mining will result in a release of particulate matter and ozone precursors in excess of the NAAQS, but whether the increased emissions will have a significant impact on the environment. One can imagine a situation, for example, where the particulate and ozone emissions from each coal mine in a geographic area complied with Clean Air Act standards but, collectively, they significantly impacted the environment. It is the duty of OSM to determine whether a mining plan modification would contribute to such an effect, whether or not the mine is otherwise in compliance with the Clean Air Act's emissions standards."(internal citations omitted).

42 U.S.C. § 7506(c)(1)(AB).[6] The "assurance of conformity" to a state implementation plan under the CAA "shall be an affirmative responsibility" of a federal agency. 42 U.S.C. § 7506(c)(1). BLM makes the argument that the administrative act of leasing is not subject to CAA Conformity requirements because the subsequent emissions from leasing are not reasonably foreseeable.[7] BLM contradicts their own assertion by estimating direct and indirect greenhouse gas emissions based on the lease sale's Reasonably Foreseeable Development scenario.[8] The same kind of forecasting and modeling is possible for criteria pollutants such as ozone.

BLM can readily identify oil and gas volume estimates for lease parcels by utilizing their own EPCA Phase III spatial data and overlaying the lease parcel boundary map provided in the lease sale notice.[9] For the June 2018 Wyoming High Desert lease sale, this simple calculation yields an estimated oil volume of 65.349592 mmbbl and an estimated gas volume of 2,658.242168 bcf that could stem from development of these lease parcels. Estimating emissions from production of oil and gas wells per volume produced, or through well drilling and operation technology used based on industry standards, can be readily calculated using a number of EPA emissions inventory calculation tools.[10] The type, quantity and future impact of additional air emissions from this new potential development can and must be analyzed in conjunction with the existing air quality landscape in this region. Failure to do so renders BLM's EA inadequate for purposes of NEPA review.

BLM should look no further than a recent interagency guidance outlining proper air quality analysis and modeling in lease sale decisions. In 2011, the Environmental Protection Agency (EPA), the Department of Interior, and the Department of Agriculture entered into a Memorandum of Understanding (MOU) to establish a "a clearly defined, efficient approach to compliance with [NEPA] regarding air quality . . . in connection with oil and gas development on Federal lands."[11] The MOU "provides for early interagency consultation throughout the NEPA process; common procedures for determining what type of air quality analyses are appropriate and when air modeling is necessary; specific provisions for analyzing and discussing impacts to air quality and for mitigating such impacts; and a dispute resolution process to facilitate timely resolution of differences among agencies."[12] The goal of this process is to ensure that "[F]ederal oil and gas decisions do not cause or contribute to exceedances of the National Ambient Air Quality Standards (NAAQS)."[13] The MOU outlines recommended technical, quantitative procedures to follow, which include identifying the reasonably foreseeable number of oil and gas wells and conducting an emissions inventory of criteria pollutants. Further air quality modeling is required if certain criteria are met, based on the level of emissions impact and the geographic location of the action.[14]

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[6] *See* Exhibit X Center for Biological Diversity, Wyoming Upper Green River Basin Ozone Non-Attainment Area and WY June 2018 High Desert Lease Sale Parcel Map (2018).
[7] EA at 62.
[8] *Id*. at 111-112.
[9] United States Department of Agriculture et al., Inventory of Onshore Federal Oil and Natural Gas Resources and Restrictions to Their Development, Phase III Inventory—Onshore U.S. ("EPCA Phase III Inventory") (2008).
[10] Russell, James et al., An Emission Inventory of Non-point Oil and Gas Emissions Sources in the Western Region, ENVIRON International Corporation (2006); See *also*, Amnon Bar-Ilan, et al., A Comprehensive Emissions Inventory of Upstream Oil and Gas Activities in the Rocky Mountain States (2010).
[11] U.S. Department of Agriculture et al., Memorandum of Understanding regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the National Environmental Policy Act Process, Preamble (2011).
[12] *Id*. at 4.
[13] *Id*. at 1, 2.
[14] *Id*. § V.E.1., pg. 9.

The MOU indicates that "[e]xisting reasonably foreseeable development scenarios can be used to identify the number of wells."[15]

The purpose of an environmental assessment is for BLM to look at the impacts in total, and to take a hard look at all "reasonably foreseeable" impacts now, before leasing the land. NEPA regulations and case law clearly establish that uncertainty about the precise extent and nature of environmental impacts does not relieve an agency of the obligation to disclose and analyze those impacts utilizing the best information available. *See* 40 C.F.R. § 1502.22(a),(b). Additionally, BLM's veiled promises about conducting the requisite site-specific air quality analysis and general conformity determination at the Application to Drill stage, the agency is avoiding a key pillar of NEPA review, which is to assess impacts and assign significance at the earliest stage possible. BLM is required to perform and disclose an analysis of environmental impacts *before* the issuance of an oil and gas lease. *N.M. ex rel. Richardson v. BLM*, 565 F.3d 683, 716 (10th Cir. 2009). In the Tenth Circuit, "assessment of all 'reasonably foreseeable' impacts must occur at the earliest practicable point, and must take place before an irretrievable commitment of resources' is made." *Id*. at 718.

The issuance of a lease is an "irretrievable commitment of resources." *See id*.; *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983); *Pennaco Energy, Inc. v. U.S. Dep't of Interior*, 377 F.3d 1147, 1160 (10th Cir. 2004). Under BLM's interpretation of its regulations, absent a no surface occupancy stipulation, a lessee cannot be prohibited entirely "from surface use of the leased parcel once its lease is final." *See Richardson*, 565 F.3d at 718 (citing 43 C.F.R. § 3101.1-2 ["A lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resource in a leasehold subject to: Stipulations attached to the lease . . . [and other] reasonable measures . . . ."]); *see also* BLM Handbook H-1624-1 ("By law, these impacts [from oil and gas development] must be analyzed before the agency makes an irreversible commitment. In the fluid minerals program, this commitment occurs at the point of lease issuance.").

Instead of disclosing reasonably foreseeable impacts, however, BLM improperly tiers to the EISs for the respective governing RMPs, in violation of NEPA. The RMP-EISs lack any analysis of the impacts of oil and gas development in the specific local areas at issue, and BLM unlawfully postpones disclosure of site-specific impacts when such analysis is possible now. The RMPs also contain incomplete or inadequate analysis of air quality impacts and public health risks of new leasing. Finally, new information arising since the RMPs' adoption concerning significant air quality, public health and cumulative effects of oil and gas drilling and operations renders the RMPs outdated and unreliable.

BLM's analysis is further lacking because the agency also failed to identify specific environmental impact mitigation methods for controlling air pollution emissions,[16] which violates NEPA's requirement that the agency identify mitigation measures, 40 C.F.R. § 1508.25, and consider all reasonable alternatives. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008) (citing 40 C.F.R. § 1502.14(a)).

A. Types of Air Emissions.

BLM failed to provide any analysis of the type, extent, or source of emissions from unconventional oil and gas extraction methods, such as fracking. The rapid expansion of unconventional oil and gas extraction makes the impacts associated with fracking foreseeable.

[15] *Id*.
[16] EA at 114-115.

Unconventional oil and gas operations emit large amounts and a wide array of toxic air pollutants,[17] also referred to as Hazardous Air Pollutants, which are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.[18] Air pollutants emitted by unconventional oil and gas production include toxic BTEX compounds (benzene, toluene, ethylbenzene, and xylene); volatile organic compounds (VOCs) such as methylene chloride; nitrogen oxides (NOx); particulate matter (including diesel exhaust); alkanes (methane, ethane, propane); formaldehyde; hydrogen sulfide; silica; acid mists; sulfuric oxide; and radon gas.[19] These toxic air contaminants and smog-forming chemicals (such as VOCs, NOx, methane and ethane) threaten local communities and regional air quality.

The reporting requirements recently implemented by the California South Coast Air Quality Management District ("SCAQMD") have shown that at least 44 chemicals known to be air toxics have been used in fracking and other types of unconventional oil and gas recovery in California.[20] Through the implementation of these new reporting requirements, it is now known that operators have been using several types of air toxics, including crystalline silica, methanol, hydrochloric acid, hydrofluoric acid, 2-butoxyethanol, ethyl glycol monobutyl ether, xylene, amorphous silica fume, aluminum oxide, acrylic polymer, acetophenone, and ethylbenzene. Many of these chemicals also appear on the U.S. EPA's list of hazardous air pollutants.[21] EPA has also identified six "criteria" air pollutants that must be regulated under the National Ambient Air Quality Standards (NAAQS) due to their potential to cause primary and secondary health effects. As detailed below, concentrations of many of these pollutants—ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead—have been shown to increase in regions where unconventional oil and gas recovery techniques are permitted.

VOCs, from car and truck engines as well as the drilling and completion stages of oil and gas production, make up about 3.5 percent of the gases emitted by oil or gas operations.[22] The VOCs emitted include the BTEX compounds – benzene, toluene, ethyl benzene, and xylene – which are listed as Hazardous Air Pollutants.[23] There is substantial evidence showing the grave harm from these pollutants.[24] Recent studies and reports confirm the pervasive and extensive amount of VOCs emitted by unconventional oil and gas extraction.[25] For example, a study covering sites near oil and gas wells in five different states including Colorado, Wyoming, Ohio, Pennsylvania, and Arkansas, found that concentrations of eight toxic volatile chemicals, including benzene, formaldehyde and hydrogen sulfide,

[17] Sierra Club et al., Comments on New Source Performance Standards: Oil and Natural Gas Sector; Review and Proposed Rule for Subpart OOOO, Nov. 30, 2011 ("Sierra Club Comments") at 13.
[18] *See* U.S. Environmental Protection Agency, Hazardous Air Pollutants (accessed Feb. 8, 2017)
[19] McKenzie, Lisa M. et al., Human Health Risk Assessment of Air Emissions From Development of Unconventional Natural Gas Resources, 424 Science of the Total Environment 79 (2012) ("McKenzie 2012); Shonkoff, Seth B.C. et al., Environmental Public Health Dimensions of Shale and Tight Gas Development, 122 Environmental Health Perspectives 8 (2014) ("Shonkoff 2014").
[20] Center for Biological Diversity, Air Toxics One Year Report (June 2014) at 1.
[21] U.S. Environmental Protection Agency, The Clean Air Act Amendments of 1990 List of Hazardous Air Pollutants, Technology Transfer Network Air Toxics Web Site (accessed July 29, 2015).
[22] Brown, Heather, Memorandum to Bruce Moore, U.S.EPA/OAQPS/SPPD re Composition of Natural Gas for use in the Oil and Natural Gas Sector Rulemaking, July 28, 2011 ("Brown Memo") at 3.
[23] 42 U.S.C. § 7412(b).
[24] Colborn, T. et al., Natural Gas Operations from a Public Health Perspective, 17 Human and Ecological Risk Assessment 5 (2011) ("Colborn 2011"); McKenzie 2012.
[25] McCawley, Michael., Air, Noise, and Light Monitoring Plan for Assessing Environmental Impacts of Horizontal Gas Well Drilling Operations (ETD-10 Project), West Virginia University School of Public Health, Morgantown, WV (2013) ("McCawley 2013"); Center for Biological Diversity, Dirty Dozen: The 12 Most Commonly Used Air Toxics in Unconventional Oil Development in the Los Angeles Basin (Sept. 2013).

exceeded federal health and safety standards, at times by several orders of magnitude.[26] Another study determined that vehicle traffic and engine exhaust were likely the sources of intermittently high dust and benzene concentrations observed near well pads.[27] Recent studies have found that oil and gas operations are likely responsible for elevated levels of hydrocarbons such as benzene downwind of the Denver-Julesburg Fossil Fuel Basin, north of Denver.[28] Another study found that oil and gas operations in this area emit approximately 55percent of the VOCs in northeastern Colorado.[29]

VOCs, NOx, methane, and ethane are potent ground-level (tropospheric) ozone precursors that are emitted by oil and gas drilling and fracking operations. Ozone can result in serious health conditions, including heart and lung disease and mortality.[30] Exposure to elevated levels of ozone is estimated to be cause ~10,000 premature deaths per year in the United States.[31] VOCs can form ground-level (tropospheric) ozone when combined with nitrogen oxides ("NO_X") from compressor engines, turbines, other engines used in drilling, and flaring,[32] in the presence of sunlight. This reaction can diminish visibility and air quality and harm vegetation. Many regions around the country with substantial oil and gas operations are now suffering from extreme ozone levels due to heavy emissions of these pollutants.[33] A recent study of ozone pollution in the Uintah Basin of northeastern Utah, a rural area that experiences hazardous tropospheric ozone concentrations, found that oil and gas operations were responsible for 98 to 99 percent of VOCs and 57 to 61 percent of NO_X emitted from sources within the Basin considered in the study's inventory.[34]

Ground-level ozone can also be caused by methane, which is leaked and vented at various stages of unconventional oil and gas development, as it interacts with nitrogen oxides and sunlight.[35] In addition to its role as a potent greenhouse gas, methane's effect on ozone concentrations can be substantial. One paper modeled reductions in various anthropogenic ozone precursor emissions and found that "[r]educing anthropogenic CH_4 emissions by 50% nearly halves the incidence of U.S. high-O_3 events . . . ."[36]

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[26] Macey, Gregg P. et al., Air Concentrations of Volatile Compounds Near Oil and Gas Production: A Community-Based Exploratory Study, 13 Environmental Health 82 (2014) at 1.
[27] McCawley 2013.
[28] Pétron, Gabrielle et al., Hydrocarbon Emissions Characterization in the Colorado Front Range – A Pilot Study, 117 Journal of Geophysical Research D04304 (2012) at 8, 13 ("Pétron 2012).
[29] Gilman, Jessica B. et al., Source Signature of Volatile Organic Compounds from Oil and Natural Gas Operations in Northeastern Colorado, 47 Environmental Science & Technology 1297 (2013) at 1297, 1303 ("Gilman 2013").
[30] U.S. Environmental Protection Agency, Integrated Science Assessment for Ozone and Related Photochemical Oxidants (2013).
[31] Caiazzo, Fabio et al., Air Pollution and Early Deaths in the United States. Part I: Quantifying the Impact of Major Sectors in 2005, 79 Atmospheric Environment 198 (2013).
[32] *See, e.g.*, U.S. Environmental Protection Agency, Oil and Gas Sector: Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution: Background Technical Support Document for Proposed Standards at 3-6 (July 2011); Armendariz, Al, Emissions for Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (2009) ("Armendariz 2009") at 24.
[33] Armendariz 2009 at 1, 3, 25-26; Koch, Wendy, Wyoming's Smog Exceeds Los Angeles' Due to Gas Drilling, USA Today, May 9, 2011; Craft, Elena, Do Shale Gas Activities Play a Role in Rising Ozone Levels?, Environmental Defense Fund (2012); Colorado Dept. of Public Health and Environment, Conservation Commission, Colorado Weekly and Monthly Oil and Gas Statistics (July 6, 2012) at 12.
[34] Lyman, Seth & Howard Shorthill, Final Report: 2012 Uintah Basin Winter Ozone & Air Quality Study, Utah Department of Environmental Quality (2013) ("Lyman 2013"); *see also* Gilman 2013.
[35] Fiore, Arlene et al., Linking Ozone Pollution and Climate Change: The Case for Controlling Methane, 29 Geophys. Res Letters 19 (2002) ("Fiore 2002"); U.S. Environmental Protection Agency, Oil and Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews Proposed Rule, 76 Fed. Reg. 52738 (Aug 23, 2011).
[36] Fiore 2002; *see also* Martin, Randal et al., Final Report: Uinta Basin Winter Ozone and Air Quality Study Dec 2010 - March 2011 (2011) at 7.

Ethane is also a potent precursor of ground-based ozone pollution as it breaks down and reacts with sunlight to create smog, as well as being a greenhouse gas. Ethane emissions have risen steeply in recent years due to U.S. oil and gas production. A recent study documented that ethane emissions in the Northern Hemisphere increased by about 400,000 tons annually between 2009 and 2014, with the majority coming from North American oil and gas activity, reversing a decades-long decline in ethane emissions.[37] Shockingly, about 60 percent of the drop in ethane levels that occurred over the past 40 years has already been made up in the past five years. At this rate, U.S. ethane levels are expected to hit 1970s levels in about three years. About two percent of global ethane emissions originate from the Bakken Shale oil and gas field alone, which emits 250,000 tons of ethane per year.[38] Because global ethane levels were decreasing until 2009, the U.S. shale gas boom is thought to be responsible for the global increase in levels since 2010.

Oil and gas operations can also emit hydrogen sulfide. The hydrogen sulfide is contained in the natural gas and makes that gas "sour."[39] Hydrogen sulfide may be emitted during all stages of operation, including exploration, extraction, treatment and storage, transportation, and refining. Long-term exposure to hydrogen sulfide is linked to respiratory infections, eye, nose, and throat irritation, breathlessness, nausea, dizziness, confusion, and headaches.[40]

The oil and gas industry is also a major source of particulate matter. The heavy equipment regularly used in the industry burns diesel fuel, generating fine particulate matter[41] that is especially harmful.[42] Vehicles traveling on unpaved roads also kick up fugitive dust, which is particulate matter.[43] Further, both NO_X and VOCs, which as discussed above are heavily emitted by the oil and gas industry, are also particulate matter precursors.[44] Some of the health effects associated with particulate matter exposure are "premature mortality, increased hospital admissions and development of chronic respiratory disease."[45]

Fracking results in additional air pollution that can create a severe threat to human health. One analysis found that 37 percent of the chemicals found at fracked gas wells were volatile, and that of those volatile chemicals, 81 percent can harm the brain and nervous system, 71 percent can harm the cardiovascular system and blood, and 66 percent can harm the kidneys.[46] The SCAQMD has identified three areas of dangerous and unregulated air emissions from fracking: (1) the mixing of the fracking chemicals; (2) the use of the silica, or sand, as a proppant, which causes the deadly disease silicosis; and

[37] Helmig, Detlev et al,, Reversal of Global Atmospheric Ethane and Propane Trends Largely Due to US Oil and Natural Gas Production. 9 Nature Geoscience 490 (2016).
[38] Kort, Eric A. et al., Fugitive Emissions From the Bakken Shale Illustrate Role of Shale Production in Global Ethane Shift. 43 Geophysical Research Letters 4617 (2016).
[39] Sierra Club Comments.
[40] U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Report to Congress on Hydrogen Sulfide Air Emissions Associated with the Extraction of Oil and Natural Gas (EPA-453/R-93-045) at i (Oct. 1993) ("USEPA 1993").
[41] Earthworks, Sources of Oil and Gas Pollution (2011).
[42] Bay Area Air Quality Management District, Particulate Matter Overview, Particulate Matter and Human Health (2012).
[43] U.S. Environmental Protection Agency, Regulatory Impact Analysis for the Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter (June 2012) ("EPA RIA").
[44] EPA RIA at 2-2.
[45] U.S. Environmental Protection Agency, National Ambient Air Quality Standards for Particulate Matter Proposed Rule, 77 Fed. Reg. 38,890, 38,893 (June 29, 2012).
[46] Colborn 2011 at 8.

(3) the storage of fracking fluid once it comes back to the surface.[47] Preparation of the fluids used for well completion often involves onsite mixing of gravel or proppants with fluid, a process which potentially results in major amounts of particulate matter emissions.[48] Further, these proppants often include silica sand, which increases the risk of lung disease and silicosis when inhaled.[49] Finally, as flowback returns to the surface and is deposited in pits or tanks that are open to the atmosphere, there is the potential for organic compounds and toxic air pollutants to be emitted, which are harmful to human health as described above.[50]

The EA should study the potential for oil and gas operations sites in the planning area to emit such air toxics and any other pollutants that may pose a risk to human health, paying particular attention to the impacts of air pollution on environmental justice communities that already bear the burden of disproportionately high levels of air pollution.

The EA should rely on the most up-to-date information regarding the contribution of oil and gas operations to air pollution levels. Numerous studies demonstrate that state and federal emissions inventories significantly underestimate the levels of hazardous air pollution coming from oil and gas drilling and fracking operations. For example, aerial surveys of more than 8,000 oil and gas wells in seven US regions found that well pads emit considerably more methane and VOCs that captured by existing inventories.[51] Recent studies in Weld County, Colorado, show that existing emissions inventories likely underestimate the contribution of oil and gas operations to VOC levels by at least a factor of two, and that benzene emissions are underestimated by four to nine times[52] These studies suggest that the health risk assessments conducted using these inventories are inaccurate and underestimate exposures and health risks.[53] Similarly, the assessment of fracking in California by the California Council on Science and Technology found that current inventory methods underestimate methane and VOC emissions from oil and gas operations.[54]

B. Sources of Air Emissions.

Harmful air pollutants are emitted during every stage of unconventional oil and gas development, including drilling, completion, well stimulation, production, and disposal, as well as from transportation of water, sand, chemicals, and to and from the well pad.[55] The well stimulation stage can emit diesel exhaust, VOCs, particulate matter, ozone precursors, silica, and acid mists.[56] Drilling and casing the wellbore require substantial power from large equipment. The engines used typically run on diesel fuel, which emits particularly harmful types of air pollutants when burned. Similarly, high-powered pump

[47] South Coast Air Quality Management District, Draft Staff Report on Proposed Rule 1148.2 - Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers (January 2013) at 15 ("SCAQMD Draft Staff Report PR1148-2").
[48] *Id.*
[49] South Coast Air Quality Management District, Response to Questions re Air Quality Risks of Hydraulic Fracturing in California, Submission to Joint Senate Hearing (2013) at 3.
[50] SCAQMD Draft Staff Report PR1148-2 at 15.
[51] Lyon, David R. et al., Aerial Surveys of Elevated Hydrocarbon Emissions From Oil and Gas Production Sites, 50 Environmental Science & Technology 4877 (2016).
[52] Pétron 2012 at 1, 18 (noting state and federal inventories likely underestimate hydrocarbon emissions from oil and gas operations by as much as factor of two); Pétron, Gabrielle et al., A New Look at Methane and Non-Methane Hydrocarbon Emissions from Oil and Natural Gas Operations in the Colorado Denver-Julesburg Basin, 119 Journal of Geophysical Research: Atmospheres 6836 (2014) at 6836 ("Pétron 2014").
[53] Pétron 2014.
[54] Brandt, Adam et al., Ch 3: Air quality impacts from well stimulation, An Independent Assessment of Well Stimulation in California, 2 California Council on Science and Technology (2015) ("CCST 2015").
[55] Shonkoff 2014.
[56] *Id.*

engines are used in the fracturing and completion phase. This too can amount in large volumes of air pollution. Flaring, venting, and fugitive emissions of gas are also a potential source of air emissions. Gas flaring and venting can occur in both oil and gas recovery processes when underground gas rises to the surface and is not captured as part of production. Emissions from flaring typically include carbon monoxide, nitrogen oxides, benzene, formaldehyde and xylene, but levels of these smog-forming compounds are seldom measured directly.[57]

Fugitive emissions can occur at every stage of extraction and production, often leading to high volumes of gas being released into the air. Methane emissions from oil and gas production are as much as 270 percent greater than previously estimated by calculation.[58] Recent studies show that emissions from pneumatic valves (which control routine operations at the well pad by venting methane during normal operation) and fugitive emissions are higher than EPA estimates.[59]

Evaporation from pits can also contribute to air pollution. Pits that store drilling waste, produced water, and other waste fluid may be exposed to the open air. Chemicals mixed with the wastewater—including the additives used to make fracking fluids, as well as volatile hydrocarbons, such as benzene and toluene, brought to the surface with the waste—can escape into the air through evaporation. Some pits are equipped with pumps that spray effluents into the air to hasten the evaporation process. For example, evaporation from fracking waste pits in western Colorado was found to have added tons of toxic chemicals to the air, increasing air pollution in Utah.[60] In Texas, toxic air emissions from fracking waste pits are unmonitored and unregulated.[61] In California, unlined disposal pits for drilling and fracking waste are documented sources of contamination.[62] Even where waste fluid is stored in so-called "closed loop" storage tanks, fugitive emissions can escape from tanks.

As mentioned above, increased truck traffic will lead to more air emissions. Trucks capable of transporting large volumes of chemicals and waste fluid typically use large engines that run on diesel fuel. Air pollutants from truck engines will be emitted not only at the well site, but also along truck routes to and from the site.

The EA must provide an adequate analysis and disclosure of the effects the lease sale could have on air quality, including the impacts that would result from fracking. The EA cannot postpone the discussion of air pollution impacts until site-specific plans are proposed. Because BLM must analyze impacts at "the earliest practicable time," and no benefit would be gained from postponing the analysis, BLM must discuss these cumulative impacts before the lease sale.

C. Impact of Increased Air Pollution.

[57] Physicians for Social Responsibility and Concerned Health Professionals of NY, Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking, Fourth Edition, November 17, 2016 ("PSR 2016").

[58] Miller, Scot et al., Anthropogenic emissions of methane in the United States, 110 PNAS 50 (2013).

[59] Allen, David et al., Measurements of Methane Emissions at Natural Gas Production Sites in The United States, 110 PNAS 17768 (2013) ("Allen 2013"); Harriss, Robert et al., Using Multi-Scale Measurements to Improve Methane Emission Estimates from Oil and Gas Operations in the Barnett Shale Region, Texas, 49 Environ. Sci. Technol. 7524 (2015).

[60] Maffy, Brian, Utah grapples with toxic water from oil and gas industry, The Salt Lake Tribune, August 28, 2014; The company responsible for the waste pits was found to have operated without a permit, underreported emissions and provided erroneous data to regulators.

[61] Center for Public Integrity, Open Pits Offer Cheap Disposal for Fracking Sludge But Health Worries Mount, October 2, 2014.

[62] Stringfellow, William T. et al., Ch 2: Impacts of Well Stimulation on Water Resources, An Independent Assessment of Well Stimulation in California, 2 California Council on Science and Technology (2015) ("CCST 2015") at 110-113.

The potential harms resulting from increased exposure to the dangerous air pollutants from unconventional oil and gas development are serious and wide-ranging. A growing body of scientific research has documented adverse public health impacts from unconventional oil and gas development, including studies showing air pollutants at levels associated with reproductive and developmental harms and the increased risk of morbidity and mortality.[63] A comprehensive review of the risks and harms of fracking to public health came to several key findings related to air pollution: (1) "drilling and fracking emissions contribute to toxic air pollution and smog (ground-level ozone) at levels known to have health impacts," (2)"public health problems associated with drilling and fracking, including reproductive impacts and occupational health and safety problems, are increasingly well documented"; and (3)"fracking infrastructure poses serious potential exposure risks to those living near it."

Air toxics and hazardous air pollutants, by definition, can result in harm to human health and safety. Understanding the full extent of the health effects of exposure is still far from being complete, but already there are numerous studies that have found these chemicals to have serious health consequences for humans exposed to even minimal amounts. The negative effects of criteria pollutants are well documented and are summarized by the U.S. EPA's website:

> *Nitrogen oxides* (NOx) react with ammonia, moisture, and other compounds to form small particles. These small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and can aggravate existing heart disease, leading to increased hospital admissions and premature death. NO_x and volatile organic compounds react in the presence of heat and sunlight to form ozone.
>
> *Particulate matter* (PM) - especially fine particles - contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including: premature death in people with heart or lung disease, increased mortality, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.[64]
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> *Sulfur Dioxide* (SO_2) – has been shown to cause an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms.[65] Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics.[66]
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> *Carbon Monoxide* (CO) can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues. At extremely high levels, CO can cause death.[67] Exposure to CO can reduce the oxygen-carrying capacity of the blood. People with several types of heart disease already have a reduced capacity for pumping oxygenated blood to

[63] Hays, Jake & Seth B.C. Shonkoff , Towards an Understanding of the Environmental and Public Health Impacts of Unconventional Natural Gas Development: A Categorical Assessment of the Peer-Reviewed Scientific Literature, 11 PLoS ONE e0154164 (2016); Shonkoff 2014; Webb, Ellen et al., Developmental and reproductive effects of chemicals associated with unconventional oil and natural gas operations, 29 Rev Environ Health 307 (2014); McKenzie 2012; Clean Air Task Force, Fossil Fumes: A Public Health Analysis of Toxic Air Pollution From the Oil and Gas Industry (June 2016).

[64] U.S. Environmental Protection Agency, Particulate Matter, (PM) (accessed July 30, 2015); Ostro, Bart et al., Long-term Exposure to Constituents of Fine Particulate Air Pollution and Mortality: Results from the California Teachers Study, 118 Environmental Health Perspectives 3 (2010)

[65] U.S. Environmental Protection Agency, Sulfur Dioxide (accessed July 29, 2015).

[66] *Id.*

[67] U.S. Environmental Protection Agency, Carbon Monoxide (accessed July 29, 2015).

> the heart, which can cause them to experience myocardial ischemia (reduced oxygen to the heart), often accompanied by chest pain (angina), when exercising or under increased stress.[68] For these people, short-term CO exposure further affects their body's already compromised ability to respond to the increased oxygen demands of exercise or exertion.[69]
>
> *Ozone* (O_3) can trigger or worsen asthma and other respiratory ailments.[70] Ground level ozone can have harmful effects on sensitive vegetation and ecosystems. Ozone may also lead to loss of species diversity and changes to habitat quality, water cycles, and nutrient cycles.

The range of illnesses that can result from the wide array of air pollutants from fracking were summarized in a study by Dr. Theo Colburn, which charts which chemicals have been shown to be linked to certain illnesses.[71] This study analyzed air samples taken during drilling operations near natural gas wells and residential areas in Garfield County, and detected 57 chemicals between July 2010 and October 2011, including 44 with reported health effects.[72] For example:

> Thirty-five chemicals were found to affect the brain/nervous system, 33 the liver/metabolism, and 30 the endocrine system, which includes reproductive and developmental effects. The categories with the next highest numbers of effects were the immune system (28), cardiovascular/blood (27), and the sensory and respiratory systems (25 each). Eight chemicals had health effects in all 12 categories. There were also several chemicals for which no health effect data could be found.[73]

The study found extremely high levels of methylene chloride, which may be used as cleaning solvents to remove waxy paraffin that is commonly deposited by raw natural gas in the region. These deposits solidify at ambient temperatures and build up on equipment.[74] While none of the detected chemicals exceeded governmental safety thresholds of exposure, the study noted that such thresholds are typically based on "exposure of a grown man encountering relatively high concentrations of a chemical over a brief time period, for example, during occupational exposure."[75] Consequently, such thresholds may not apply to individuals experiencing "chronic, sporadic, low-level exposure," including sensitive populations such as children, the elderly and pregnant women.[76] For example, the study detected polycyclic aromatic hydrocarbon (PAH) levels that could be of "clinical significance," as recent studies have linked low levels of exposure to lower mental development in children who were prenatally exposed.[77] In addition, government safety standards do not take into account "the kinds of effects found from low-level exposure to endocrine disrupting chemicals…, which can be particularly harmful during prenatal development and childhood.[78]

Adverse health impacts documented among residents living near drilling and fracking operations include reproductive harms, increased asthma attacks, increased rates of hospitalization, ambulance runs, emergency room visits, self-reported respiratory problems and rashes, motor vehicle fatalities, trauma, and drug abuse. A recent review concluded:

> By several measures, evidence for fracking-related health problems is emerging across the United States. In Pennsylvania, as the number of gas wells increase in a community, so do rates of

[68] *Id.*
[69] *Id.*
[70] U.S. Environmental Protection Agency, Ground Level Ozone (accessed July 29, 2015).
[71] Colborn 2011; Colborn 2012; *see* note 120 & accompanying text below.
[72] Colborn 2012 at pp. 21-22 (pages refer to page numbers in attached manuscript and not journal pages).
[73] Colborn 2012 at 11.
[74] *Id*. at 10.
[75] *Id*. at 11-12.
[76] *Id*. at. 12.
[77] *Id*. at 10-11.
[78] *Id*. at 12.

> hospitalization. Drilling and fracking operations are correlated with elevated motor vehicle fatalities (Texas), asthma (Pennsylvania), self-reported skin and respiratory problems (southwestern Pennsylvania), ambulance runs and emergency room visits (North Dakota), infant deaths (Utah), birth defects (Colorado), high risk pregnancies (Pennsylvania), premature birth (Pennsylvania), and low birthweight (multiple states). Benzene levels in ambient air surrounding drilling and fracking operations are sufficient to elevate risks for future cancers in both workers and nearby residents, according to studies. Animal studies show that two dozen chemicals commonly used in fracking operations are endocrine disruptors that can variously disrupt organ systems, lower sperm counts, and cause reproductive harm at levels to which people can be realistically exposed.[79]

A rigorous study by Johns Hopkins University, which examined 35,000 medical records of people with asthma in Pennsylvania, found that people who live near a higher number of, or larger, active gas wells were 1.5 to 4 times more likely to suffer from asthma attacks than those living farther away, with the closest groups having the highest risk.[80] Increased asthma risks occurred during all phases of well development. A recent Yale University study identified numerous fracking chemicals that are known, probable, or possible human carcinogens (20 air pollutants) and/or are linked to increased risk for leukemia and lymphoma (11 air pollutants), including benzene, 1,3-butadiene, cadmium, diesel exhaust, and polycyclic aromatic hydrocarbons.[81]

Numerous studies suggest that higher maternal exposure to fracking and drilling can increase the incidence of high-risk pregnancies, premature births, low-birthweight babies and birth defects. A study of 9,384 pregnant women in Pennsylvania found that women who live near active drilling and fracking sites had a 40 percent increased risk for having premature birth and a 30 percent increased risk for having high-risk pregnancies.[82] Another study found that pregnant women who had greater exposure to gas wells (measured in terms of proximity and density of wells) had a much higher risk of having low-birthweight babies; the researchers identified air pollution as the likely route of exposure.[83] In rural Colorado, mothers with greater exposure to natural gas wells were associated with a higher risk of having babies with congenital heart defects and possibly neural tube defects.[84]

Other studies have found that residents living closer to drilling and fracking operations had higher hospitalization rates[85] and reported more health symptoms, including upper respiratory problems and rashes.[86]

Workers suffer high risks from toxic exposure and accidents.[87] As summarized by a recent review:

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[79] PSR 2016 at 93.
[80] Rasmussen, Sara G. et al., Association Between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations, 176 JAMA Internal Medicine 1334 (2016).
[81] Elliot, Elise G. et al., A Systematic Evaluation of Chemicals in Hydraulic-Fracturing Fluids and Wastewater for Reproductive and Developmental Toxicity, 27 Journal of Exposure Science and Environmental Epidemiology 90 (2016).
[82] Casey, Joan A., Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania, USA, 27 Epidemiology 163 (2016).
[83] Stacy, Shaina L. et al., Perinatal Outcomes and Unconventional Natural Gas Operations in Southwest Pennsylvania, 10 PLoS ONE e0126425 (2015).
[84] McKenzie, Lisa M., Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado, 122 Environmental Health Perspectives 412 (2014).
[85] Jemielita, Thomas et al., Unconventional Gas and Oil Drilling Is Associated with Increased Hospital Utilization Rates, 10 PLoS ONE e0131093 (2015).
[86] Rabinowitz, Peter M. et al., Proximity to Natural Gas Wells and Reported Health Status: Results of a Household Survey in Washington County, Pennsylvania, 123 Environmental Health Perspectives 21 (2015).

> Drilling and fracking jobs are among the most dangerous jobs in the nation with a fatality rate that is five times the national average and shows no sign of abating. Occupational hazards include head injuries, traffic accidents, blunt trauma, burns, inhalation of hydrocarbon vapors, toxic chemical exposures, heat exhaustion, dehydration, and sleep deprivation. An investigation of occupational exposures found high levels of benzene in the urine of wellpad workers, especially those in close proximity to flowback fluid coming up from wells following fracturing activities. Exposure to silica dust, which is definitively linked to silicosis and lung cancer, was singled out by the National Institute for Occupational Safety and Health as a particular threat to workers in fracking operations where silica sand is used. At the same time, research shows that many gas field workers, despite these serious occupational hazards, are uninsured or underinsured and lack access to basic medical care.[88]

Methods of collecting and analyzing emissions data often underestimate health risks by failing to adequately measure the intensity, frequency, and duration of community exposure to toxic chemicals from fracking and drilling; failing to examine the effects of chemical mixtures; and failing to consider vulnerable populations.[89] Of high concern, numerous studies highlight that health assessments drilling and fracking emissions often fail to consider impact on vulnerable populations including environmental justice communities[90] and children.[91] For example, a recent analysis of oil and gas development in California found that 14 percent of the state's population (5.4 million people) live within a mile of at least one oil and gas well. More than a third of these people (1.8 million) also live in areas most burdened by environmental pollution.[92]

A nationwide study of stillbirth risk among 223,375 births during 2002-2008 linked chronic and acute exposure to ground level ozone during pregnancy to an increased risk of stillbirth.[93] Ozone exposure in the week prior to delivery was associated with a 13–22% increased stillbirth risk, while chronic exposure over the course of pregnancy increased risk by nearly 40%. The risk in some parts of Wyoming could be even greater in areas with high ozone levels, like the Upper Green River ozone non-attainment area.

A study of long-term exposure to ozone and fine particulate matter in a cohort of more than 60 million U.S. Medicare beneficiaries between 2000 and 2012 reported "significant evidence of adverse

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[87] Esswein, Eric J. et al., Occupational Exposures to Respirable Crystalline Silica During Hydraulic Fracturing, 10 Journal of Occupational and Environmental Hygiene 7:347 (2013); Esswein, Eric et al., Evaluation of Some Potential Chemical Exposure Risks during Flowback Operations in Unconventional Oil and Gas Extraction: Preliminary Results, 11 Journal of Occupational and Environmental Hygiene D174-D-184 (2013); Harrison, Robert J. et al., Sudden Deaths Among Oil and Gas Extraction Workers Resulting from Oxygen Deficiency and Inhalation of Hydrocarbon Gases and Vapors — United States, January 2010–March 2015. 65 MMWR Morb Mortal Weekly Rep 6 (2016); PSR 2016.

[88] PSR 2016 at 80

[89] Brown, David et al., Understanding Exposure From Natural Gas Drilling Puts Current Air Standards to the Test, 29 Reviews on Environmental Health 277 (2014).

[90] Natural Resources Defense Council, Drilling in California: Who's At Risk? (October 2014) ("NRDC 2014"); Clough, Emily & Derek Bell, Just Fracking: A Distributive Environmental Justice Analysis of Unconventional Gas Development in Pennsylvania, USA, 11 Environmental Research Letters 025001 (2016); McKenzie, Lisa M. et al., Population Size, Growth, and Environmental Justice Near Oil and Gas Wells in Colorado, 50 Environmental Science & Technology 11471 (2016).

[91] Webb, Ellen et al., Potential Hazards of Air Pollutant Emissions From Unconventional Oil and Natural Gas Operations on The Respiratory Health of Children And Infants, 31 Reviews on Environmental Health 225 (2016).

[92] NRDC 2014.

[93] Mendola, P. et al., Chronic and Acute Ozone Exposure in the Week Prior to Delivery is Associated with the Risk of Stillbirth, 14 Int. Journal of Environmental Research and Public Health 731 (2017).

effects related to exposure to PM2.5 and ozone at concentrations below current national standards."[94] Specifically, there was an important effect of ozone and PM2.5 on mortality, even for pollution exposures below National Ambient Air Quality Standards, which was strongest among self-identified racial minorities and people with low income. The effect was at least as great in individuals living in a rural environment as in those in cities. This study suggests that simply meeting current EPA standards will still result in a significant number of older individuals losing their lives due to ozone and particulate matter pollution in Wyoming.

The EA should incorporate a literature review of the harmful effects of each of these chemicals known to be used in fracking and other unconventional oil and gas extraction methods. Without knowing the effects of each chemical, the EA cannot accurately project the true impact of unconventional oil and gas extraction.

D. The EA Does Not Adequately Consider the Impact of Natural Gas and Oil Development on Ozone Formation in Wyoming Non-Attainment Regions.

In Wyoming, ground-level ozone concentrations that greatly exceed national ambient air quality standard levels regularly occur in the Upper Green River Basin during the winter, and have been linked to the extensive oil and gas operations in the region.[95] A 2009 study documented ground-level hourly ozone concentrations in the vicinity of the Jonah–Pinedale Anticline natural gas field that reached 140 ppb in winter.[96] Another study documented wintertime ozone hourly values above 150 ppb and maximum daily 8-hour averages over 120 ppb, linked to the high ozone precursors emitted by fracking and drilling operations.[97]

II. The EA Fails to Accurately Analyze the Leasing Decision's Impact on Climate Change.

Meaningful consideration of greenhouse gas emissions (GHGs) is clearly within the scope of required NEPA review. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin*., 538 F.3d 1172, 1217 (9th Cir. 2008). As the Ninth Circuit has held, in the context of fuel economy standard rules:

> The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct. Any given rule setting a CAFE standard might have an "individually minor" effect on the environment, but these rules are "collectively significant actions taking place over a period of time" *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin*., 538 F.3d 1172, 1216 (9th Cir. 2008)(quoting 40 C.F.R. § 1508.7).

The courts have ruled that federal agencies consider indirect GHG emissions resulting from agency policy, regulatory, and leasing decisions. For example, agencies cannot ignore the indirect air quality and climate change impact of decisions that would open up access to coal reserves. *See Mid States Coal. For Progress v. Surface Transp. Bd*., 345 F.3d 520, 532, 550 (8th Cir. 2003); *High Country Conservation Advocates v. U.S. Forest Serv*., 52 F.Supp. 3d 1174, 1197-98 (D.Colo. 2014).

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[94] Di, Q. et al., Air Pollution and Mortality in the Medicare Population, 376 New England Journal of Medicine 26:2513–2522, June 29, 2017.

[95] Wyoming Department of Health, Associations of Short-Term Exposure to Ozone and Respiratory Outpatient Clinic Visits — Sublette County, Wyoming, 2008–2011 (March 1, 2013).

[96] Schnell, Russell C. et al., Rapid Photochemical Production of Ozone at High Concentrations in a Rural Site During Winter, 2 Nature Geoscience 120 (2009).

[97] Oltmans, Samuel et al., Anatomy of wintertime ozone associated with oil and natural gas extraction activity in Wyoming and Utah, 2 Elementa: Science of the Anthropocene 000024, doi: 10.12952/journal.elementa.000024 (2014).

The EA fails to fully and accurately analyze the impacts of increased oil and gas development on greenhouse gas (GHG) emissions and climate change based on this particular Wyoming High Desert lease parcel sale. While we commend BLM's attempt at quantifying potential downstream GHG emissions based on a Reasonably Foreseeable Development Scenario for this lease sale, the assumptions and methodology of this analysis leave much to be desired.[98]

The EA's analyses of GHG emissions that would result from the proposed lease sale and the associated climate change impacts are inadequate in several key respects: (1) the EA fails to accurately report the direct greenhouse gas emissions that would result from the Proposed Lease Sale, leading to a vast underestimate; (2) the EA vastly underestimates the indirect greenhouse gas emissions that would result from the Proposed Lease Sale; (3) the EA misrepresents the global carbon budget for staying below 2°C of warming; (4) the EA fails to use the correct global warming potential for methane during 20-year and 100-year time periods; (5) the cumulative direct and indirect emissions from the Proposed Lease Sale should be put in the context of the U.S. carbon budget for staying well below 2°C: based on the EA's incomplete emissions estimates, the emissions resulting from the Lease Sale would consume more than ~0.62 percent of the remaining U.S. carbon budget; and (6) the climate change analysis should draw upon the 2017 National Climate Assessment, as detailed below.

First, the EA fails to accurately report the direct greenhouse gas emissions that would result from the Proposed Lease Sale, leading to a large underestimate. The EA estimates direct emissions from well development for only one year, 2020.[99] However, emissions from well development, defined as "all emissions generated from construction through the production of the wells,"[100] will occur not just for one year, but during the entire time period of well development, including emissions from construction, surface disturbance, and well stimulation. These emissions can be quite large: the EA's emissions estimate for well development in 2020 alone was 3.15 million mt CO_2e.[101]

The EA also does not appear to account for the substantial GHG emissions that would be emitted during the production phase. Production emissions from well operations and maintenance include emissions from EOR and secondary recovery techniques, vents, and fugitive emissions. As stated by the EA itself, fugitive methane emissions that escape from wells, oil storage, and processing equipment are a "major source of global CH_4 emissions."[102] The EA must estimate and report the cumulative direct emissions from both development and production that would occur over the lifetime of the wells, and provide a clear tracking of the emissions sources and calculations.

Second, the EA fails to accurately report the indirect emissions that would result from the proposed lease sale. The EA estimates indirect emissions coming from only five years of production: 2016-2020.[103] However, the oil and gas wells that will be developed under the lease sale will produce for many decades, not just five years. Yet the indirect emissions from the combustion of oil and gas produced beyond the five-year period are not captured in the EA's analysis. The EA must estimate and

[98] EA at 109-112.
[99] EA at 110 ("Direct GHG emissions resulting from any future development of these parcels is within the projections identified in the GSG ARMPA FEIS and includes all emissions generated from construction through the production of the wells and are based on the year 2020 estimates. As explained above those represent peak emissions values as 2020 is estimated to be the peak period for well development.")
[100] EA at 110.
[101] EA at 110 ("[D]evelopment to the full RFD in the KFO would produce a total of 380,551 metric tonnes (mt) of CO2e; the PFO is projected to produce a total of 1,618,329 mt; and the RFO is projected to produce a total of 1,147,892 mt.").
[102] EA at 109.
[103] EA at 111 and Table 4-2. Indirect emissions estimates assume 100 percent combustion of produced oil and gas.

report the cumulative indirect emissions that would be produced from oil and gas production over the lifetime of the wells. The EA must also provide estimates of the downstream methane and N_2O emissions that would be produced from combustion of oil and gas resulting from the lease sale.

Despite these deficiencies, the EA's incomplete indirect emissions estimate is still enormous at 236 million mt CO_2 produced during a five-year period.[104] This is equivalent to the emissions of 58.5 coal-fired power plants operating for one year.[105] These emissions are clearly significant, as detailed below. The EA provides no analysis of the severity or significance of the reported greenhouse gas emissions. One widely used approach to evaluating the impact of GHG emissions is to estimate the costs of those emissions to society. The federal Interagency Working Group on the Social Cost of Carbon has developed estimates of the present value of the future costs of carbon dioxide, methane, and nitrous oxide emissions as a proxy for the magnitude and severity of those impacts. [106] These tools are easy to use by agencies, easy to understand by the public, and supported by years of peer-reviewed scientific and economic research. The EPA and other federal agencies have used these social cost protocols to estimate the effects of rulemakings on climate, and certain BLM field offices have used these tools in project level NEPA analysis. These protocols estimate the global financial cost of each additional ton of GHG pollution emitted to the atmosphere, taking into account factors such as diminished agricultural productivity, droughts, wildfires, increased intensity and duration of storms, ocean acidification, and sea-level rise.[107]

An agency must "consider every significant aspect of the environmental impact of a proposed action." *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council*, 462 U.S. 87, 107 (1983) (quotations and citation omitted). This includes the disclosure of direct, indirect, and cumulative impacts of its actions, including climate change impacts and emissions. 40 C.F.R. § 1508.25(c). The need to evaluate such impacts is bolstered by the fact that "[t]he harms associated with climate change are serious and well recognized," and environmental changes caused by climate change "have already inflicted significant harms" to many resources around the globe. *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007); *see also id*. at 525 (recognizing "the enormity of the potential consequences associated with manmade climate change."). Failing to perform such analysis undermines the agency's decision-making process and the assumptions made.

Third, the EA misrepresents the global carbon budget for staying below 2°C of warming. We appreciate that the EA acknowledges that there is a scientifically established global carbon budget representing the amount of carbon emissions that humans can emit while maintaining a likely chance of limiting global temperature rise below a particular target such as 1.5°C or 2°C. [108] However, the EA's estimate of the global carbon budget -- at 1 trillion tonnes of carbon for a likely chance of meeting a 2°C

[104] EA at Table 4-2. Indirect emissions from oil and gas produced during 2016-2020 are estimated as 29,284,678 mt CO_2 + 195,378,028 mt CO_2 + 11,623,466 mt CO_2 = 236,286,172 mt CO_2

[105] U.S. Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator (2017) *available at*, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.

[106] *See* Interagency Working Group on the Social Cost of Carbon, United States Government, Technical Support Document: Technical Update on the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866 (May 2013) at 2 (hereinafter 2013 TSD); Interagency Working Group on Social Cost of Greenhouse Gas, United States Government, Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016) (last visited October 30, 2016).

[107] U.S. Environmental Protection Agency, The Social Cost of Carbon (accessed May 18, 2016).

[108] EA at 78 ("The IPCC has identified a target worldwide 'carbon budget' to estimate the amount of CO_2 the world can emit while still having a likely chance of limiting global temperature rise to 2°C above pre-industrial levels.")

target[109] -- fails to provide the essential context that much of this carbon budget has already been expended, and the remaining carbon budget is much smaller, estimated at 275 billion tonnes of carbon from 2011 onward.

According to the IPCC Fifth Assessment (AR5), total cumulative anthropogenic emissions of CO_2 must remain below about 1,000 $GtCO_2$ (equal to 275 GtC) from 2011 onward for a 66 percent probability of limiting warming to 2°C above pre-industrial levels.[110] Specifically, the AR5 states that cumulative CO_2 emissions from all anthropogenic sources must stay below 1 trillion tons of carbon or 1000 GtC (equal to 3670 $GtCO_2$) from 1861-1880 onward for a >66 percent probability of limiting warming to less than 2°C.[111] The AR5 goes on to state that 1000 GtC is reduced to about 790 GtC (2900 $GtCO_2$) when accounting for non-CO_2 forcings. Furthermore, an amount of 515 GtC (1890 $GtCO_2$) was already emitted as of 2011. This leaves a carbon budget of 275 GtC or 1010 $GtCO_2$ from 2011 onward (i.e., 790 GtC minus 515 GtC leaves 275 GtC which equates to 1009 $GtCO_2$).

Given that global CO_2 emissions in 2015 alone totaled 9.8 GtC (36 $GtCO_2$),[112] this carbon budget is being rapidly consumed. The 275 GtC (1010 GtCO2) carbon budget from 2011 onward has been reduced to 232 GtC (850 $GtCO_2$) from 2015 onward.[113]

Fourth, the EA must use the correct global warming potential (GWP) for methane over policy-relevant 20-year and 100-year time periods. The EA states that the global warming potential for methane is 28-36 over a 100 year period.[114] However, the 2013 IPCC Fifth Assessment Report clearly establishes a GWP for fossil fuel sources of methane of 36 (not 28) over a 100-year time period, and 87 over a 20-year time period.[115] That means that over a 20-year period, methane is 87 times stronger in trapping heat than CO_2. Accurate representation of methane's warming influence is critical because the climate system responds more quickly to methane, with its shorter residence time in the atmosphere, than to CO_2. This means that aggressive mitigation of methane emissions is essential if the near-term pace of climate change is to be slowed. A slowdown is critical to increase the likelihood of avoiding climatic tipping points and to moderate the intensification of current climate impacts.

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[109] EA at 78 ("The IPCC has identified a target worldwide 'carbon budget' to estimate the amount of CO_2 the world can emit while still having a likely chance of limiting global temperature rise to 2°C above pre-industrial levels. The international community estimates this budget to be 1 trillion tonnes of carbon (IPCC, 2014).").

[110] Intergovernmental Panel on Climate Change, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F. et al. (eds.)], Cambridge University Press (2013) at 27; Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], IPCC, Geneva, Switzerland, 151 pp. (2014) at 63-64 & Table 2.2.

[111] IPCC 2013 at 27 ("Limiting the warming caused by anthropogenic CO_2 emissions alone with a probability of >33%, >50%, and >66% to less than 2°C since the period 1861–1880, will require cumulative CO_2 emissions from all anthropogenic sources to stay between 0 and about 1570 GtC (5760 $GtCO_2$), 0 and about 1210 GtC (4440 $GtCO_2$), and 0 and about 1000 GtC (3670 $GtCO_2$) since that period, respectively. These upper amounts are reduced to about 900 GtC (3300 $GtCO_2$), 820 GtC (3010 $GtCO_2$), and 790 GtC (2900 $GtCO_2$), respectively, when accounting for non-CO_2 forcings as in RCP2.6. An amount of 515 [445 to 585] GtC (1890 [1630 to 2150] $GtCO_2$), was already emitted by 2011.").

[112] *See* Le Quéré, Corrine et al., Global Carbon Budget 2016, 8 Earth System Science Data 605 (2016).

[113] Rogelj, Joeri et al., Differences between carbon budget estimates unraveled, 6 Nature Climate Change 245 (2016) at Table 2.

[114] EA at 79 ("Methane (CH4) is estimated to have a GWP of 28-36 times that of CO2 over 100 years.").

[115] Myhre, G. et al., 2013: Anthropogenic and Natural Radiative Forcing. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Stocker, T.F. et al. (eds.)], Cambridge University Press (2013) at Table 8.7.

Fifth, the cumulative direct and indirect emissions from the proposed lease sale should be put in the context of the global and U.S. carbon budgets. The more than 236 million metric tons CO_2 that would result from the lease sale is significant in the scope of national, state, and local level commitments to implementing rapid GHG emissions reductions. As detailed below, the estimated downstream CO_2 emissions that would result from the lease sale comprise a measurable ~0.62 percent of the remaining U.S. carbon budget for staying well below 2°C. At a time when the U.S. must rapidly ratchet down GHG emissions to avoid the worst dangers of climate change, the BLM should not be committing to new fossil fuel development and infrastructure on our public lands that locks in carbon intensive oil production for years into the future.

A robust body of scientific research has established that most fossil fuels must be kept in the ground to avoid the worst dangers of climate change. Human-caused climate change is already causing widespread damage from intensifying global food and water insecurity, the increasing frequency of heat waves and other extreme weather events, flooding of coastal regions by sea level rise and increasing storm surge, the rapid loss of Arctic sea ice and Antarctic ice shelves, increasing species extinction risk, and the worldwide collapse of coral reefs.[116] The Third National Climate Assessment makes clear that "reduc[ing] the risks of some of the worst impacts of climate change" will require "aggressive and sustained greenhouse gas emission reductions" over the course of this century.[117]

The United States has committed to the climate change target of holding the long-term global average temperature "to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels"[118] under the Paris Agreement.[119] The United States signed the Paris Agreement on April 22, 2016 as a legally binding instrument through executive agreement,[120] and the treaty entered into force on November 4, 2016. The Paris Agreement codifies the international consensus that climate change is an "urgent threat" of global concern.[121] The Agreement also requires a "well below 2°C" climate target because 2°C of warming is no longer considered a safe guardrail for avoiding catastrophic climate impacts and runaway climate change.[122]

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[116] Melillo, Jerry M., Climate Change Impacts in the United States: The Third National Climate Assessment, Terese (T.C.) Richmond and Gary W. Yohe, Eds., U.S. Global Change Research Program, (2014); U.S. Global Change Research Program, 2017: Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J. et al. (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp. (2017).
[117] Melillo, Jerry M., Climate Change Impacts in the United States: The Third National Climate Assessment, Terese (T.C.) Richmond and Gary W. Yohe, Eds., U.S. Global Change Research Program, (2014) at 13, 14, and 649.
[118] United Nations Framework Convention on Climate Change, Conference of the Parties, Nov. 30-Dec. 11, 2015, Adoption of the Paris Agreement Art. 2, U.N. Doc. FCCC/CP/2015/L.9 (December 12, 2015) ("Paris Agreement").
[119] On December 12, 2015, 197 nation-state and supra-national organization parties meeting in Paris at the 2015 United Nations Framework Convention on Climate Change Conference of the Parties consented to the Paris Agreement committing its parties to take action so as to avoid dangerous climate change.
[120] United Nations Treaty Collection, Chapter XXVII, 7.d Paris Agreement, List of Signatories; U.S. Department of State, Background Briefing on the Paris Climate Agreement (December 12, 2015). Although not every provision in the Paris Agreement is legally binding or enforceable, the U.S. and all parties are committed to perform the treaty commitments in good faith under the international legal principle of *pacta sunt servanda* ("agreements must be kept"); Vienna Convention on the Law of Treaties, Article 26.
[121] *See* Paris Agreement, at Recitals.
[122] *See* the comprehensive scientific review under the United Nations Framework Convention on Climate Change (UNFCCC) of the global impacts of 1.5°C versus 2°C warming: U.N. Subsidiary Body for Scientific and Technological Advice, Report on the Structured Expert Dialogue on the 2013-2015 review, FCCC/SB/2015/1NF.1 (May 4,2015); *See also* Schleussner, Carl-Friedrich et al., Differential climate impacts for policy-relevant limits to global warming: the case of 1.5°C and 2°C, 7 Earth Systems Dynamics 327 (2016); Anderson, Kevin and Alice Bows, Beyond 'dangerous' climate change: emission scenarios for a new world, 369 Philosophical Transactions of the Royal Society 20 (2011).

Immediate and aggressive greenhouse gas emissions reductions are necessary to keep warming well below 2°C rise above pre-industrial levels. The IPCC Fifth Assessment Report and other expert assessments have established global carbon budgets, or the total amount of carbon that can be burned while maintaining some probability of staying below a given temperature target. According to the IPCC, total cumulative anthropogenic emissions of CO_2 must remain below about 1,000 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 2°C above pre-industrial levels, and to 400 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 1.5°C.[123] These carbon budgets have been reduced to 850 $GtCO_2$ and 240 $GtCO_2$, respectively, from 2015 onward.[124] As discussed above, the EA acknowledges there are scientifically established global carbon budget for limiting global temperature rise to specific temperature targets.[125]

Published scientific studies have estimated the United States' portion of the global carbon budget by allocating the remaining global budget across countries based on factors including equity and economics. Estimates of the U.S. carbon budget vary depending on the temperature target used by the study (1.5°C versus 2°C), the likelihood of meeting the temperature target (50 or 66 percent probability), the equity principles used to apportion the global budget among countries, and whether a cost-optimal model was employed. The U.S. carbon budget for limiting temperature rise to well below 2°C has been estimated at 38 $GtCO_2$, while the estimated budget for limiting temperature rise to 2°C ranges from 34 $GtCO_2$ to 158 $GtCO_2$.

Du Pont et al. (2017) averaged across five IPCC-AR5 sharing principles (e.g. capability, equal per capita, greenhouse development rights, equal cumulative per capita, and constant emissions ratio) to estimate the U.S. carbon budget through 2100 based on a cost-optimal model.[126] Du Pont et al. (2017) estimated the U.S. carbon budget at 57 $GtCO_2eq$ (equal to ~ 38 $GtCO_2$)[127] for a 50 percent chance of returning global average temperature rise to 1.5°C by 2100, which is the only target among the studies that is consistent with the well below 2°C temperature commitment of the Paris Agreement. The U.S. carbon budget for a 66 percent probability of keeping warming below 2°C was estimated at 104 $GtCO_2eq$ (equal to ~ 69 $GtCO_2$).[128]

For a 66 percent probability of keeping warming below 2°C, Peters et al. (2015) estimated the U.S. carbon budget at 34 $GtCO_2$ based on an equity approach for allocating the global carbon budget, and 123 $GtCO_2$ under an inertia approach.[129] The "inertia" approach bases sharing on countries' current emissions, while the "equity" approach bases sharing on population size and provides for equal per-capita emissions across countries. Similarly using a 66 percent probability of keeping warming below 2°C,

[123] Intergovernmental Panel on Climate Change, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F. et al. (eds.), Cambridge University Press (2013) at 27; Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], IPCC, Geneva, Switzerland, 151 pp. (2014) at 63-64 & Table 2.2.

[124] Rogelj, Joeri et al., Differences between carbon budget estimates unraveled, 6 Nature Climate Change 245 (2016) at Table 2.

[125] EA at 78.

[126] Du Pont, Yann Robiou et al., Equitable mitigation to achieve the Paris Agreement goals, 7 Nature Climate Change 38 (2017).

[127] *See* Meinshausen, Malte et al., Greenhouse gas emission targets for limiting global warming to 2 degrees Celsius, 458 Nature 1158 (2009). We used a conversion factor of 1 $GtCO_2$ = 1.5 $GtCO_2eq$ based on Table 1 in Meinshausen et al. 2009.

[128] *Id.* 1 $GtCO_2$ = 1.5 $GtCO_2eq$ based on Table 1 in Meinshausen et al. 2009.

[129] Peters, Glen P. et al., Measuring a fair and ambitious climate agreement using cumulative emissions, 10 Environmental Research Letters 105004 (2015).

Gignac et al. (2015) estimated the U.S. carbon budget at 78 to 97 $GtCO_2$, based on a contraction and convergence framework, in which all countries adjust their emissions over time to achieve equal per-capita emissions.[130] Although the contraction and convergence framework corrects current emissions inequities among countries over a specified time frame, it does not account for inequities stemming from historical emissions differences. When accounting for historical responsibility, Gignac et al. (2015) estimated that the United States has an additional cumulative carbon debt of 100 $GtCO_2$ as of 2013. Using a non-precautionary 50 percent probability of limiting global warming to 2°C, Raupach et al. (2014) estimated the U.S. carbon budget at 158 $GtCO_2$ based on a "blended" approach of sharing principles that averages the "inertia" and "equity" approaches.[131] Of that 158 $GtCO_2$ budget, 91 $GtCO_2$ was categorized as "committed" emissions from existing CO_2-emitting infrastructure that will continue for infrastructure lifetimes without early retirement.[132] Under any scenario, the remaining U.S. carbon budget consistent with limiting global average temperature rise to 1.5°C or 2°C is extremely small and is rapidly being consumed.

In the context of this lease sale, the more than 236 million metric tons of CO_2 that would be emitted comprises ~0.62 percent of the remaining U.S. carbon budget of 38 $GtCO_2$ for a 50 percent chance of returning global average temperature rise to 1.5°C by 2100. This is measurable and significant.

Furthermore, a large body of scientific research has established that the vast majority of global and U.S. fossil fuels must stay in the ground in order to hold temperature rise to well below 2°C.[133] Studies estimate that 68 to 80 percent of global fossil fuel reserves must not be extracted and burned to limit temperature rise to 2°C based on a 1,000 $GtCO_2$ carbon budget.[134] For a 50 percent chance of limiting temperature rise to 1.5°C, 85 percent of known fossil fuel reserves must stay in the ground.[135] Effectively, fossil fuel emissions must be phased out globally within the next few decades.[136]

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[130] Gignac, Renaud and H. Damon Matthews, Allocating a 2C cumulative carbon budget to countries, 10 Environmental Research Letters 075004 (2015). In a contraction and convergence approach, national emissions are allowed to increase or decrease for some period of time until they converge to a point of equal per capita emissions across all regions at a given year, at which point all countries are entitled to the same annual per capita emissions.

[131] Raupach, Michael et al., Sharing a quota on cumulative carbon emissions, 4 Nature Climate Change 873 (2014) at Supplementary Figure 7.

[132] *Id.*

[133] The IPCC estimates that global fossil fuel reserves exceed the remaining 275 GtC carbon budget (from 2011 onward) for staying below 2°C by 4 to 7 times, while fossil fuel resources exceed the carbon budget for 2°C by 31 to 50 times. *See* Bruckner, Thomas et al., 2014: Energy Systems. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press (2014) at Table 7.2.

[134] To limit temperature rise to 2°C based on a 1,000 $GtCO_2$ carbon budget from 2011 onward, studies indicate variously that 80 percent (Carbon Tracker Initiative 2013), 76 percent (Raupach et al. 2014), and 68 percent (Oil Change International 2016) of global fossil fuel reserves must stay in the ground. *See* Carbon Tracker Initiative, Unburnable Carbon – Are the world's financial markets carrying a carbon bubble? (2013); Raupach et al. 2014; Oil Change International, The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production (September 2016).

[135] Oil Change International 2016 at 6.

[136] Rogelj et al. (2015) estimated that a reasonable likelihood of limiting warming to 1.5° or 2°C requires global CO_2 emissions to be phased out by mid-century and likely as early as 2040-2045. Rogelj, Joeri et al., Energy system transformations for limiting end-of-century warming to below 1.5°C, 5 Nature Climate Change 519 (2015). The United States must phase out fossil fuel CO_2 emissions even earlier: between 2025 and 2030 on average for a reasonable chance of staying below 1.5°C and between 2040 and 2045 on average for a reasonable chance of staying below 2°C. *See* Climate Action Tracker, USA (last updated Jan. 25, 2017) at Rating figure showing U.S. emissions versus year (last visited Nov. 13, 2017).

A 2016 global analysis found that potential carbon emissions from developed reserves in currently operating oil and gas fields and mines would lead to global temperature rise beyond 2°C.[137] Excluding coal, currently operating oil and gas fields alone would take the world beyond 1.5°C.[138] To stay well below 2°C, the clear implication is that no new fossil fuel extraction or transportation infrastructure should be built, and governments should grant no new permits for new fossil fuel extraction and infrastructure.[139] Moreover, some fields and mines, primarily in rich countries, must be closed before fully exploiting their resources. The analysis concludes that, because existing fossil fuel reserves considerably exceed both the 2°C and 1.5°C carbon budgets, "[i]t follows that exploration for new fossil fuel reserves is at best a waste of money and at worst very dangerous."[140]

According to a U.S.-focused analysis,[141] the United States alone has enough recoverable fossil fuels, split about evenly between federal and non-federal resources, that if extracted and burned, would exceed the global carbon budget for a 1.5°C limit, and would consume nearly the entire global budget for a 2°C limit.[142] Specifically, the analysis found:

> Potential greenhouse gas emissions of federal fossil fuels (leased and unleased) if developed would release up to 492 $GtCO_2e$, representing 46 percent to 50 percent of potential emissions from all remaining U.S. fossil fuels.

Of that amount, up to 450 $GtCO_2e$ have not yet been leased to private industry for extraction; Releasing those 450 $GtCO_2e$ (the equivalent annual pollution of more than 118,000 coal-fired power plants) would be greater than any proposed U.S. share of global carbon limits that would keep emissions well below 2°C.[143]Fracking has also opened up vast resources that otherwise would not be available, increasing the potential for future greenhouse gas emissions.

In sum, the long-lived GHG emissions and fossil fuel infrastructure that would result from this project will contribute to undermining climate commitments and increasing climate change impacts, at a time when there is urgent need to keep most fossil fuels in the ground.

Finally, the EA's climate change analysis should draw upon the 2017 National Climate Assessment's Climate Science Special Report.[144] Key points from this scientific report highlight the urgent need to reduce greenhouse gas emissions to avoid large and irreversible impacts:

- The magnitude of climate change beyond the next few decades will depend primarily on the amount of greenhouse gases (especially carbon dioxide) emitted globally. Without major reductions in emissions, the increase in annual average global temperature relative to preindustrial times could reach 9°F (5°C) or more by the end of this century. With significant

[137] Oil Change International (2016) at 5.
[138] *Id.* at 5.
[139] *Id.* at 5.
[140] *Id.* at 17.
[141] Ecoshift Consulting, et al., The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels (2015).
[142] *Id.* at 4.
[143] Raupach, Michael et al. (2014) at Supplementary Figure 7. For the United States, Raupach et al. (2014) provided a mid-range estimate of the U.S. carbon quota of 158 $GtCO_2$ for a 50 percent chance of staying below 2°C, using a "blended" scenario of sharing principles for allocating the global carbon budget among countries. This study estimated U.S. fossil fuel reserves at 716 $GtCO_2$, of which coal comprises the vast majority, indicating that most fossil fuel reserves in the U.S. must remain unburned to meet a well below 2°C carbon budget.
[144] U.S. Global Change Research Program, 2017: Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J. et al. (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp. (2017).

reductions in emissions, the increase in annual average global temperature could be limited to 3.6°F (2°C) or less.

- The global atmospheric carbon dioxide (CO2) concentration has now passed 400 parts per million (ppm), a level that last occurred about 3 million years ago, when both global average temperature and sea level were significantly higher than today. Continued growth in CO2 emissions over this century and beyond would lead to an atmospheric concentration not experienced in tens to hundreds of millions of years. There is broad consensus that the further and the faster the Earth system is pushed towards warming, the greater the risk of unanticipated changes and impacts, some of which are potentially large and irreversible.[145]

Inadequate analysis of climate change impacts also violates NEPA. NEPA requires "reasonable forecasting," which includes the consideration of "reasonably foreseeable future actions…even if they are not specific proposals" *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1079 (9th Cir. 2011) (citation omitted). That BLM cannot "accurately" calculate the total emissions expected from full development is not a rational basis for cutting off its analysis. "Because speculation is . . . implicit in NEPA," agencies may not "shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry." *Id.* Indeed, the EA for a recent lease sale in Utah undercuts BLM's assertion here that GHGs cannot be quantified at the leasing stage[146]. *See High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1196 (D. Colo. 2014) (decision to forgo calculating mine's reasonably foreseeable GHG emissions was arbitrary "in light of the agencies' apparent ability to perform such calculations").

The final CEQ *Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA review* is dispositive on the issue of federal agency review of greenhouse gas emissions as foreseeable direct and indirect effects of the proposed action. 81 Fed. Reg. 51,866 (Aug. 5, 2016). The CEQ guidance provides clear direction for BLM to conduct a lifecycle greenhouse gas analysis because the modeling and tools to conduct this type of analysis are readily available to the agency:

> If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action. Agencies should disclose the information and any assumptions used in the analysis and explain any uncertainties. To compare a project's estimated direct and indirect emissions with GHG emissions from the no-action alternative, agencies should draw on existing, timely, objective, and authoritative analyses, such as those by the Energy Information Administration, the Federal Energy Management Program, or Office of Fossil Energy of the Department of Energy. In the absence of such analyses, agencies should use other available information. 81 Fed. Reg. 51,866 at 16 (Aug. 5, 2016)(citations omitted).

CEQ's guidance even provides an example of where a lifecycle analysis is appropriate in a leasing context at footnote 42:

> The indirect effects of such an action that are reasonably foreseeable at the time would vary with the circumstances of the proposed action. For actions such as a Federal lease sale of coal for

[145] *Id.* at 11.

[146] U.S. Bureau of Land Management, Environmental Assessment for West Desert District, Fillmore Field Office, August 2015 Oil and Gas Lease Sale, pp. 57-58 (Dec. 2015); U.S. Bureau of Land Management, Greenhouse Gases Estimate (West Desert District Nov 2015 Lease Sale).

energy production, the impacts associated with the end-use of the fossil fuel being extracted would be the reasonably foreseeable combustion of that coal. *Id*.

Although the 2016 CEQ guidance has been "withdrawn for further consideration," 82 Fed. Reg. 16,576 (April 5, 2017), the underlying requirement to consider climate change impacts under NEPA, including indirect and cumulative combustion impacts foreseeably resulting from fossil fuels leasing decisions, has not changed. *See S. Fork Band*, 588 F.3d at 725; *Ctr. for Biological Diversity*, 538 F.3d at 1214-15; *Mid States Coalition for Progress*, 345 F.3d at 550; *WildEarth Guardians*, 104 F. Supp. 3d at 1230; *Dine Citizens Against Ruining Our Env't*, 82 F. Supp. 3d at 1201; *High Country Conservation Advocates*, 52 F. Supp. 3d at 1174.

As described above in the air quality context, the volume of potential oil and gas from these lease parcels is knowable and calculating the direct GHG emissions impact from development of these lease parcels is also quantifiable. Utilizing BLM's own potential volume data for the June 2018 Wyoming High Desert lease sale, the estimated oil volume of 65.349592 mmbbl represents lifecycle greenhouse gas emissions of up to 22,770,247.09 tons of CO2e and the estimated gas volume of 2,658.242168 bcf represents lifecycle greenhouse gas emissions of up to 198,042,688.64 tons of CO2e. Potential lifecycle greenhouse gas emissions for resultant oil and gas volumes can be generated using the Center's peer-reviewed carbon calculator and lifecycle greenhouse gas emissions model developed by EcoShift consulting.[147] This model is not novel in its development or methodology. Numerous greenhouse gas calculation tools exist to develop lifecycle analyses, particularly for fossil fuel extraction, operations, transport and end-user emissions.[148]

It is reasonably foreseeable, as opposed to speculative, that this lease sale will induce oil and natural gas production, transmission and ultimate end-user climate change impacts. The effects of this induced production must be considered in the EA, and in fact, necessitate a more robust review under an EIS. *See*, *e.g.*, *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1081-82 (9th Cir. 2011) (finding that NEPA review must consider induced coal production at mines, which was a reasonably foreseeable effect of a project to expand a railway line that would carry coal, especially where company proposing the railway line anticipated induced coal production in justifying its proposal); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549-50 (8th Cir. 2003) (environmental effects of increased coal consumption due to construction of a new rail line to reach coal mines was reasonably foreseeable and required evaluation under NEPA). The development of an area for lease and subsequent oil and gas production would certainly result in combustion of the extracted product, which the EA acknowledges.[149] As courts have held in similar contexts, combustion emissions resulting from opening up a new area to development are "reasonably foreseeable," and therefore a "proximate cause" of the leasing. *See Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549 (8th Cir. 2003) (holding that agency violated NEPA when it failed to disclose and analyze the future coal combustion impacts associated with the agency's approval of a railroad line that allowed access to coal deposits); *High Country Conserv'n Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1197 (D. Colo. 2014) (same with respect to GHG emissions resulting from approval of coal mining exploration project).

In both *Mid States Coalition* and *High Country*, the courts rejected the government's rationale that increased emissions from combustion of coal was not reasonably foreseeable because the same amount of coal would be burned without opening up the areas at issue to new coal mining. Both courts found this argument "illogical at best" and noted that "increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when

[147] *See* Ecoshift Consulting, The potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels, (2015).
[148] *See* Council on Environmental Quality, Revised draft guidance for greenhouse gas emissions and climate change impacts (2014).
[149] EA at 112.

compared with other potential fuel sources, such as nuclear power, solar power, or natural gas." See *High Country*, 52 F. Supp. 3d at 1197 (quoting *Mid States Coalition*, 345 F.3d at 549). "On similar grounds, the development of new wells over the proposed areas for lease will increase the supply of [oil and natural gas]. At some point this additional supply will impact the demand for [oil and gas] relative to other fuel sources, and [these minerals] that otherwise would have been left in the ground will be burned. This reasonably foreseeable effect must be analyzed, even if the precise extent of the effect is less certain." *Id. See also WildEarth Guardians v. United States Office of Surface Mining, Reclamation & Enf't*, 104 F. Supp. 3d 1208, 1229-30 (D. Colo. 2015) (coal combustion was indirect effect of agency's approval of mining plan modifications that "increased the area of federal land on which mining has occurred" and "led to an increase in the amount of federal coal available for combustion.")[150]

BLM suggests that accurate quantification of GHGs would occur when actual drilling is proposed.[151] But by delaying quantification until after a lease is issued, BLM may prejudice the consideration of alternatives or leasing stipulations that would avoid or reduce greenhouse gas emissions to an extent not otherwise available after leasing. BLM has long (but incorrectly) maintained that leasing stipulations can only be imposed with the issuance of the lease. Thereafter, purportedly, its authority to condition drilling is limited to "reasonable measures" or "conditions of approval" that may not be "[in]consistent with lease rights granted." 43 C.F.R. § 3101.1-2. Cost-prohibitive measures could therefore potentially be barred. Further, measures to "minimize" impacts may be imposed, but those may not necessarily avoid impacts altogether. *Id*. Waiting until the drilling stage could also be too little too late, as various other actions may occur between leasing and drilling, such as the execution of unit agreements, or construction of roads or pipelines, all of which may narrow mitigation options available at the drilling stage. *See William P. Maycock et al.*, 177 I.B.L.A. 1, 20-21 (Dec. Int. 2008) (holding that unit agreements limit drilling-stage alternatives).

The Leasing EA's failure to accurately quantify reasonably foreseeable GHG emissions that could result from new leasing within the Wyoming High Desert region—including lifecycle emissions from construction, operating fossil-fuel powered equipment during production, reclamation, transportation, processing and refining, and combustion of the extracted product—is unlawful and unsupported by evidence or reasoned analysis.

III. The EA Fails Disclose Basic Information, Acknowledge Scientific Information or Conform to Governing RMPs Regarding Conservation of Greater Sage-Grouse (all parcels)

The proposed leasing decision, consisting of 227,502 acres entirely within greater sage-grouse habitat,[152] including 44 parcels comprising 57,480 acres entirely within Priority Habitat Management Areas (PHMA), and another 30 parcels comprising 42,563 acres partially within PHMA,[153] violates NEPA and FLPMA in its treatment of sage-grouse conservation in four significant respects. First, the EA violates NEPA's "hard look" requirement and implementing regulations by failing to consider the cumulative effect of this and other recent, ongoing, and proposed leasing and development actions on

[150] *See also*, CEQ's Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 151, at 14 (Aug. 5, 2016)(For example, NEPA reviews for proposed resource extraction and development projects typically include the reasonably foreseeable effects of various phases in the process, such as clearing land for the project, building access roads, extraction, transport, refining, processing, using the resource, disassembly, disposal, and reclamation. Depending on the relationship between any of the phases, as well as the authority under which they may be carried out, agencies should use the analytical scope that best informs their decision making.).
[151] EA at 112.
[152] EA at 90 ("All subject parcels are located within what is assumed to be suitable GSG habitat.").
[153] EA at 2.

sage-grouse habitat and population in the Wyoming/Montana region and rangewide. Second, the EA fails to acknowledge or take into account new scientific information calling into doubt BLM's assertion that impacts to sage-grouse will be limited to those described in the 2015 Green River, Kemmerer, Pinedale, and Rawlins RMPs (EA at 117). Third, BLM's EA violates NEPA's requirement to consider a reasonable range of alternatives by failing to consider any alternative other than no action or the indiscriminate leasing of all proposed lands within both Priority and General sage-grouse habitat. Fourth, the EA violates FLPMA's requirement that BLM actions must conform to the governing Resource Management Plan, by violating the ARMPA's requirement to prioritize oil and gas leasing outside of both Priority and General sage-grouse habitat.

Wyoming supports 35-40% of the entire population of greater sage-grouse and is a source population for the more isolated grouse populations in Montana and the Dakotas.[154] Since 2007, there has been an increase in the number of known inactive leks statewide, while the number of active leks has remained constant. At the same time, there has been a 60% decrease in the average number of males counted per lek statewide, indicating an overall statewide population decline of 60% from 2007 to 2013. This is cause for extreme concern, especially given the fact that there have been many wet springs during this period with above-average forb and cover production, which should have resulted in increases in sage grouse population numbers. This inadequacy is confirmed by Copeland et al. (2013), who projected further statewide declines across Wyoming with the implementation of current conservation strategies.[155]

As the EA acknowledges, habitat loss, infrastructure, disturbance, noise, and other factors associated with oil and gas development resulting from leasing can have multiple adverse impacts on greater sage-grouse habitat use, survival, reproduction, and population persistence. The EA acknowledges

Following the BLM's sage-grouse plan amendment process, on October 2, 2015, the Fish and Wildlife Service found the Greater sage-grouse "not warranted" for listing under the ESA. The Service's not warranted finding relied upon the habitat protections set forth in the new plans, including restrictions on oil and gas development and mining, disturbance caps, lek buffers, required design features intended to mitigate impacts, and the net conservation benefit mitigation standard:

> The Federal Plans, Wyoming Plan, Montana Plan, and Oregon Plan provide adequate regulatory mechanisms to reduce the threats of human-caused habitat disturbance on the most important sage-grouse habitats (as discussed in detail in the Changes Since the 2010 Finding, above). The Federal Plans designate PHMAs, and the State Plans designate Core Areas, all of which correspond closely with the PACs identified in the COT Report and include important breeding and seasonal habitats for the species. The PHMAs and Core Areas are managed for sage-grouse habitat objectives, primarily by excluding or avoiding major new surface-disturbing activities that could cause habitat destruction (BLM and USFS 2015, entire). For example, in many important habitats, the Federal Plans require NSO for nonrenewable energy development, which results in no new oil and gas wells or

[154] *See* Upper Snake River Basin Sage---Grouse Conservation Plan. 2014 (draft), *available at* http://wgfd.wyo.gov/web2011/Departments/Wildlife/pdfs/SG_USRBASIN_DRAFT0005199.pdf.

[155] Copeland, Holly E**.,** et al., Measuring the effectiveness of conservation: a novel framework to quantify the benefits of sage-grouse conservation policy and easements in Wyoming, 8 PLoS ONE 6: e67261.doi:10.1371/journal.pone.0067261 (2013).

> associated infrastructure being constructed within PHMAs. For the few ongoing land uses that could continue to occur in PHMAs, such as limited wind development in certain areas and existing rights for nonrenewable energy or mining, the Federal, Wyoming, Montana, and Oregon Plans work together to limit the total amount of human-caused habitat disturbance on PHMAs and Core Areas to no more than 3 to 5 percent. To prevent indirect impacts to sage-grouse that could occur from land uses in areas outside of PHMAs and Core Areas, the Federal Plans, Wyoming Plan, Montana Plan, and Oregon Plan all require lek buffers so that breeding birds will not be disturbed by human activities. Lastly, the Federal Plans require any project that may adversely affect sage-grouse (in both PHMA and GHMA) to minimize impacts by implementing RDFs and mitigating to a net conservation benefit for sage-grouse. As a result of these measures, the Federal and three State Plans reduce the potential threat of habitat loss caused by human-caused disturbances on approximately 90 percent of breeding habitat across the species' range. These measures were effective immediately upon the implementation of the Federal Plans, the Wyoming Plan, the Montana Plan, and the Oregon Plan and will be in place for the next 20 to 30 years.

U.S. Fish and Wildlife Service, Not Warranted Finding, 80 Fed. Reg. 59858, 59934 (Oct. 2, 2015).

Despite the fact that highly sensitive sage-grouse habitat would be threatened by new leasing, the EA fails in four major respects to disclose or analyze indirect and cumulative impacts of leasing on greater sage-grouse. It fails to meaningfully inform the reader or the decision-maker of the extent of new leasing within Sagebrush Focal Areas and priority habitat management areas, both in this lease sale and cumulatively in lease sales since the finalization of the sage-grouse RMP amendments. Second, it tiers to and relies on RMP decisions for management of Wyoming greater sage-grouse habitat that fail to follow the best available science regarding measures necessary to ensure the survival and recovery of the species. Third, the proposed leasing action, violates FLPMA by failing to conform to a key management prescription of those plans – the obligation to "prioritize the leasing and development of fluid mineral resources outside GRSG habitat." Fourth, because the proposed leases are not in conformance with the 2015 RMP amendments and undermine significant assumptions of their accompanying FEISs (i.e., that new oil and gas development will be prioritized outside of greater sage-grouse habitat), the EA cannot tier to or rely on those EISs.

A. The EA Fails to Disclose Cumulative Impacts to Greater Sage-Grouse

NEPA requires BLM to evaluate the cumulative impacts of this lease sale "resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R § 1508.27(b)(7); *Kern v. Bureau of Land Management*, 282 F.3d 1062, 1075-77 (9th Cir. 2002). In order to satisfy this requirement of NEPA and its implementing regulations, prior to lease issuance BLM must consider the cumulative impact of all recent, ongoing, and currently-proposed actions which will affect hundreds of thousands of acres of sage-grouse priority and general habitat governed by the ARMPAs.

The proposed lease sale, , is particularly damaging to the future viability of greater sage-grouse because it would allow for new leasing of sage-grouse habitat both without site-specific analysis of

impacts, and without complying with the Wyoming Approved Resource Management Plan Amendments' mandate to prioritize leasing outside of both priority and general habitat. The EA's treatment of effects to sage-grouse habitat is limited to the following general and cursory statement:

> The vast majority of parcels located partially or entirely in PHMA are proximate or adjacent to existing production and occur in areas where BLM has determined that the oil and gas development potential ranges (within 2 miles of leases currently held by production), have low to very high, and several of the parcels have occupied leks within their boundaries potential for oil and gas development, and one has an active GSG lek within its boundary. The Sageouth Rawlins PHMA unit currently has more than 5% cumulative disturbance based on data provided by the University of WY collected under the DDCT process (dated October 28, 2016) while the Uinta and Greater South Pass,Fontenelle, Seedskadee and Greater Sage-grouse PHMA units are below 5% cumulative disturbance.
>
> Following a detailed review in consideration of the WO IM factors, forty-four (44) whole parcels are located in PHMA, thirty (30) parcels contain lands identified as both GHMA and PHMA, and eighty-nine (89) whole parcels are located in GHMA as identified in the ARMPA ROD. The parcels located entirely or partially in PHMA (please see Appendix A and Table 3-1), have moderate to very high potential for oil and gas development. These lands within the PHMA parcels may provide nesting, wintering, and/or breeding habitat for Greater Sage-Grouse GSG (see Table 3-1).[156]

The EA further fails completely to acknowledge or disclose the Wyoming BLM's ongoing pattern of large-scale leasing of greater sage-grouse habitat, including priority habitat management areas, since and in contravention of the adoption of the Wyoming sage-grouse RMP amendments. Based on review of BLM lease sale notices and accompanying leases sold or made available for noncompetitive sale in designated GRSG habitat in Wyoming since adoption of the ARMPAs include:

Date	PHMA (Acres)	GHMA (Acres)
November 2015	0	59,217
February (May) 2016	45,063	18,713
May 2016	17	21,837
August 2016	1,732	64,992
November 2016	7,164	19,898
February 2017	3,134	35,050
June 2017	1,702	18,934

[156] EA at 85.

September 2017	4,303	13,535
Totals	63,115	252,176

Additional currently-proposed sales within PHMA and/or GHMA include 187 out of 204 parcels proposed for BLM's Montana December 2017 sale, 26 parcels of PHMA and 24 of GHMA proposed for Wyoming's December 2017 sale, 98% of all parcels proposed for the March 2018 Wind River/Bighorn Basin District.

Thus, despite the BLM and Fish and Wildlife Service's assumptions in the ARMPA FEISs and Not Warranted Finding that the prioritization policy would minimize new oil and gas leasing within greater sage-grouse habitat, the practical result of the BLM's leasing policy has been to issue or make available 63,115 acres of PHMA and 252,176 acres of GHMA in Wyoming alone since adoption of the ARMPAs.

In order both to disclose the effects of the proposed action and to comply with the revised RMPs and their implementing memoranda, BLM must disclose the cumulative extent and effects of these leasing practices.

B. The EA Fails to Acknowledge New and Relevant Scientific Information

The scientific literature is clear that greater sage-grouse continues to experience habitat loss and fragmentation which are contributing to population decline. In the eastern portion of the species' range, including its core strongholds in Wyoming, habitat loss due to oil and gas development are a significant threat, which led to the BLM's adoption of the 2015 ARMPAs.

Greater sage-grouse are negatively impacted by activities associated with oil and gas development, including not only the construction and operation of well pads and associated drilling, gathering, processing, and transmission facilities, but also the ongoing human presence, noise and disturbance associated with production. Oil and gas infrastructure and activity can lead not only to direct mortality from collisions, contamination, and poaching, but, more significantly, to the abandonment of necessary habitats, including breeding grounds, winter habitat, and brood-rearing habitat. Sage-grouse ecosystems are slow and difficult to impossible to reclaim once sagebrush is removed.

Recent peer-reviewed scientific publications have reviewed Greater Sage-Grouse population response to oil and gas management measures in Wyoming, and re-confirmed lek attendance by male sage-grouse declines approximately 2.5% per year in response to oil and gas development, and that attendance declines as development increases, even where well pad density is limited.[157] In light of this information, BLM cannot continue to assume, against scientific evidence, that the management measures in the 2015 RMP amendments will be sufficient to stem sage-grouse population decline.

[157] Green, Adam et al., Investigating Impacts of Oil and Gas Development on Greater Sage-Grouse, Journal of Wildlife Management, doi: 10.1002/jwmg.21179 (2016).

Recent scientific study confirms the established finding that sage-grouse lek attendance is negatively related to oil and gas density, regardless of sagebrush cover and participation.[158] Green et al. examined greater sage-grouse lek attendance ,oil and gas well, and habitat and precipitation data from Wyoming over the period 1984 to 2008, and, consistent with numerous prior studies, that lek attendance declines are closely associated with the density of oil and gas development:

> Oil and gas development correlates well with sage-grouse population declines from 1984 to 2008 in Wyoming, which is supported by other findings (Doherty et al. 2010b, Harju et al. 2010, Hess and Beck 2012, Taylor et al. 2013, Gregory and Beck 2014). As with other studies, we also found support for 4-year lag effects of oil and gas development on lek attendance (Walker et al. 2007, Doherty et al. 010a, Harju et al. 2010, Gregory and Beck 2014). This result suggests that development likely affects recruitment into the breeding population rather than avoidance of wells by adult males or adult survival. Adult sage-grouse are highly philopatric to lek sites (Dalke et al. 1963, Wallestad and Schladweiler 1974, Emmons and Braun 1984, Dunn and Braun 1985, Connelly et al. 2011a), and males typically recruit to the breeding population in 2–3 years. We would expect a delayed response in lek attendance if development affects recruitment, either by reducing fecundity or avoidance of disturbance by nesting females, as adult males die and are not replaced by young males.

On average, lek attendance was stable when no oil and gas development was present within 6,400m. However, attendance declined as development increased. [159] Importantly, Green et al. confirmed that declines in sage-grouse populations may continue even within Wyoming's "core areas," where density of wells is limited to approximately one pad per square mile. Based on this new information, BLM cannot continue to forego site-specific analysis and rely on the unsubstantiated assumption that "areas containing the parcels addressed in this EA would be satisfactorily mitigated through the required stipulations." EA at 118.

C. BLM's Proposed Alternative Does Not Conform to the Amended Wyoming Resource Management Plans

Even under the BLM's own determinations, the proposed action is directly in conflict with a core provision of the 2015 sage-grouse RMP amendments. The Rocky Mountain Region RMPs—including the Rawlins RMP—are subject to the following measure for both priority and general habitat management areas:

> *Prioritization Objective*—In addition to allocations that limit disturbance in PHMAs and GHMAs, the ARMPs and ARMPAs prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs. This is to further limit future surface disturbance and encourage new development in areas that would not conflict with GRSG. This objective is intended to guide development to lower conflict areas and as such protect important habitat and reduce the time and cost associated with oil and gas leasing development by avoiding sensitive areas, reducing the complexity of environmental

[158] *Id.*
[159] Green et al. at 9.

review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation.[160]

The EA makes a cursory assertion that "As provided for in Washington Office Instruction Memorandum 2016-143, Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments -Oil & Gas Leasing and Development Sequential Prioritization, the BLM has reviewed the subject parcels for consistency. All subject parcels are located within what is assumed to be suitable GSG habitat. This policy clarifies that the intent of prioritization is to ensure consideration of the lands outside of GHMAs and PHMAs for leasing and development before considering lands within GHMAs and, thereafter, to ensure consideration of lands within GHMAs for leasing and development before considering any lands within PHMAs for leasing and development in an effort to focus future surface disturbance outside of the most important areas for Greater Sage-Grouse conservation consistent with the conservation objectives and provisions in the GRSG Plans." EA at 84. This statement fails to meet either the procedural or substantive requirements of the prioritization requirement.

The BLM is subject to clear direction in the RMP amendments that its greater sage-grouse RMP plans and conservation strategy rely not only on stipulations within designated habitats (stipulations acknowledged as insufficient, in Wyoming, to result in a net conservation gain for general habitat, *see* 2015 RMPA ROD at 1-30 to 1-31, but also on a larger strategy of prioritizing development outside of all sage-grouse habitats.

Instruction Memorandum 2016-143 provides guidance to agency officials on the prioritization of sage-grouse habitat when making oil and gas leasing decisions. *See* Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments – Oil and Gas Leasing and Development Sequential Prioritization, BLM Instruction Memorandum 2016-143 ("IM 2016-143").[161] The IM requires BLM to employ a two-step prioritization process. The first step, the "prioritization sequence," requires BLM to sort the leases by category (non-habitat, GHMA, and PHMA) and prioritize leasing first in non-habitat, then in GHMA, then in PHMA. *Id.* The second step, the "parcel-specific factors," requires BLM to prioritize individual parcels within each of these three categories (non-habitat, GHMA, and PHMA) according to the following prioritization factors:

- Parcels immediately adjacent or proximate to existing oil and gas leases and development operations or other land use development should be more appropriate for consideration before parcels that are not near existing operations. This is the most important factor to consider, as the objective is to minimize disturbance footprints and preserve the integrity of habitat for conservation.

[160] 2015 Rocky Mountain RMP ROD at 1-25.

[161] The Instruction Manual explains that its guidance "is intended to ensure *consideration* of the lands outside of GHMAs and PHMSs for leasing and development before *considering* any lands within PHMAs for leasing and development" and that lands outside of PHMAs and GHMAs "should be the first priority for leasing *in any given lease sale*." IM 2016-143 (emphasis added). Insofar as the IM demands only prioritized review and processing of nominations outside sage-grouse habitat, the IM suffers from the same deficiencies outlined above, and fails to ensure compliance with the Utah ARMPA.

- Parcels that are within existing Federal oil and gas units should be more appropriate for consideration than parcels not within existing Federal oil and gas units.

- Parcels in areas with higher potential for development (for example, considering the oil and gas potential maps developed by the BLM for the GRSG Plans) are more appropriate for consideration than parcels with lower potential for development. The Authorized Officer may conclude that an area has "higher potential" based on all pertinent information, and is not limited to the Reasonable Foreseeable Development (RFD) potential maps from Plans analysis.

- Parcels in areas of lower-value sage-grouse habitat or further away from important life-history habitat features (for example, distance from any active sage-grouse leks) are more appropriate for consideration than parcels in higher-value habitat or closer to important life-history habitat features (i.e. lek, nesting, winter range areas). At the time the leasing priority is determined, when leasing within GHMA or PHMA is considered, BLM should consider, first, areas determined to be non-sage-grouse habitat and then consider areas of lower value habitat.

- Parcels within areas having completed field-development Environmental Impact Statements or Master Leasing Plans that allow for adequate site-specific mitigation and are in conformance with the objectives and provisions in the GRSG Plans may be more appropriate for consideration than parcels that have not been evaluated by the BLM in this manner.

- Parcels within areas where law or regulation indicates that offering the lands for leasing is in the government's interest (such as in instances where there is drainage of Federal minerals, 43 CFR § 3162.2-2, or trespass drilling on unleased lands) will generally be considered more appropriate for leasing, but lease terms will include all appropriate conservation objectives and provisions from the GRSG Plans.

- As appropriate, use the BLM's Surface Disturbance Analysis and Reclamation Tracking Tool (SDARTT) to check EOI parcels in PHMA, to ensure that existing surface disturbance does not exceed the disturbance and density caps and that development of valid existing rights (Solid Minerals, ROW) for approved-but-not-yet-constructed surface disturbing activities would not exceed the caps.

Id. at "Factors to Consider While Evaluating EOIs in Each Category."

BLM asserts that it complied with IM 2016-143. *See* EA at 84. However, the EA provides absolutely no discussion of the parcel-specific factors or evidence that the agency applied the "prioritization sequence." This approach is inconsistent with the language of the IM 2016-143, which does not relieve BLM of the obligation to assess the site-specific factors simply because it has adequate resources to review and process all nominated parcels. It also breaks with its treatment of prioritization in other recent lease sale EAs. For example, in the Final EA for Wyoming BLM's August 2017 Lease Sale

in the Wind River/Bighorn Basin District, BLM expressly applied the parcel-specific factors and described how the factors informed its proposed action. *See* BLM-Wyoming August 2017 Competitive Oil & Gas Lease Sale Wind River/Bighorn Basin District, Environmental Assessment, DOI-BLM-WY-R000-2017-0001-EA at 1-2 to 1-3. The Final EA for Utah's December 2017 Oil and Gas Lease Sale in the Vernal Field Office did the same. *See* December 2017 Competitive Oil and Gas Lease Sale, Environmental Assessment, DOI-BLM-UT-G010-2017-0028-EA at 35–45.

In particular, the EA admits that "[t]he vast majority of parcels located partially or entirely in PHMA are proximate or adjacent to existing production and occur in areas where BLM has determined that the oil and gas development potential ranges (within 2 miles of leases currently held by production), have low to very high, and several of the parcels have occupied leks within their boundaries potential for oil and gas development, and one has an active GSG lek within its boundary." EA 85 It provides, howeer, no site-specific analysis whatsoever, however, of which parcels are or are not proximate to existing production, which are in "low" versus "very high" development potential ranges, and which have occupied or active leks present. This failure to give site-specific consideration to the factors enumerated in IM 2016-143, including development potential and habitat value, violates BLM's obligations to conform to the governing RMP and to consistently follow its own internal guidance.

An apparent district policy of leasing virtually all nominated parcels within sage-grouse habitat is not only inconsistent with the RMPs and FLPMA's consistency requirement, it also undermines a fundamental assumption of the RMP Amendment EISs – as well as the U.S. Fish and Wildlife Service's determination that listing the greater sage-grouse under the Endangered Species Act was "not warranted." That assumption is that the measures adopted in the RMP Amendments will result in oil and gas development tending to occur outside of greater sage-grouse habitat. It further undermines the assumption in the Fish and Wildlife Service's "not warranted" finding for the greater sage-grouse that federal and state implementation of the "Wyoming Plan" for fluid minerals will continue the 2012-15 pattern of reduced drilling within core areas. If BLM is not actually going to give meaningful content to its plan direction to prioritize leasing outside of sage-grouse habitats, it cannot rely on FEISs, such as the Wyoming Sage Grouse RMP FEIS, that assume the effectiveness of that plan direction.

D. The BLM Fails to Consider Reasonable Alternatives Prioritizing Leasing Outside of Sage-Grouse Core Areas, Priority Habitat and/or Sagebrush Focal Areas

The "heart" of NEPA is an agency's obligation, in evaluating the environmental impacts of its actions, whether by EA or EIS, to consider all reasonable alternatives to those actions. *See Center for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008) (citing 40 C.F.R. § 1502.14(a)). The High Desert District May 2017 leasing EA fails to meet this core NEPA obligation by erroneously arbitrarily excluding from consideration any alternative that could meaningfully preserve BLM Wyoming offices' authority to adopt effective and scientifically credible conservation measures for greater sage-grouse.

The High Desert District December 2017 EA does not even consider an alternative, regularly considered and adopted by other field offices, would defer all remaining parcels located within sage grouse Sagebrush Focal Areas and Priority Habitat Management Areas, consistent with the prioritization

objective of its amended RMPs. NEPA's alternatives requirement requires that BLM give consideration to such a reasonable habitat prioritization alternative.

Agencies may not reject an otherwise reasonable alternative out of hand simply because it shares some characteristics with the no-action alternative. *See Colorado Environmental Coalition v. Salazar*, 875 F. Supp.2d 1233, 1248-50 (D. Colo. 2012). Such an alternative would be consistent with BLM Instruction Memorandum IM WY-2012-019 at 8, which states:

> This policy does not preclude the development and immediate implementation of new or innovative mitigation, or other conservation measures that would be expected to reduce activity/project impacts to sage-grouse and their habitats.

Sincerely,



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From:	Edwin Roberson
To:	Adam Trupp; Alair Emory; Alan Matheson; Barbara A Allen; Barry McLerran; Bert Granberg; Bob Barrett; Brad Westwood; Brian Cottam; Carmen Bailey; Chad Hudson; Chris Luecke; Cornell Christensen; Darin G Bird; Dave Ure; Dave Whittekiend; David Susong; Eric Millis; Evan Curtis; Fred Hayes; Gary Webster; Henry Maddux; Ireland, Jim; Ivan Djambov; J. Shea Owens; Jason Gipson; Joann Perea-Richmann; John Baza; John Newhall; Kathleen Clarke; Kathleen Mathews; Ken Matthews; Ken White; Kent L Jones; Kim Christy; Kristine Kust; Larry Crist; Laura Romin; Laurel Price; Lisa Northrop; Lola Bird; Luann Adams; Michael Mower; Mike D Fowlks; Mike Styler; Nanette Johnson; Natasha Ballif; Nora Rasure; Rebecka Stromness; Rick Allis; Robyn Pearson; Ryan Wilcox; Scott Ericson; Sidney Groll; Stowell, Mike; Susanne - FS Tracy; Timothy Wilson; Todd Adams; Tom Adams; Travis Campbell; Tyler Thompson; Wade Garrett; Wade Kloos; Wayne Pullan; Wendy J Wack; Whitney Norton
Cc:	Michael Richardson
Subject:	Fwd: RAC Call for Nominations Press Release
Date:	Tuesday, November 28, 2017 7:56:49 AM
Attachments:	ATT00001.htm RAC Final 2017 Second National Call for Nominations Press Releasev.2.docx Form 1120-19_RACs.pdf ATT00002.htm

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Dear NRCC Members,

As I mentioned at last week's meeting, BLM is asking for nominations for our Utah statewide Resource Advisory Committee. Below is the national recruitment information. If you or someone you know is interested in applying please share this with them and/or have them call Lola Bird, BLM Utah External Affairs, at 801-539-4033. Thank you. Ed

Bureau of Land Management
Contact: Twinkle Thompson
For immediate release
202-208-7301

Nov. 1, 2017

BLM Seeks Nominations to Resource Advisory Councils and other BLM Land Management Advisory Committees

The Bureau of Land Management today announced that it is seeking public nominations for open positions on 17 of its 36 Resource Advisory Councils (RACs). As published in a notice in the Federal Register, the BLM will consider nominations for 30 days, with the application period ending Dec. 1, 2017.

The BLM's RACs, composed of citizens chosen for their expertise in natural resource issues, help the Bureau carry out its multiple-use mission and stewardship of 245 million acres of public lands. The Bureau, which manages more land than any other Federal agency, has 36 RACs across the West, where most BLM-managed land is located. Each RAC consists of 10 to 15 members with an interest or expertise in energy and mineral development, ranching, outdoor recreation, conservation, state and local government, tribal and cultural resources, and academia. The diverse membership of each RAC helps ensure that BLM land managers receive the varying perspectives they need to achieve their mission of managing the public lands for multiple uses.

"Restoring trust in the federal government and being a good land manager are two of my top priorities at Interior, and state and local input, particularly in communities surrounding public lands, is imperative to building trust," said U.S. Secretary of the Interior Ryan Zinke. "Nobody knows the land better than the people who live and work it. Council members provide a valuable service to the Department and offer a variety of perspectives that assist in solving land and resource use issues."

Individuals may nominate themselves or others to serve on an Advisory Council. Nominees, who must be residents of the state or states where the RAC has jurisdiction, will be reviewed on the basis of their training, education, and knowledge of the council's geographic area. Nominees should also demonstrate a commitment to consensus building and collaborative decision-making. All nominations must be accompanied by letters of reference from any represented interests or organizations, a completed RAC application, and any other information that speaks to the nominee's qualifications.

Each of the 17 RACs has different positions open in the following categories:

Category One – Public land ranchers and representatives of organizations associated with energy and mineral development, the timber industry, transportation or rights-of-way, off-highway vehicle use, and commercial recreation.

Category Two – Representatives of nationally or regionally recognized environmental organizations, archaeological and historical organizations, dispersed recreation activities, and wild horse and burro organizations.

Category Three – Representatives of State, county, or local elected office; representatives and employees of a state agency responsible for the management of natural resources; representatives of Indian tribes within or adjacent to the area for which the RAC is organized; representatives and employees of academic institutions who are involved in natural sciences; and the public-at-large.

For information regarding the Utah RAC, please contact Lola Bird at lbird@blm.gov or 801-539-4033. For information regarding the Grand Staircase-Escalante National Monument Advisory Committee, contact Larry Crutchfield at lcrutchf@blm.gov or 435-644-1209. Persons who use a telecommunications device for the deaf may call the Federal Relay Service (FRS) at 1-800-877-8339 to leave a message or question for the above individual. The FRS is available 24 hours a day, seven days a week. Replies are provided during normal business hours.

The BLM manages more than 245 million acres of public land located primarily in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The agency's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations. Diverse activities authorized on these lands generated $75 billion in sales of goods and services throughout the American economy in fiscal year 2016—more than any other agency in the Department of the Interior. These activities supported more than 372,000 jobs.

-BLM-
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Bureau of Land Management
Resource Advisory Council
Application

Resource Advisory Councils (RAC) were established by the Federal Land Policy and Management Act (43 U.S.C. 1739), as citizen advisory groups to the Bureau of Land Management (BLM). These citizen-based groups provide an opportunity for individuals from all backgrounds and interests to have a voice in the management of America's public lands, and to help improve their health and productivity. RAC recommendations address all public land issues, including: land use planning, recreation, noxious weeds, and wild horse and burro herd management areas, to name just a few.

Members are appointed by the Secretary of the Interior to serve 3-year terms and may be re-appointed. Each RAC consists of 10 to 15 members from diverse interests in local communities, including ranchers, environmental groups, tribes, State and local government officials, academics, and other public land users. An individual may not serve concurrently on more than one RAC. Council members must reside in the states within the geographic jurisdiction of the RAC.

RAC members serve without salary, but are reimbursed for travel and per diem expenses at current rates for government employees. To be eligible for appointment to a RAC, a person must be qualified through education, training, knowledge, or experience. A RAC generally meets two-to-four times annually, or as needed to accomplish RAC business.

RAC members are generally expected to do the following:

- Attend meetings and field trips that have been scheduled in advance and participate in public discussion of issues during the meeting.
- Provide advice to the BLM officials on an informal basis, regarding issues that arise between formal meetings.
- Maintain up-to-date knowledge of issues affecting the RAC's geographic area.
- Provide BLM officials with opinions and advice that represents the point-of-view of the category represented by the RAC member, the member's experience and knowledge about the issue, and his/her reflection on data presented to the RAC by the public, BLM staff, or other sources.
- Provide feedback from the RAC meetings and interaction with the BLM staff and managers to specific interest groups. Provide the BLM with input and overview from interest groups.

The RACs have been successful in bringing diverse and often competing interests to the table to deal with matters of mutual concern. This inclusive approach has shown great promise as a means to successfully deal with long-standing issues of public land management. The RACs have demonstrated that consensus-driven recommendations often lead to sustainable outcomes that benefit natural resources and often enjoy a high level of public support.

Form 1120-19
November 2015

FORM APPROVED
OMB Control No. 1004-0204
Expires: 11/30/2018

Bureau of Land Management
Resource Advisory Council
Application

All Fields Required
Attach additional pages if necessary

Name of Committee to be considered for:

First Name

Full Middle Name

Last Name

Date of Birth

Home Address

City State Zip Code

Home Phone Number

Mailing Address
(if different than home)

City State Zip Code

Business Address

City State Zip Code

Business Phone Number

Email Address

Education: including colleges, degrees, major fields of study (or attach a resumé)

Work history (or attach a resumé)

List significant related experience, previous advisory committee experience, civic and professional activities, education, and training that qualifies you to serve on this committee. If applying as an elected official, please also include dates of service.

Describe your experience of knowledge of the committee's geographic area of jurisdiction.

Describe your experience working with disparate groups.

Indicate the specific area(s) of interest you seek to represent:

Category 1:

- ☐ I hold a Federal grazing permit within the committee's area of jurisdiction.
- ☐ I represent transportation or rights-of-way interests.
- ☐ I represent developed outdoor recreation, off-highway vehicle users, or commercial recreation activities. I
- ☐ represent the commercial timber industry.
- ☐ I represent energy and mineral development interests.

Category 2:

- ☐ I represent a nationally or regionally recognized environmental organization.
- ☐ I represent dispersed recreation interests.
- ☐ I represent archaeological and historical interests.
- ☐ I represent wild horse and burro interest groups.

Category 3:

- ☐ I hold State, county, or local elected office.
- ☐ I am an employee of a State agency responsible for management of natural resources, land, or water. I
- ☐ represent an Indian tribe within or adjacent to the Committee's area of jurisdiction.
- ☐ I am an academician involved in natural resource management or the natural sciences.
- ☐ I represent the affected public-at-large.

Indicate any BLM permit, leases, or licenses that you hold personally or are held by your employer:

Are you a federally registered lobbyist? ○ Yes ○ No

Is at least one letter of recommendation attached or has a letter been sent on your behalf by the interest group or organization that you wish to represent? ○ Yes ○ No

Signature _____ Date _____

NOTE: Although applications are submitted to the BLM office within the RAC's area of jurisdiction, appointments are ultimately conferred by the Secretary of the Interior. Applications will be reviewed and nomination packages will be completed at the local level. Governors of affected States will be consulted during this process. Recommendations will be endorsed by the appropriate BLM State Director and forwarded to the BLM Washington Office. Following the BLM Director's endorsement, recommendations will be forwarded to the Department of the Interior for background checks, ethics, and other reviews before presentation to the Secretary. The time between submission of application and receipt of member appointment letter may take 4-5 months.

The Privacy Act and the regulation at 43 CFR 2.48 (d) require that you be furnished the following information in connection with information required by this form.

AUTHORITY: The authority to request this information is contained in 5 U.S.C. App. 2, the Federal Advisory Committee Act; 5 U.S.C. 1739, the Federal Land Policy and Management Act; and 43 CFR Subpart 1784, Bureau of Land Management advisory committee regulations.

PURPOSE: The information will be used by the appointment officer to determine the qualifications such as education, training, and experience of candidates related to qualifications to serve on a Resource Advisory Council of the Bureau of Land Management.

ROUTINE USES: This information will be maintained in the Interior Volunteer Service File System (Interior/DOI-05) and is subject to routine uses of that system of records. These routine uses can be found at 66 FR 28536.

DISCLOSURES: Failure to submit this information will inhibit full consideration of a prospective advisory council member's qualifications, and could result in non-selection. If you are appointed as an advisor, the information will be retained by the appointing official as long as you serve. Otherwise, it will be destroyed 2 years after termination of your membership or returned (if requested) following announcement of the Council appointments.

THE PAPERWORK REDUCTION ACT requires us to inform you that:
This collection is in accordance with the clearance requirements of 5 U.S.C. 3507. Completion of this form is required to obtain or retain a benefit. You do not have to respond to this or any other Federal agency-sponsored information collection and no Federal agency may conduct or sponsor such a collection, unless it displays a valid OMB control number. The information is used to determine qualifications, suitability, and availability for service on resource advisory councils. Failure to submit this information will inhibit full consideration of a prospective advisory council member's qualifications, and could result in non-selection.

BURDEN HOURS STATEMENT: The estimated public reporting burden for this form is 4 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. You may submit comments regarding the burden estimate or any other aspect of this form to: U.S. Department of the Interior, Bureau of Land Management (1004-XXXX), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Room 2134LM, Washington, D.C. 20240.

From:	Nada Culver
To:	blm_sagegrouseplanning@blm.gov
Subject:	Comments on Sage-grouse Plan Amendments - TWS, Conservation Colorado, Audubon, WOC
Date:	Friday, December 1, 2017 10:59:50 AM
Attachments:	Sage-grouse Plan Amendments- Scoping Comments - TWS, ConsCo, WOC, Audubon 12-1-17.pdf Analysis of DOI 8-4-17 Sage-Grouse Memo and Report final.pdf TWS Sage-grouse Plans Review letter - 8-15-17.pdf Sage-Grouse Task Force Final GRSG Mitigation Report - Dec. 2016.pdf Letter to Secretary Zinke from Sage-Grouse Scientists_10.13.17.pdf

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Attached please find scoping comments on potential amendments and other changes to the BLM's sage-grouse plans, along with the referenced attachments, submitted on behalf of The Wilderness Society, Conservation Colorado, the National Audubon Society and the Wyoming Outdoor Council. We appreciate your consideration.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

Direct: 303-225-4635

Nada_Culver@tws.org

*The Wilderness Society * National Audubon Society * Conservation Colorado * Wyoming Outdoor Council*

December 1, 2017

Submitted via electronic mail (blm_sagegrouseplanning@blm.gov)

Re: Scoping comments
Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation and Prepare Associated Environmental Impact Statements or Environmental Assessments

To Whom It May Concern:

Please accept these scoping comments on behalf of The Wilderness Society, National Audubon Society, Conservation Colorado and Wyoming Outdoor Council.

All of the undersigned organizations care deeply about the survival of the greater sage-grouse and the sagebrush ecosystem, and have been integrally involved in the multi-year efforts that resulted in the 2015 amendments and revisions to Bureau of Land Management (BLM) resource management plans ("2015 Sage-grouse Plans). We are concerned that this administration is considering significant changes to the plans, which will risk the habitat upon which the sage-grouse and more than 350 other species depend for their survival.

We support the plans and oppose any significant changes. Overall, we do not believe that amendments are needed, although we recognize that some clarifications may be made without rising to the level of amendments. To the extent any changes are made to the plans, they must be accomplished through a transparent process with sufficient opportunities for public oversight and input. The core aspects of the plans, including providing the most protections for the most important habitat, are based on science and the input of a wide range of stakeholders; they must be maintained. The plans should be allowed to continue working and should not be dismantled or otherwise undermined. Undermining the plans will undermine the basis for the U.S. Fish & Wildlife Service's finding that the greater sage-grouse no longer warrants listing under the Endangered Species Act.

I. THE 2015 SAGE-GROUSE PLANS WERE INTEGRAL TO THE U.S. FISH AND WILDLIFE SERVICE'S "NOT WARRANTED" FINDING; THEIR RANGE-WIDE STRUCTURE MUST BE PRESERVED.

A. The 2015 Sage-grouse Plans were designed to address primary threats to greater sage-grouse and to provide adequate regulatory mechanisms, providing the foundation for the FWS decision.

In 2010, the U.S. Fish and Wildlife Service (FWS) found that the greater sage-grouse warranted listing under the Endangered Species Act (ESA). 75 Fed.Reg. 13910 (March 23, 2010). In 2015, FWS found that the greater sage-grouse no longer warranted listing under the ESA based on the

"status of the species, potential threats, regulatory mechanisms, and conservation efforts." 80 Fed.Reg. 59857 (October 2, 2015).

FWS summarized the primary to greater sage-grouse as follows:

> In the Rocky Mountain portion of the range, sagebrush habitats have become increasing degraded and fragmented due to fossil fuel and renewable energy development, infrastructure such as roads and power lines, mining, improper grazing, the direct conversion of sagebrush to croplands, and by urban and ex-urban development.
>
> In the Great Basin, incursions of invasive plants such as cheatgrass and conifer, increases in wildfire size, frequency and intensity fueled by invasive plants, along with improper grazing from domestic livestock and free-roaming horses and burros, drought, and mining have eliminated the habitat and degraded the value of large areas of sagebrush habitat for greater sage-grouse. The threat of habitat loss to fire and invasive species can be exacerbated by even small amounts of development in important habitat.
>
> Impacts from these stressors have been exacerbated by the lack of adequate regulatory mechanisms to control their effect on sagebrush habitat. In the finding the Service discusses how these threats have been ameliorated.[1]

FWS also highlighted the 2015 Sage-grouse Plans were highlighted as the basis for finding adequate regulatory mechanisms now exist:

> The Bureau of Land Management (BLM) and U.S. Forest Service (USFS) have each completed amendments or revisions to 98 land management plans governing greater sage-grouse habitat. The Service provided technical assistance during the development of these federal land use plans, which are the principal regulatory documents for the activities allowed on BLM and USFS lands. This federal greater sage-grouse planning effort is unprecedented in scope and scale, and represents a significant change from managing within administrative boundaries to managing with an ecosystem approach with a goal of balancing the agencies' multiple-use mandates with conservation objectives.[2]

FWS also acknowledged state plans, but only cites Wyoming, Oregon and Montana as having "regulatory provisions that provide certainty and will help to reduce habitat loss and fragmentation in the best remaining greater sage-grouse habitat."[3] Consequently, it is the 2015 Sage-grouse Plans that are the foundation for the FWS finding – based on their ability to address the wide range of potential threats "with an ecosystem approach" and to provide adequate regulatory certainty. Therefore, it is of primary importance that the range-wide structure of the plans be preserved, as well as measures to address the potential threats FWS identified.

---

[1] FWS, 2015 Endangered Species Act Finding, Frequently Asked Questions, discussing potential threats: https://www.fws.gov/greatersagegrouse/findings.php

[2] *Id.*, discussing regulatory measures.

[3] *Id.*

Significant changes to the plans will risk the FWS finding and the function of the plans, which benefit the entire sagebrush ecosystem.

B. The Nevada court's decision does not require amendments or major changes to the 2015 Sage-grouse Plans.

In addition to the report to Secretary of the Interior Ryan Zinke that was prepared by the Department of the Interior's (DOI) Sage-Grouse Review Team and adopted by the Secretary on August 4, 2017[4] (hereinafter the Report), BLM's Notice of Intent states that the agency is also responding to the decision in *Western Exploration, LLC v. U.S. Dep't of the Interior,* 250 F. Supp. 3d 718 (D. Nev. 2017), stating:

> In order to comply with the court's order . . . the BLM seeks comments on the [Sagebrush Focal Area] SFA designation, mitigation standards, lek buffers in all habitat management types, disturbance and density caps, habitat boundaries to reflect new information, and reversing adaptive management responses when the BLM determines that resource conditions no longer warrant those responses.

82 Fed. Reg. 47248, 47249 (Oct. 11, 2017). However, the court's decision does not require or justify amendments or major changes to the plans. In fact, the court's decision only requires the BLM to conduct supplemental analysis of limited aspects of the SFA designations.

While the plaintiffs in *Western Exploration* argued that a supplemental environmental impact statement (EIS) was required for several issues — changes to the lek buffer requirements, the application of a "net conservation gain" mitigation strategy, the use of hard-trigger adaptive management strategies, and SFA designations in Nevada — the court found that only the SFAs required supplemental review. 250 F. Supp. 3d 718 at 749. The court agreed that "the designation of 2.8 million acres as Focal Areas in Nevada amounts to a substantial change relevant to environmental concerns" requiring the BLM and Forest Service to prepare a supplemental EIS. *Id.* However, the court refused to vacate the records of decision that implemented the sage grouse protection plans. Per the Court's order, these plans remain in effect while BLM reconsiders only the narrow issue of the SFAs. *Id.* at 750-51.

Notably, the court refused to vacate the records of decision because of potential "undesirable consequences," stating:

> The parties do not dispute that protecting the greater sage-grouse species and their habitat is an important goal. The State and several of the counties argue that existing state and local land use plans provide for the greater sage-grouse's protection, thus recognizing that a certain level of protection is warranted. Moreover, FWS found in part that "listing the greater sage-grouse (rangewide) is

[4] Report in Response to Secretarial Order 3353, available at https://www.eenews.net/assets/2017/08/07/document_gw_08.pdf.

> warranted, but precluded by higher priority listing actions," and that existing regulatory mechanisms available to federal agencies were essentially inadequate to provide for the species' protection. (75 Fed. Reg. 13910, 13982 (Mar. 23, 2010).

Id. at 750-51. The court found that continuing to protect the sage-grouse weighed against suspending the plans while a supplemental EIS is prepared to analyze the SFAs.

Based on the plain language of the court ruling, the only issue that should be reconsidered based on the *Western Exploration* opinion is eliminating developed areas from SFAs and ensuring low priority habitats and non-habitats are not included in SFAs. *See* 250 F. Supp. 3d 718 at 749 (noting these issues in the SFAs). The addition of SFAs did not change the basic management prescriptions in the land use plans, it only affected where those decisions would apply. *Id.* at 750. The core concept of SFAs is not in question. In fact, SFAs were a key part of the FWS "not warranted" decision. SFAs were created in response to data provided by the FWS in documents such as the Conservation Objectives Team (COT) report, which was prepared by the FWS and which will be discussed in more detail below. *See* 250 F. Supp, 3d 718 at 749 (noting the "new information" that the FWS provided in the plan development process). The BLM cannot abandon this best available science by revoking the concept and practice of SFAs. The basic management is not at issue, only the specific boundaries of the SFAs.

Other aspects of the *Western Exploration* decision also point to the validity and importance of the 2015 Sage-grouse Plans. First, the court found that the BLM adequately considered local land use plans when it developed the BLM sage grouse plans for Nevada, which met the Federal Land Policy and Management Act (FLPMA) consistency requirement. 250 F. Supp. 3d 718 at 744. Thus, local land use plans were adequately considered and reconciled with the BLM sage-grouse land use plans.

Second, the court found that BLM had fully complied with its multiple use mandate when it developed the Nevada sage-grouse plan, concluding:

> Plaintiffs contend that BLM Plan's closure of millions of acres of land for multiple use — specifically the proposed withdrawal of 2.8 million acres of land from mineral entry [under the SFA provision], onerous travel restrictions on 16 million acres, and restrictions on grazing — fails to meet FLPMA's requirement that BLM balance diverse resource uses based on the relative values of those resources. . . . Plaintiffs insist that BLM provided inadequate analysis of the relative value of Nevada resources, based the restrictions to multiple use on faulty science, and did not meaningfully consider viable alternatives that balanced resources and met local economic goals. … A review of the administrative record shows that BLM considered the relative value of Nevada's resources.

250 F. Supp. 3d at 746.

Further, the court rejected claims that BLM's net conservation gain mitigation standard was invalid because it violated the unnecessary or undue degradation prohibition found at 43 U.S.C. § 1732(b). *Id.* at 747.

The *Western Exploration* decision primarily endorsed the validity and scope of the 2015 Sage-grouse Plans. The opinion states that BLM must conduct a supplemental EIS regarding SFA boundaries in Nevada, but otherwise validated the authority, purpose, and scope of the current land use plans. This opinion makes it clear that the BLM plans address the primary threats to the species and put in place adequate regulatory mechanisms to address those threats, which was a primary reason for the FWS "not warranted" finding.

II. KEY ELEMENTS OF THE 2015 SAGE-GROUSE PLANS MUST BE RETAINED.

As discussed above, the rangewide structure of the 2015 Sage-grouse Plans and the manner in which they address the potential threats to greater sage-grouse with regulatory certainty are vital to the continued function of the sagebrush ecosystem, forming the basis for the FWS finding that listing under the ESA was no longer warranted. While some of these provisions could be clarified, retained or better interpreted through additional guidance or plan maintenance actions, the core elements must be retained in order to support the function and effectiveness of the plans. Further, all of these elements are needed to demonstrate that the FWS "not warranted" finding continues to be justified, including during the FWS review expected no later than five years from the date the applicable Records of Decision (RODs) were signed (i.e., 2020). Key elements of the plans are discussed below.

A. Protect the highest value habitat with the strongest management guidelines.

The structure of the 2015 Sage-grouse Plans was developed to provide the most protections to the highest value habitat (thus ensuring it is sufficiently protected) while providing more flexibility for other activities to occur outside habitat and in other habitat areas. Consequently, maintaining the overall structure of the plans to focus on protecting the highest value habitat is not only the most likely to succeed in conserving the species, it is also having limited impacts on activities like oil and gas development. It is essential for the functioning of the plans that Priority Habitat Management Areas (PHMA) (and/or Core Habitat), including Sagebrush Focal Areas (SFA), are maintained and provided with the most protections, while appropriate levels of protection are also incorporated for General Habitat Management Areas (GHMA).

The 2015 Sage-grouse Plans currently incorporate key commitments of agency resources to support this structure. For instance, oil and gas leasing and development are prioritized outside of both priority and general habitat management areas. *See*, Rocky Mountain ROD, p. 1-25.[5] At the same time, SFAs are to be "prioritized for vegetation management and conservation actions

[5] https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

in these areas, including land health assessments, wild horse and burro (WHB) management actions, livestock grazing permit and lease review, and habitat restoration." Rocky Mountain ROD, p. 1-22. These habitat classifications and the corresponding protections must be retained as a core principle of the plans.

Within PHMA, the 2015 Sage-grouse Plans also identify SFAs, based on such factors as population density and habitat integrity. The additional layer of habitat protections provided in the SFAs responds directly to the concerns raised in the FWS's 2010 greater sage-grouse finding that listing under the ESA was warranted based on habitat disturbance and the lack of adequate regulatory measures to prevent continued losses. The RODs for the plans committed BLM to seek mineral withdrawals within the SFAs specifically to address the threat of surface disturbance from hardrock mining. BLM has now canceled its SFA withdrawal application and the proposed withdrawal of 10 million acres from location and entry under the mining law in six Western States. Based on the FWS concerns, the mineral withdrawal should not be abandoned.

Even without the mineral withdrawal, however, the SFAs serve as a landscape-level anchor for the sustained conservation and restoration of sage-grouse, including addressing habitat linkages. SFAs are closed or excluded from discretionary surface disturbances. In addition, SFAs are used to prioritize fire protection, habitat restoration and other habitat management actions. This approach allows BLM to target limited resources to those areas identified by FWS and state agencies as most important to long-term sagebrush ecosystem health and species persistence. As a result, SFAs are particularly valuable as sites for concentrating initial efforts to build sustained populations of birds and should be maintained.

B. Retain measures to reduce destruction and fragmentation of habitat.

As summarized by FWS "[t]he most significant threat to the species is habitat loss and fragmentation due to a variety of causes."[6] Consequently, in order for the 2015 Sage-grouse Plans to continue to be effective, provisions addressing energy development and other causes of habitat fragmentation must be retained and enforced. These provisions include:

- No surface occupancy provisions for oil and gas development within PHMAs;
- Similar direction on appropriate locations for development of wind, solar and transmission lines; and
- Limitations on the amount and timing of surface-disturbing activities, such as surface disturbance caps and buffers around leks.

Without these safeguards, the plans are not likely to effectively protect habitat or prevent habitat fragmentation. Many of the states that have developed their own sage-grouse conservation plans use similar measures because they are most reliable and effective measures available.

[6] FWS, 2015 Endangered Species Act Finding, Frequently Asked Questions, discussing potential threats: https://www.fws.gov/greatersagegrouse/findings.php

C. Ensure unavoidable harms are mitigated

By designing appropriate mitigation measures, the 2015 Sage-grouse Plans provide a path forward for permitting more activities on the public lands that may harm greater sage-grouse habitat (such as activities that would otherwise exceed the scientifically-set surface disturbance caps) while ensuring those harms will be sufficiently addressed to offset unavoidable harms (such as restoring habitat or providing intact habitat). Mitigation is a necessary part of the plans' structure and is also a key part of the management approaches taken by the Western states, including those states that have formal sage-grouse conservation plans. The plans are set up to ultimately improve and restore habitat, using a "net gain" standard, which should also be retained to continue expanding suitable habitat and making up for years of precipitous loss.

Protections in the plans will only be effective if the full mitigation hierarchy, including avoidance, minimization and mitigation or compensation, is rigorously employed. The Report states that both the Review Team and the Western Governors Association's Sage Grouse Task Force agree that consistent application of the mitigation hierarchy (avoid, minimize, and mitigate), including compensatory mitigation standards and other requirements between State and Federal plans, policies, and procedures, is desirable. The 2015 Sage-grouse Plans comply with the mitigation hierarchy (i.e., avoid impacts where possible; minimize impacts where avoidance is not practicable; and mitigate or offset unavoidable impacts) and this compliance is necessary for their success. By providing the greatest protection for the highest value habitat and setting out specific management provisions for different activities, the 2015 Sage-Grouse Plans seek to avoid or minimize impacts to sage-grouse habitat. Nonetheless, the plans also recognize that some harm to habitat cannot be sufficiently avoided or minimized, and therefore mitigation through compensatory actions is required to restore or replace the damaged habitat.

Evaluation of mitigation is required by the National Environmental Policy Act (NEPA).[7] Management for multiple use and sustained yield and avoidance of unnecessary or undue degradation to the uses and values of the public lands (including wildlife) is required by FLPMA.[8] The BLM's current manual and handbook on mitigation (Manual 1794, Handbook H-1794-1) acknowledge the BLM's authority to condition land uses on mitigation and to deny approval of uses when impacts cannot be sufficiently mitigated.[9] Similarly, DOI's Manual on Mitigation "affirms its authority to identify and plan for the extent, nature, and location of mitigation, including compensatory mitigation, and to require the implementation of effective mitigation."[10]

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[7] *See* 40 C.F.R. §§ 1508.8, 1502.14, 1502.16.
[8] *See* 43 C.F.R. §§ 1701, 1732(b).
[9] *See, e.g.,* BLM Handbook, H-1794-1 Mitigation (P) (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM%20H-1794-1%20Mitigation%20FINAL.docx, and BLM Manual, MS-1794 Mitigation § 1.6.E.2 (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM_MS-1794%20Mitigation%20FINAL.docx
[10] See U.S. Dep't of Interior Manual, 600 DM § 6.5, Landscape-Scale Mitigation Policy (Oct. 23, 2015) https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf

Application of strict avoidance and minimization principles is critical because impacts to sage-grouse habitat cannot be reduced if development continues to occur on functioning habitat. In addition, restoration resulting from compensatory mitigation continues to be challenging in sagebrush habitat. The difficulty in achieving successful restoration, as well as the years of habitat loss, are also justifications for the use of the net conservation standard for mitigation.

BLM should not restrict the use of multipliers for mitigation. There are large variations in the quality of sage-grouse habitat and, as noted above, there are currently low success rates of restoration. In addition, because the 2015 Sage-grouse Plans already allow fragmentation and additional disturbance in all types of habitat, ongoing habitat loss is inevitable. The use of multipliers provides a mechanism to address the challenges in restoration and is an important part of many state mitigation programs, including Nevada and Wyoming.

Compensatory mitigation programs must include strategies to assess and manage risks and benefits. Characterization of both the risks associated with mitigation approaches and their likely benefits are necessarily predictive and require monitoring to ensure solutions are successful and durable. The BLM must ensure that it continues to monitor both the risks and benefits resulting from compensatory mitigation and that it employs and requires those provisions that are shown to be most successful and durable.

D. Monitor and adjust the plans, based on best available science, as conditions on the ground change.

The 2015 Sage-grouse Plans provide regulatory certainty by incorporating mechanisms to demonstrate that any major problems (such as precipitous drops in population or habitat condition) will be identified and can be addressed quickly. The plans include a Habitat Objectives Table, Habitat Assessment Framework, and Assessment, Inventory and Monitoring procedures that provide for data collection and measurement of conditions and analysis. These elements of the 2015 Sage-grouse Plans yield detailed information to show that the plans are working. They can also feed into the plans' adaptive management framework, which leads to immediate action when certain triggers are met.

The Report suggests the option of policy guidance for conducting a "causal factor analysis" when applying those triggers to determine what caused the trigger to be tripped, and implies that this could be a requirement before responses are instituted. Exhaustive casual factor analyses are very expensive, often speculative and time consuming, and in the end, may not be feasible in a short time frame once a trigger is tripped. While identifying causal factors can be valuable, such an analysis must not delay critical corrective actions.

Further, as discussed in more detail below, the 2015 Sage-grouse Plans are based on accepted science. Some of the changes discussed in the Report are clearly not supported by science, such as captive breeding or relying solely on population counts. At the same time, many of the key

elements of the current plans, such as surface disturbance caps and lek buffers, are accepted as the most likely to succeed based on available science. Any changes to the conditions monitored and actions taken must similarly be consistent with the current, accepted science.

E. Maintain the rangewide framework of the 2015 Sage-grouse Plans, while addressing the need for state-specific measures.

While the 2015 Sage-grouse Plans have variations among states, the approach and the result (and the basis for the FWS decision that listing was no longer warranted) were based on a rangewide conservation strategy, which aggregated the commitments and their effects. The 2015 Sage-grouse Plans provided for certain measures to be tailored to be more consistent with state plans or to address specific concerns. However, these state-specific management approaches were limited so that they did not undermine the rangewide, "ecosystem approach" that the FWS highlighted. This cohesive and comprehensive strategy must be maintained; state-specific approaches must not interfere with its ability to succeed.

III. RECOMMENDATIONS IN THE REPORT IN RESPONSE TO SECRETARIAL ORDER 3353 DO NOT SUPPORT DEVELOPMENT OF AMENDMENTS TO THE 2015 SAGE-GROUSE PLANS.

Secretarial Order No. 3353, entitled "Greater Sage-Grouse Conservation and Cooperation with Western States," directed the BLM to take actions to review the 2015 Sage-grouse Plans and find ways to modify them to give "appropriate weight to the value of energy and other development of public lands."[11] In addition, in response to the Report generated in response to the Secretarial Order, submitted on August 4, 2017, Secretary Zinke issued a memorandum to the Deputy Secretary of the Interior entitled "Improving the BLM's 2015 Sage-Grouse Plans" (hereinafter the Memorandum).[12]

The Report and Memorandum provide no basis for amending BLM's land use plans protecting the sage-grouse. The shortcomings of this report were outlined in an analysis The Wilderness Society and National Audubon Society prepared after the Report was issued. That analysis is also relevant to this formal scoping process and is included herewith. We ask the BLM to fully consider it in connection with this scoping process. In addition, on August 15, 2017, The Wilderness Society submitted a letter to BLM Acting Director Michael Nedd outlining concerns with the Report. That letter too is submitted herewith and we ask that it be fully considered.

A. Concerns with Recommendations in the Report Outlined in The Wilderness Society and Audubon Analysis.

The Wilderness Society and Audubon analysis outlined two key concerns with the DOI Memorandum and Report: (1) they proposed to remove key protections of the plans by shrinking the areas subject to protection and weakening the protections in the plans; and (2) they provided for an inadequate public review and involvement process.

[11] https://www.doi.gov/sites/doi.gov/files/uploads/so_3353.pdf.
[12] https://www.eenews.net/assets/2017/08/07/document_gw_07.pdf.

Key elements of the plans that are targeted for removal or modification that are criticized in the analysis include:

1. **There is a focus on increasing oil and gas development in sage-grouse habitats that is contrary to the current plans**. We note that there is only a 4 percent overlap between PHMAs and existing coal and oil and gas leases on federal lands; approximately 79 percent of federal lands and minerals in PHMAs have a zero to low oil and gas development potential; and approximately 71 percent of federal lands and minerals in the principal sage-grouse states that have a medium to high oil and gas development potential are located outside PHMAs.[13] Protections of sage-grouse habitat from oil and gas development should be maintained; and this can be done with little impact on oil and gas development opportunities.

2. **The Report proposes to amend the 2015 Sage-grouse Plans to remove SFAs.** SFAs are strongholds for sage-grouse and support protections in PHMAs. The BLM has already cancelled the withdrawal of these areas from mineral entry, as had been proposed and analyzed by the agency. 82 Fed. Reg. 47,248 (Oct. 11, 2017). SFAs are the "most highly valued sagebrush ecosystem areas" and are a subset of the PHMAs,[14] so they should be maintained. Putting in place SFAs was a key reason for the FWS not warranted listing decision in 2015.

3. **The Report considers amending the 2015 Sage-grouse Plans to modify the boundaries of protected areas, including PHMAs and GHMAs**. These protected areas are key to the effectiveness of the plans and their modification or removal would destroy the plans and would make listing the sage-grouse under the ESA a necessity. Under the recommendations in the Report, GHMAs in Utah might be removed altogether, which is not acceptable.

4. **The Report considers eliminating conditional surface use stipulations in GHMA**. It is also considering eliminating the review of waivers, exceptions, and modifications by the FWS where no surface occupancy (NSO) requirements can be put in place. As we said in the analysis, FWS review "was focused on ensuring certainty for conservation measures, so meaningful sideboards on waiver, exception, or modification of these stipulations is a foundation for the [FWS] finding that the plans will succeed and listing was no longer needed." Stipulations in GHMA must be retained.

5. **The Report considers modifying or removing buffers around sage-grouse leks and modifying the surface disturbance caps that are found in the 2015 Sage-grouse Plans**. These provisions are key to protecting the sage-grouse and are a hallmark of many state plans. The science is overwhelmingly in support of providing for these lek buffers

[13] *See* http://westernvaluesproject.org/wp-content/uploads/2014/10/Greater-Sage-Grouse-Priority-Habitats-and-Energy-Development.pdf (report of the Backcountry Hunters and Anglers).
[14] See Great Basin and Rocky Mountain Region sage-grouse land use plan amendment records of decision. https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf and https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/ Great_Basin_ROD_9.21.15_508.pdf

and surface disturbance caps. Recently, preeminent sage-grouse scientists provided a letter to Secretary Zinke outlining their concerns about amending the plans, which included changing these elements of the plans. The letter states:

> Surface disturbance thresholds and avoidance measures established in the LUPs are based on a substantial amount of data resulting from more than 25 investigations of the response of sage-grouse to energy development. All of the studies investigating the response of sage-grouse to oil and gas development report negative impacts of development on sage-grouse and no studies identify a positive influence of the development on individuals, populations or habitats. Sage-grouse population-level declines in response to energy development result from avoidance of infrastructure during one or more seasons and reduced recruitment, productivity, and/or survival. Population declines have consistently been reported when well pad densities exceed 1 pad/square mile. Impacts to sage-grouse are most severe if the infrastructure associated with energy development occurs near sagebrush habitats, but population-level effects remain discernable out to a distance of approximately 4 miles and impacts to 11 miles on trends in the number of males counted on leks range-wide have been reported.

October 13, 2017 letter to Ryan Zinke, which is included herewith and discussed in more detail below.

6. **The Report considers removing or updating the habitat objectives tables, which are found in the 2015 Sage-grouse Plans**. These objectives should not be changed because they were based on site-specific information and scientifically-based conditions. They help establish clear management goals and achieve functioning habitats, allowing BLM to identify when management changes are needed.

7. **The Report considers changing adaptive management in the 2015 Sage-grouse Plans.** Adaptive management is a key component of the land use plans, including "hard" and "soft" triggers for management modifications. These are key provisions that should not be eliminated—adaptive management has become a hallmark of compliance with the NEPA and the land use plans adopted under FLPMA. *See* https://www.ntc.blm.gov/krc/krc_search.php?searchterm=adaptive (BLM adaptive management website); https://www.energy.gov/sites/prod/files/2016/02/f29/finalreport.pdf (Council on Environmental Quality report on adaptive management).

8. **The Report considers major changes to mitigation measures in the 2015 Sage-grouse Plans**. As with adaptive management, mitigation is a hallmark of, and required by, NEPA. As we noted in The Wilderness Society and Audubon analysis, "Mitigation is a necessary part of the plans' structure to allow for development without compromising conservation and is also a key part of the management approach taken by the western states . . ." The net conservation gain standard is a key part of mitigation in the existing plans, and while the plans might be clarified, these provisions must be maintained. These

provisions have been accepted by industry and they now rely on these mitigation measures to provide certainty when they propose development.

9. **The Report considers adopting captive breeding as a means to augment sage-grouse populations. The Report also considers setting population objectives as the basis for management, not habitat condition or quality as the current plans—and best science—provide for and recognize**.

These recommendation raises significant concerns. The best science clearly shows that these proposals are not likely to be effective in conserving the sage-grouse. This is made clear in the white papers prepared by the Western Association of Fish and Wildlife Agencies (WAFWA) that are included as Appendix F in the Report, which includes the following discussion:

Captive Breeding: "In general, if environmental conditions that precipitated sage-grouse declines have not been mitigated, transplants of additional and locally naïve birds is not likely to succeed . . . . Sage-grouse have been maintained, hatched and bred in captivity successfully, but only in research settings . . . . Sage-grouse captured in the wild do not adapt well to captive conditions . . . . Techniques for captive rearing of sage-grouse are still in their infancy . . . . Pending refinement and demonstration of the effectiveness of captive breeding and release of sage-grouse, other approaches to augmentation appear to be more certain and likely to be less costly and impactful to source populations . . . . Augmentation by any means are not necessary for recovery from declines in relatively large contiguous habitats in good condition. Augmentations are unlikely to have any success in small and isolated populations until and unless the environmental conditions that precipitated sage-grouse declines have been mitigated. *See* WAFWA White Paper entitled "Augmenting Sage-Grouse Populations Through Captive Breeding and Other Means," attached as Appendix F to the Report.

Population Objectives: "Management approaches must include conservation of seasonal sagebrush habitats to be successful . . . . The overall goal of the range-wide Strategy is to maintain and enhance populations and distribution of sage-grouse *by protecting and improving sagebrush habitats and ecosystems that sustain these populations* [emphasis in original] . . . . Sage-grouse have become a conservation reliant species . . . . Setting and managing to population goals is not realistic unless we have the capability to estimate sage-grouse population size . . . . Population level management actions to benefit sage-grouse don't provide benefits to other sagebrush-dependent species . . . . For this reason, any significant retraction of habitat based protections afforded in BLM Land Use Plan Amendments . . . may lead to additional petitions on sagebrush species of conservation concern such as pygmy rabbits . . . . Goals should be population ranges that recognize and account for the large population fluctuations (cycles) typical for this species . . . . Efforts to enhance, restore, and protect habitats from conversion and degradation will be necessary to achieve population goals that are

in aggregate sufficient to deter listing. Habitat efforts will benefit other sagebrush obligates and make petitions and listing of these species less likely." *See* WAFWA White Paper entitled "Population and Habitat-Based Approaches to Management of Sage-Grouse," attached as Appendix F to the Report.[15]

With respect to providing for public involvement in this process, The Wilderness Society and Audubon analysis pointed out that the 2015 Sage-grouse Plans were the product of a massive, long-term level of public engagement and participation, which sought to balance sage-grouse conservation and the use of federal lands for economic activities. Yet the Report and Memorandum were developed with only a 60-day review period and no public involvement, and this scoping comment period was similarly set for only 45 days. The reference in the Report to Executive Order No. 13783 ("Promoting Energy Independence and Economic Growth"), shows that BLM is focused on expanding energy development and is not giving sufficient attention to required public engagement. In the Report, BLM made no commitments to lead outreach or to engage the public, referring to expected actions by the Western Governors Association's Sage-Grouse Task Force, which does not operate under the legal mandates that BLM has under FLPMA and NEPA. Further, BLM did not wait for the Task Force to conduct stakeholder engagement before commencing this comment period and it is not clear that additional outreach by the states will be supported.

The BLM needs to correct this approach and ensure there is a public engagement and participation process that is on par with the level of engagement that led to the 2015 Sage-grouse Plans. This is necessary to meet the BLM's multiple use mission as well as the land use planning requirements of FLPMA, not to mention the public participation requirements of NEPA. *See* 43 C.F.R. § 1610.2 (outlining the requirement for a robust public involvement process in BLM land use planning); 40 C.F.R. § 1506.6(a) (agencies shall "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures").

As The Wilderness Society and Audubon analysis made clear, maintaining sage-grouse protections is needed because as recognized by Western governors, wholesale changes to the plans are not needed. In addition, maintaining the plans is needed to support the FWS "not warranted" decision and to protect the more than 350 additional species that rely on the sagebrush ecosystem from the need for listing. Maintaining these plans is also needed as a sign of respect for the thousands of stakeholders representing mining, oil and gas, livestock, local government, and environmental interests who engaged in the development of the 2015 Sage-grouse Plans.

B. Concerns with Recommendations in the Report Outlined in The Wilderness Society Letter to the BLM.

The letter to then-Acting Director Michael Nedd reiterates and expands on The Wilderness Society's concerns with the actions the agency might take based on the Report and Memorandum; and the BLM should similarly consider this letter. In that letter we emphasized a need to maintain critical elements of the 2015 Sage-grouse Plans. These included:

[15] The WAFWA white papers also addressed predator control issues and hunting and the BLM should also consider these reports as it considers land use plan amendments.

1. Protecting the highest value habitats (PHMA and GHMA) and maintenance of BLM's oil and gas prioritization process, which allows for development in non-habitat areas but which seeks to limit and provide for mitigation of development in high value habitats.
2. Maintain provisions that address threats to sage grouse such as continuing NSO provisions and limiting the amount of development by providing for surface disturbance caps and lek buffers. There was a particular need to address threats from oil and gas development in the Rocky Mountain region and prevention of agricultural conversion in Montana, with fire and invasive species being key threats in the Great Basin region, and a need to prevent habitat fragmentation in all cases.
3. Ensuring the mitigation hierarchy is complied with and avoidance and minimization of impacts is ensured in sage-grouse habitats. Compensatory mitigation is necessary where impacts cannot be avoided.
4. There must be continued maintenance of the Habitat Objectives Table, Habitat Assessment Framework, and Assessment, Inventory and Monitoring procedure. This is necessary so that the plans are monitored and can be adjusted if needed.

Underlying the maintenance of these key provisions in the plans is a need to ensure that any modifications are based on the best available science, as was clearly the case when the 2015 Sage-grouse Plans were adopted. This is specifically true with respect to the proposals to consider captive breeding and the use of population objectives for management, where the WAFWA white papers must be considered. We will address some of the best available science that BLM must take into account in making any changes to the 2015 Sage-grouse Plans below.

Finally, in our letter to Mr. Nedd we again emphasized the need for the BLM to ensure there are robust opportunities for public participation and engagement in this process.

C. Concerns with Recommendations in the Report Made in the Letter from Seventeen Prominent Sage-Grouse Scientists to Secretary of the Interior Ryan Zinke.

In addition to our analysis and the letter to the BLM, the BLM also needs to consider the letter from sage-grouse scientists to Mr. Zinke (cited above) when considering the recommendations in the Report. Again, that letter is included herewith. We ask the BLM to fully consider it. In their letter, these well-known sage-grouse scientists share three general concerns regarding the Report. These were:

1. Recommendations in the Report could result in fewer acres of PHMA and GHMA, "limiting management options for the species."
2. Recommendations in the Report have the potential to limit effective management of "anthropogenic aspects of the sagebrush biome", which were concerns about oil and gas development and compensatory mitigation and the net conservation gain standard.
3. The recommendations in the Report could limit the ability to "effectively manage vegetative aspects of the sagebrush biome."

Considering these concerns one at a time shows the importance of avoiding amendments to the 2015 Sage-grouse Plans and limiting any changes to their key provisions.

As the scientists point out, PHMAs and GHMAs include the diversity of habitats that are required to sustain sage-grouse populations from the lek complex level through their annual life-cycle. There is a need for holistic consideration of these habitats so as to "provide large, functional, connected habitat patches that include the diversity of resources sage-grouse require seasonally and annually." Thus, "it is vital that we at least maintain the amount of habitat under greater protection established in the plans while also moving to increase habitat quality in these areas by improving sagebrush health through enhancement and restoration." Based on the 'best available science," the scientists say the PHMA and GHMA areas should not be reduced as a result of boundary modifications and if areas are designated as replacements to PHMAs and GHMAs they "should provide the species with high quality, diverse sagebrush habitats."

As to anthropogenic aspects of recommendations in the Report, the scientists point to and cite the unequivocal research that has documented densities of oil and gas development that harm sage-grouse. The results of this scientific research were quoted above. Based on this, the scientists "recommend maintaining current oil and gas infrastructure density and avoidance stipulations in priority habitats as the objective in priority habitats range-wide, and only considering changing these objectives in defined areas where site-specific sage-grouse data empirically and rigorously suggest these stipulations can be modified without negatively impacting habitat use, fecundity or population growth-rate of the local sage-grouse population." And, in addition to stating that BLM should not consider reducing these protections, the scientists recommend that the agency consider *increasing* these protections by increasing NSO distances and decreasing the densities of permissible oil and gas development.

As for mitigation measures and the net conservation gain standard, the scientists emphasize that there is scientific uncertainty about the results of mitigation and therefore "compensatory mitigation measures should balance the spatial and temporal risk associated with mitigation projects and the predicted long-term effects." And, "a net conservation gain standard is necessary to allay the inherent spatial and temporal risk associated with compensatory mitigation projects meant to create, enhance or restore sagebrush habitats."

In considering vegetation management aspects of the recommendations in the Report, some of the focus of the scientists was on livestock grazing. However, they also considered the habitat objectives tables in the plans. They point out that "the habitat objectives established in the LUPs are based on extensive published literature." Management should seek to restore and maintain vegetative conditions in the reference state and "we recommend that the guidelines established for vegetation structure, cover, and composition in the LUPs be maintained as the objective in priority habitats."

In addition to these three general concerns, the scientists also provided their views on the captive breeding, predator control, and population objectives recommendations in the Report. Their recommendations mirror those made by WAFWA, as discussed above.

Finally, the scientists make several general statements that are noteworthy and which BLM should fully consider:

1. "We are concerned that the current focus on amending the LUPs will detract from the critical task of building from those plans to realize enhanced conditions in currently designated priority and general habitats and stabilized or increasing sage-grouse populations."
2. "We are concerned that following many of the Reports' recommendations will lead to an overall loss of sage-grouse habitat quantity and quality which in turn may result in additional population declines."
3. "It is our opinion that now is not the time to look backwards and challenge the work done by countless shareholders in support of sage-grouse conservation."
4. "Now is the time to build on the momentum and allow the process to mature and evolve from the foundation provided by the LUPs to realize the sustained conservation of sagebrush landscapes and the wildlife and people dependent thereon."

D. Conclusions regarding previously stated concerns with BLM's approach to changing the 2015 Sage-grouse Plans.

Based on the information in The Wilderness Society and Audubon analysis letter, the letter to BLM, and the scientists' letter, BLM should not be considering amendments to the 2015 sage-grouse protection plans at this time. This would be consistent with the direction that is found in the Report. Under the terms in the Report, plan amendments are only to be done at some point in the future after initial less drastic modifications to sage-grouse protections are considered and put in place. Plan amendments are "longer term options." Report at 1, 2, 5 and 13. Before any plan amendments should be considered, BLM should first evaluate the short-term approaches that are identified in the Report, such as policy clarifications and providing training to BLM personnel. We are not aware that any of these short- term actions have been completed. Therefore, any effort to amend the plans at this time is premature and should not be pursued.

IV. BLM MUST USE THE BEST AVAILABLE SCIENCE IN AMENDING THESE PLANS, INCLUDING SCIENTIFIC REPORTS USED IN CRAFTING THE 2015 SAGE-GROUSE PLANS.

It is imperative that the BLM employ the best available science as it considers amendments or any changes to the sage-grouse land use plans and especially if it moves to amend the plans. As stated in Secretarial Order No. 3353, "[a]s the Department moves forward in the management of Sage-Grouse habitat, it is imperative that it does so in a manner that allows . . . [it to] incorporate the expertise of Federal employees in the field, local conditions, and proven State and local approaches." The Memorandum from Secretary Zinke to the Deputy Secretary states that "I also believe we should examine a program to enhance scientific research."

The Report considered data management and the use of science, stating:

> Addressing priority science needs of managers and sharing high-quality science and information, including locally collected monitoring and assessment data, among all entities can further the application of a data-driven approach to conservation and management of GRSG and the sagebrush ecosystem. Continued development and integration of local data and information, peer-reviewed science, and other high-quality information forms the foundation for management decisions and identifies the need for new science and information. Attributes to assess the quality and reliability of new science, data, and information include peer review, repeatability of methods and analyses, quality assurance, strength of evidence, and relevance to local conditions.

Report at 11-12. Based on this statement, seven recommendations were made to "increase the use of science," including "[c]ontinue to emphasize the need for locally relevant science and data to inform implementation of management actions." Clearly the best available science should be employed in this NEPA review.

There is a tremendous amount of very high-quality science that formed the basis for the 2015 Sage-grouse Plans. These scientific reports remain valid and must be fully reconsidered and made the basis for this current NEPA review. We highlight some of these reports below.

BLM National Technical Team (NTT) Report (December 21, 2011).[16] This report, entitled "A Report on National Greater Sage-Grouse Conservation Measures", provides an analysis of the most scientifically up-to-date conservation measures for sage-grouse, particularly for use in PHMA. It considers many issues such as range management, wild horse and burro management, minerals (both fluid and solid), and wildfire issues, among others. This report was widely cited in the environmental impact statements prepared for the 2015 land use plan amendments, and in fact served as the basis for an alternative considered in many of these plans.[17]

Conservation Objectives Team (COT) Report (February 2013).[18] This report, entitled "Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report" was prepared by the FWS, the nation's premier wildlife management agency. Like the NTT report, it addresses all aspects of sage-grouse conservation from a scientific basis. And like the NTT report it is widely cited and forms the basis of many of the provisions in the 2015 land use plan amendments.[19] It was prepared with the support of the Western Governors Association Sage-Grouse Task Force. Like the NTT, it was prepared by a wide range of state and federal scientists

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[16] https://eplanning.blm.gov/epl-front-office/projects/lup/9153/39961/41912/WySG_Tech-Team-Report-Conservation-Measure_2011.pdf.

[17] See, e.g., Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region, https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/Great_Basin_ROD_9.21.15_508.pdf, and Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region, https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

[18] https://www.fws.gov/greatersagegrouse/documents/COT-Report-with-Dear-Interested-Reader-Letter.pdf.

[19] See, e.g., Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region, https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/Great_Basin_ROD_9.21.15_508.pdf and Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region, https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

from a number of backgrounds and agencies. Incorporation of this report into the land use plan amendments was an important reason for the FWS' not warranted determination in 2015.

U.S. Geological Survey Report (2013).[20] The Geological Survey, like the FWS, has preeminent scientific qualifications. Its report, "Summary of Science, Activities, Programs, and Policies That Influence the Rangewide Conservation of Greater Sage-Grouse (*Centrocercus urophasianus*)" is an extensive review of sage-grouse science and conservation needs and practices. USGS reports are cited many times in BLM's 2015 land use plan amendments, including for the proposition that they (and the NTT and COT reports, among others) represent the best available science.[21]

Sage-Grouse Task Force Compensatory Mitigation Report (December 2016). While this report from the Western Governors Association Sage=Grouse Task Force came out after the 2015 Sage-grouse Plans were issued, it still represents some of the best available science on this issue. It is entitled "Report to the Sage-Grouse Task Force: Greater Sage-Grouse Compensatory Mitigation". It is included herewith.

Studies in Avian Biology No. 38 (2011).[22] This 665-page compendium of sage-grouse science was authored by dozens of leading ornithologists and sage-grouse scientists. It is entitled "Greater Sage-Grouse: Ecology and Conservation of a Landscape Species and its Habitats." At this point, it is probably the leading scientific discourse on this species. While it does not appear to have been cited in the 2015 plan amendment NEPA documents, it should be incorporated in BLM's evaluations of proposed actions.

Scientists Letter to Secretary Zinke (October 13, 2017). We discussed this letter at some length above. But clearly this letter from seventeen prominent sage-grouse scientists must be treated as best available science on the issues it addresses and therefore it should be fully considered in any plan amendments BLM is contemplating. As mentioned, it is included herewith.

In addition to these reports, BLM's sage-grouse website lists many other reports that represent the best available science. *See* https://www.blm.gov/learn/blm-library/subject-guides/greater-sage-grouse-subject-guide/greater-sage-grouse-subject-guide-documents-and-resources. We would especially note the "November 2004 Guidance for Addressing Sagebrush Habitat Conservation in BLM Land Use Plans" and the "November 2004 Guidance for Management of

[20] https://pubs.usgs.gov/of/2013/1098/OF13-1098.pdf.

[21] See, e.g., Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region at 1-34, https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/Great_Basin_ROD_9.21.15_508.pdf, Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region at 1-33, https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

[22] This book is only available for sale. But an extensive review of it can be found at https://books.google.com/books/about/Greater_Sage_Grouse.html?id=4NyQPESqM7EC&printsec=frontcover&source=kp_read_button#v=onepage&q&f=false.

Sagebrush Plant Communities for Sage-Grouse Conservation" reports. There is also a just-published report that the BLM should consider.[23]

As discussed above, the BLM has a responsibility to employ the best available science in this NEPA review. "Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. § 1502.24. As we will discuss below, an environmental impact statement should be employed in any land use plan amendments considered here, not an environmental assessment. The scientific reports we cited above clearly represent some of the best available science and they should be fully recognized and employed in this environmental impact statement.

V. THERE MUST BE OPPORTUNITIES FOR MEANINGFUL PUBLIC INPUT AND INVOLVEMENT IN THIS REVIEW PROCESS.

As we have mentioned several times, BLM must ensure there are sufficient opportunities for meaningful public input and engagement in this review process, including in any changes to the 2015 Sage-grouse Plans and especially if land use plan amendments are pursued. This need for public involvement also raises issues about the level of NEPA compliance that is needed: an environmental impact statement (EIS) versus a mere environmental assessment (EA) for plan amendments. This is also the place to consider the need for plan amendments versus more moderate resource management plan (RMP) maintenance actions.

A. The BLM must provide comprehensive opportunities for public engagement in this process.

Both NEPA and FLPMA require the BLM to ensure there are full and robust opportunities for public involvement in this process. Under the Council on Environmental Quality (CEQ) NEPA regulations, BLM shall "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a). BLM is to hold public hearings and public meetings and is to "[s]olicit appropriate information from the public." *Id.* §§ 1506.6(c) and (d). Scoping is to be an open process and the public is to be invited to participate. *Id.* §§ 1501.7 and 1501.7(a)(1). If a draft EIS is prepared, the agency must request comments from the public. *Id.* § 1503.1(a)(4).

Under the FLPMA planning regulations the public is to be provided the opportunity to "meaningfully participate in and comment on the preparation of plans, amendments and related guidance and be given early notice of planning activities." 43 C.F.R. § 1610.2(a). In addition, to the extent a plan amendment is pursued, BLM must provide at least a 90-day public comment period. 43 C.F.R. § 1610.2(e). BLM's planning efforts must comply with the requirements of NEPA. *Id.*

[23] Edmunds, D.R., C. L. Aldridge, M.S. O'Donnell, and A.P. Monroe. 2017. Greater Sage-Grouse Population Trends Across Wyoming. J. Wildl. Manage. 81(1): 46-57. http://www nrel.colostate.edu/ assets/nrel_files/labs/aldridge-lab/publications/Green_et_al-2017-The_Journal_of_Wildlife_Management.pdf.

While the BLM has held scoping meetings as part of this process and is accepting scoping comments, we are concerned that the public involvement process may be too limited. In our view, the level of public engagement in this process should at least match what was seen when the 2015 Sage-grouse Plans were developed. In 2015 and the time leading up to those amendments, the BLM put in place lengthy scoping periods, up to three months. Here the scoping period is only about 45 days. In 2015, EISs were prepared for the amendments, not more constrained EAs, and there were 90-day public comment periods with extensions granted in some cases. Many thousands of public comments were received, and many public hearings were held throughout the west. There was extensive outreach to tribes and local collaborators such as county governments. The agency issued press releases announcing public engagement opportunities and it established websites to give people more access to the process.

The outpouring of public involvement in the 2015 amendment process shows the depth of public interest and concern about sage-grouse management and planning. The 2015 Sage-grouse Plans represent a collaborative product that was developed cooperatively with many stakeholders in the west. They represent a scientifically-based effort to conserve the sage-grouse and prevent its listing under the Endangered Species Act. Obviously, thousands of Americans care deeply about the management of this bird, showing this by their wide and deep participation in the 2015 process. They should be given that opportunity again.

Yet the BLM has made no commitment to repeat the level of public involvement that was provided for in 2015. The Federal Register Notice announcing this scoping period does not commit to developing EISs for the potential plan amendments that are being contemplated; only EAs might be prepared, which could lead to much less public engagement. Scoping meetings were not even announced when the Notice of Intent was published, and the BLM only initially provided for a 45-day comment period—to November 27, 2017.[24] 82 Fed. Reg. 47248 (Oct. 11, 2017).

The Report, if anything, is even more noncommittal about engaging the public in the review of the sage-grouse land use plans. It says the DOI will "initiate additional discussions" with stakeholders in coordination with the Western Governors Association Sage-Grouse Task Force (SGTF). Report at 13. It says "outreach" will begin but it will only be "continuing for approximately 2 months." *Id.* This is a woefully inadequate commitment to public engagement. It is essentially no commitment at all. The SGTF is not a federal agency and it does not operate under the direction in NEPA and FLPMA, or any other federal environmental law. Unlike BLM, it does not have a multiple use mandate. It does not operate under the requirement to prevent unnecessary or undue degradation of the public lands as BLM does. 43 U.S.C. § 1732(b). The FLPMA land use planning requirements do not apply to the SGTF. And it has no responsibility to comply with NEPA and prepare detailed environmental analyses. As we noted above, when the DOI developed the Report it did not accept any public comment on that effort or provide any mechanism for public participation in that process.

[24] The comment period closure date has since been extended minimally to December 1, 2017, due to the dates some public scoping meetings were held.

BLM needs to develop a much more detailed and comprehensive plan for engaging the public in the review of the sage-grouse land use plans and any changes to the 2015 Sage-grouse Plans especially if any amendments are pursued.

Any changes to the plans must be conducted with full transparency and opportunities for meaningful public input prior actions be taken. In addition, to the extent states or state game and fish agencies are conducting stakeholder outreach, those efforts should be supported and their results incorporated into this process. Further, cooperating agency meetings should be open to the public.

B. Any plan amendments must be accomplished with environmental impact statements not environmental assessments.

The 2015 Sage-grouse Plans were accomplished by preparing EISs, not EAs. At least twelve EISs were prepared for sage-grouse conservation in the western states and there were two major records of decision implementing these plans.[25] The BLM must again pursue any land use plan amendments through preparation of EISs, not EAs.

The CEQ's NEPA regulations define when an EIS must be prepared. An EIS is required for "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). *See also* BLM National Environmental Policy Act Handbook H-1790-1 at section 7.3. Determining the significance of an action requires consideration of the context and intensity of the project. 40 C.F.R. § 1508.27. Context means an agency must consider the scale of the project and it "varies with the setting of the proposed action." *Id.* § 1508.27(a). Short and long-term effects are relevant. *Id.*

The context of the BLM plans, and any amendments to them, is enormous. The plans cover 10 western states and 67 million acres of public land, and amended 98 land use plans. As the prior EISs make clear, there are not only many short-term effects from implementing these plans, there are also numerous long-term effects, such as the ongoing, long-term efforts to improve habitats and provide for increasing sage-grouse populations. On the context basis alone, the significance standard is clearly met and EISs must be prepared for any sage-grouse RMP amendments.

The CEQ regulations define 10 intensity factors that must be considered when determining significance. 40 C.F.R. §§ 1508.27(b)(1)-(10). At least three of those factors indicate significance relative to any RMP amendments: First, this is a highly controversial action. *Id.* § 1508.27(b)(4). That is clearly true with respect to public concerns, but even if the BLM only focuses on scientific controversy, there is no doubt there is a great deal of debate about the scientific merits of the current plans, and BLM's plans for review of them. The recommendations in the Report raise many scientific controversies, such as the plan to consider captive breeding as a means to augment sage-grouse populations and the plan to base management on population

[25] . *See* https://www.blm.gov/programs/fish-and-wildlife/sagegrouse/state-sagegrouse-efforts and https://www.blm.gov/learn/blm-library/subject-guides/greater-sage-grouse-subject-guide/greater-sage-grouse-subject-guide-documents-and-resources (presenting the EISs and the records of decision).

objectives. The scientific controversy of these ideas was shown by the WAFWA white papers that are included in the Report and by the scientists' letter which was discussed above.
The effects of these proposals on the human environment are also highly uncertain and involve unique or unknown risks. 40 C.F.R. § 1508.27(b)(5). The outcomes of mitigation to protect sage-grouse populations are far from certain and involve many unknown risks of success. Plans to eliminate SFAs and even possibly PHMAs and GHMAs would raise many unknown risks, as shown by the deep scientific analysis that underlaid the 2015 Sage-grouse Plans. Modifying oil and gas lease prioritization guidance and modifying or even eliminating lek buffers and density and disturbance caps would raise many unknowns.

Amending the 2015 Sage-grouse Plans also raises issues regarding the cumulative impacts of these plans when considered alongside the many other actions affecting our public lands. 40 C.F.R. § 1508.27(b)(7). Clearly the level of cumulative impacts rises to the level of significance. "Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts." *Id.*

The CEQ regulations also make potential adverse impacts on an Endangered Species Act-listed species a factor to consider when determining intensity. 40 C.F.R. § 1508.27(b)(9). While the sage-grouse is not listed, it is a BLM sensitive species and the BLM should consider intensity from that vantage point.

We also note that impacts can rise to the level of being intense, and therefore significant, even if they are beneficial. 40 C.F.R. § 1508.27(b)(1). There is no doubt that the current plans have beneficial impacts, and we suspect BLM will view any modifications to the plans that it proposes as being beneficial. And the unique characteristics of an area also can contribute to significance. *Id.* § 1508.27(b)(3). There is no doubt that there are many, many unique (that is, wonderful) characteristics present in the 67 million acres of public lands that are covered by the sage-grouse plans.

The "severity of impact" that will result from any changes to the 2015 sage-grouse Plans is intense, and therefore significant, so an EIS(s) must be prepared if there are proposals to amend the plans. 40 C.F.R. § 1508.27(b). **Together the context and intensity factors clearly dictate preparation of an EIS for any plan amendments, not an EA.**

C. Plan maintenance can be used in narrow circumstances to make small-scale changes to land use plans.

Under BLM's regulations governing land use plans developed pursuant to FLPMA, provision is made for developing land use plans in the first instance but then provisions are made for amending existing plans or engaging in a "maintenance" action for such plans. 43 C.F.R. §§ 1610.5-4 and 1610.5-5. An amendment is needed when several conditions develop, including "a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan." *Id.* at § 1610.5-5. Amendments can be made through development of an EIS or an EA and shall comply with the public involvement provisions of section 1610.2.

Maintenance actions are used to reflect "minor changes in data." 43 C.F.R. § 1610.5-4. They further refine or document previously approved decisions. *Id.* Maintenance does not require the formal public involvement and interagency coordination processes for plan amendments that are prescribed in the BLM planning regulations. *Id.* Neither an EA or an EIS is required for maintenance; however, BLM must document the maintenance action in in the plans and supporting documents. *Id.*

The BLM is unclear about whether amendments or maintenance actions will be used to address the recommendations in the Report. BLM states that it "intends to consider the possibility of amending some, all or none of the BLM land use plans that were amended or revised in 2014 and 2015 . . . ." 82 Fed. Reg. 47248 (Oct. 11, 2017). "This Notice and potential planning effort does not preclude the BLM from addressing issues and inconsistencies through other means, including policy, training, or plan maintenance, nor does it commit the BLM to amending some, all, or none of the Greater Sage-Grouse plans." *Id.* at 47249.

Yet the recommendations in the plan make it clear that many of the actions would need to be accomplished via land use plan amendments. To accomplish many of the recommendations in the Report there will need to be "a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan", 43 C.F.R. § 1610.5-5, meaning land use plan amendments are required for any such meaningful changes.

Some other recommendations in the Report, particularly the short-term actions, might be suitable for maintenance actions or addressed through personnel training. But again, the BLM does not say when this will be the case.

We believe the BLM needs to evaluate the actions it is going to take for all of these recommendations and publish its plan as to whether it will amend, issue a maintenance action, issue new policy or engage in more training of personnel. **The public deserves to know what actions will be accomplished via mere maintenance actions, what policy or training BLM intends to issue, and what actions will need to be accomplished via land use plan amendments before the agency takes action**. The BLM should then open its process plans to public comment and involvement.

As we have made clear throughout these comments, we believe land use plan amendments should not be pursued as part of this review process. To do so based on the recommendations in the Report will lead to a weakening of the plans, which represent a vast scientifically-based collaborative process that was engaged in by many stakeholders. There will also likely be a need to list the sage-grouse under the ESA when the FWS completes its review in 2020 if the plans are weakened, as proposed in the Report.

Even for maintenance actions, where compliance with the planning rule public involvement provisions is not required, the BLM should still give the public an opportunity to engage. The prior level of public engagement in the sage-grouse land use plan amendments demonstrates the high level of public interest in sage-grouse management and planning. And, as the Report makes clear, not just one or two maintenance actions might be pursued; in fact, a dozen or more could

be developed. The sum of these maintenance actions could be significant, so the public should be given a chance to engage in them. This group of actions would not be a "one off" situation, which is what BLM's planning regulations contemplate for maintenance actions; rather, it would represent cumulatively significant actions and impacts, so public involvement is needed.

While BLM's regulations do not require the same level of public involvement as is required for amendments, the regulations do not prohibit providing for public involvement in plan maintenance actions. *See* 43 C.F.R. § 1610.5-4. And as the public involvement provisions provide, they apply not only to development of plans in the first instance and plan revisions and amendments, but also apply to "related guidance" where the public is to be given an opportunity to "meaningfully" participate and the public is to be given "early notice of planning activities." *Id.* § 1610.2(a). And maintenance actions are to be "documented in plans and supporting records." *Id.* § 1610.5-4. Accordingly, there should be meaningful opportunities for public engagement in any plan maintenance actions, especially if the count of these actions is more like 15 or 20 than 1 or 2.

Similarly, there should be opportunities for public engagement in BLM's overall approach to using amendments, maintenance, policy guidance and/or training to accomplish changes to the 2015 Sage-grouse Plans. **Given the importance of the overall structure of the 2015 Sage-grouse Plans, BLM should provide stakeholders, including the cooperating state agencies, local governments and other stakeholders, with an opportunity to provide input on all aspects of the potential changes to the 2015 Sage-grouse Plans before actions are taken or changes are made.**

D. BLM must coordinate with the Forest Service in ensuring adequate public review before changes are made to the 2015 Sage-grouse Plans.

On November 21, 2017, the Forest Service issued a formal Notice of Intent to consider amendments to its land management plan amendments that parallel the BLM's 2015 Sage-grouse Plans. 82 Fed.Reg. 55346. The Notice of Intent states that:

> The Forest Service intends to continue to work as a cooperating agency with the BLM in their planning process. This notice and the potential planning effort do not preclude the Forest Service from addressing issues through other means, including policy, training, or administrative changes, nor does it commit the Forest Service to amending some, all, or none of the greater sage-grouse plans.

Comments on this scoping process are due on January 5, 2018. No additional public meetings have been set at this time, so it is not clear how the Forest Service will be provided with the input BLM received at public meetings. BLM must ensure that the Forest Service is supplied with the input it receives, both from the recent public meetings and through this written comment process. Similarly, since the BLM and Forest Service plans work together across the range of the greater sage-grouse, BLM must ensure it receives and takes into account comments submitted to the Forest Service and its proposed approach to changing the 2015 Sage-grouse Plans before taking actions. Further, the two agencies should coordinate preparation of NEPA documents to ensure the full range of direct, indirect and cumulative effects are taken into account across both BLM

and Forest Service plans, and the public is provided an opportunity to review and comment on such analyses.

VI. IMPROVEMENTS TO 2015 SAGE-GROUSE PLANS AND STATE-SPECIFIC COMMENTS.

In addition to the comments regarding the overall changes to the 2015 Sage-grouse Plans, we are providing specific recommendations that are focused on improvements to the 2015 Sage-grouse Plans, as well as comments that focus on certain states.

A. Additional measures to strengthen the 2015 Sage-grouse Plans.

While we strongly recommend not weakening the 2015 Sage-grouse Plans, there are aspects of the plans that could be strengthened. For example:

1. Evaluating grazing measures based on site conditions.

BLM should issue new guidance regarding management of livestock grazing in grouse habitat pursuant to the 2015 Sage-grouse Plans. The lack of clear guidance has led to misunderstandings regarding decisions made in the plans and decisions to be made based on site-specific conditions. Guidance should clarify:

- No lands are closed to grazing in the grouse plans;
- Achieving habitat objectives for vegetation (such as grass or forb height) will be evaluated based on a specific site's ability to meet those conditions; there are no hard and fast requirements;
- Changes to management, including grazing practices, based on not meeting habitat conditions, will be based on the specific site conditions and determinations as to what activity is actually causing the habitat impacts. In other words, only if grazing activities are causing habitat impacts and if changing those activities can be expected to improve conditions will changes to authorized grazing be made.

2. Prioritizing oil and gas leasing and development outside sage-grouse habitat.

BLM should issue additional guidance regarding prioritizing oil and gas leasing and development outside sage-grouse habitat. This guidance should reiterate that such prioritization is an important requirement of the plans. Unfortunately, BLM's current guidance does not actually provide direction consistent with the plans. The 2015 Sage-grouse Plans make the intent of this requirement clear stating:

> In addition to allocations that limit disturbance in PHMAs and GHMAs, the ARMPs and ARMPAs prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs. This is to further limit future surface disturbance and encourage new development in areas that would not conflict with GRSG. This objective is intended to

guide development to lower conflict areas and as such protect important habitat and reduce the time and cost associated with oil and gas leasing development by avoiding sensitive areas, reducing the complexity of environmental review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation. *See* Rocky Mountain ROD, p. 1-25.

BLM should issue stronger guidance directing BLM personnel to take actions that will actually limit new leasing and development in sage-grouse habitat that can be avoided, including focusing on leasing parcels that have higher potential for development and less potential to harm sage-grouse habitat.

In light of BLM's stated approach of evaluating the 2015 Sage-grouse Plans in terms of how they affect energy development, it is important to note that the majority of federal lands within sage-grouse priority habitat have zero to low assumed potential for oil and gas development production. [26] Similarly, the majority of federal lands identified as having high or medium oil and gas development potential are located outside priority sage-grouse habitat.[27] Moreover, the use of directional drilling technology means that most oil and gas resources can continue to be developed, even if they are under important sage-grouse habitat.

B. States should be able to experiment with different mitigation approaches.

If state programs meet the standards in the 2016 Mitigation Report, then those programs should be available to accomplish mitigation required under the Plans. All states rely on mitigation as part of their approach to conservation of the greater sage-grouse. Where impacts are unavoidable, state mitigation programs, including compensatory mitigation and ratios that exceed 1:1, should be implemented. If BLM decides to recommend minimum standards, states should be able to exceed those standards.

C. Specific elements of state plans.

Certain state BLM plans have tailored aspects that should be maintained, while others should be improved.

1. <u>The exemption for certain multi-state transmission lines from mitigation should be removed</u>.

Most of the state-specific 2015 BLM Plans provide for both PHMA and GHMA to be classified as "avoidance" for large-scale transmission lines, subject to special stipulations prior to authorization. An exception is made, however, for certain transmission lines, such as the

[26] *See* http://westernvaluesproject.org/wp-content/uploads/2014/10/Greater-Sage-Grouse-Priority-Habitats-and-Energy-Development.pdf (report by Backcountry Hunters and Anglers).
[27] *Id.*

TransWest and Gateway South Transmission Line projects, where review is "well underway" and BLM is analyzing mitigation measures through those processes.

The special stipulations that would apply to transmission lines other than these specific lines were detailed in the Proposed Amendments and provide that:

> In GRSG PHMA or GHMA managed as avoidance, ROWs/Special Use Authorizations may be issued after documenting that the ROWs/Special Use Authorizations would not adversely affect GRSG populations based on the following criteria:
> • Location of proposed activities in relation to critical GRSG habitat areas as identified by factors including, but not limited to, average male lek attendance and/or important seasonal habitat
> • An evaluation of the potential threats from proposed activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see Chapter 2, Section 2.6.3, Regional Mitigation)
> • An evaluation of the proposed activities in relation to the site-specific terrain and habitat features. For example, within 4 miles of a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.
>
> Any new projects within PHMA would be subject to the 3 percent disturbance cap as described in Appendix H, Guidelines for Implementation. If the 3 percent disturbance cap is exceeded in PHMA in any Colorado Management Zone, no new ROW would be authorized in PHMA within that Colorado Management Zone, unless site-specific analysis documents no impact on GRSG. See, e.g., Northwest Colorado, Proposed Amendment at p. D-8, Management Action #10.[28]

The Northwest Colorado Proposed Amendment further provides:

> All authorizations in these areas, **other than the excepted projects**, must comply with the conservation measures outlined in this Proposed LUPA, including the [Required Design Features] RDFs and avoidance criteria presented in this document." Proposed Amendment at p. 2-16.

Unfortunately, none of the exempted transmission lines will be subject to these protective measures, even though they will still contribute to surface disturbance, impact the surface disturbance caps in the affected areas and impact other potential land uses. The exemption should be removed from the plans and/or the plans should clearly address how these projects will be managed to ensure they do not undermine the overall purpose of the plans.

[28] https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=48134

2. Wyoming plans are tied to the State's Core Area Strategy and that balance must be maintained; relatively minor changes are needed.

The Wyoming Approved Resource Management Plan Amendments for Sage-grouse (ARMPA[29]), completed as part of the 2015 Sage-grouse Plans, complement the Wyoming Sage Grouse Conservation Strategy as set forth in the Sage Grouse Executive Order (SGEO). The SGEO has been implemented statewide across all land ownerships since 2010 in conjunction with the BLM and USFS permitting processes. This is an important detail the BLM should consider, since no other sage-grouse state has the number of energy development permits administered jointly by state and federal agencies. The goal of this parallel effort is to conserve the greater sage-grouse while reducing administrative redundancy for development proponents. The Density and Disturbance Calculation Tool (DDCT) is used by the Forest Service, the BLM and Wyoming State permitting agencies to determine compliance with sage-grouse protection measures. The nine other states (MT excepted) chose not to create a regulatory mechanism to conserve sage-grouse. Instead the nine other states have opted to provide voluntary efforts by the state which in turn required federal agencies to devise and implement enforceable sage-grouse conservation measures.

The long-term conservation of the greater sage-grouse and continued development of Wyoming's energy-dependent economy are intertwined, and both depend on carefully crafted policies and actions affecting state, private and federal mineral and surface ownership. The existing consensus-based ARMPAs reflect that reality. Without a coordinated effort, involving all land and mineral owners and the land and wildlife management agencies, both conservation and economic interests would suffer. Changing the ARMPA will provide inconsistencies with state regulatory efforts and potentially upset the delicate balance that has been achieved between conservation and development interests. There should be no reduction in or weakening of the consensus-based conservation measures currently in place on federal land, as this would result in an imbalance in management for Federal, State and private lands.

The Wyoming ARMPA mirrors the SGEO closely and few modifications are needed. We believe that the vast majority of issues can be clarified with one or more maintenance actions, policy guidance or a narrowly focused supplemental EIS. Changes to the Wyoming ARMPA would require a full RMP amendment process.

The following highlights key elements of the ARMPA to retain and areas where clarifications can be made. Any Wyoming Cooperator meetings should be open for the public to attend.

(a) Minor map adjustments should not require plan amendments.

There have been 4 versions of PHMAs and connectivity areas mapped in Wyoming. With each version the maps have been refined to provide better information to land managers about the presence of sage-grouse habitat and sage-grouse. Just prior to the ARMPA ROD, Wyoming updated the PHMA/Core Areas to Version 4. This resulted in 282,000 of BLM - managed surface acres statewide (387,000 acres of BLM-managed oil and gas estate) added to PHMA. Version 4 increased designated core area/PHMA by 5%. The BLM readily accepts updated data

[29] https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=18704

and maps of crucial habitats from the State Wildlife Agencies without amending an RMP. The change in designation of PHMA from Version 3 to Version 4 would fall as an updated crucial habitat map under the category of a maintenance action.

The ARMPA allows such adjustment for Winter Concentration Areas in the following management direction:

> MD SSS10: Protection of additional mapped winter concentration areas in GHMAs would be implemented where winter concentration areas are identified as supporting populations of sage-grouse that attend leks within PHMAs (core only). Appropriate seasonal timing restrictions and habitat protection measures would be considered and evaluated in consultation with the WGFD in all identified winter concentration areas.

Map adjustments for sage-grouse PHMA should be allowed as adjustments are made for other species.

(b) SFAs should remain in the ARMPA.

As discussed above, SFAs represent the best sage-grouse habitat within a field office.

The WY BLM direction for SFAs includes:

> **MD SSS 14:** Designate SFAs as shown on Map 1-2 (should be Map 2-1)(1,915,990 acres - *38% of BLM PHMA acres*). SFAs will be managed as PHMAs, with the following additional management:
> 1) Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights, the lands shown in Map 2-3 (252,160 acres), and
> 2) Prioritized for vegetation management and conservation actions in these areas, including, but not limited to land health assessments, wild horse and burro management actions, review of livestock grazing permits/leases, and habitat restoration (see specific management sections).

In Wyoming only 13% of the core areas would see federal mineral withdrawal and because of previous planning the withdrawals occur in low mineral recovery potential areas. The withdrawal would represent 1% of the 21,251,690 available mineral acres. We request that the direction for SFAs in Wyoming continue to be processed for withdrawal and the prioritization for vegetation management also remain within the ARMPA.

We also believe that Item #2 is not an extra burden for grazing permittees. The language only prioritorizes reviews in SFAs. There are no other limitations or closures within SFAs in Wyoming.

(c) Clarify application of livestock grazing management.

We believe concerns raised by certain parts of the livestock industry regarding threats to future of grazing permits are based on a misunderstanding of the actual provisions of the ARMPA. Specifically the Conservation Objectives Team and the SGEO refer to issues with **improper** grazing and not proper grazing (Page 19).

The ARMPA states*:*

> The NEPA analysis for renewals and modifications of grazing permits/leases will include specific management thresholds, based on the GRSG Habitat Objectives Table (Table 2-2), Land Health Standards and ecological site potential, to allow adjustments to grazing that have already been subjected to NEPA analysis).

However, Table 2-2 contains footnote 6, which states**:** "All Desired Conditions will be dependent upon site capability and local variation (e.g., weather patterns, localized drought, Ecological Site Description (ESD) state, etc.)." This footnote should be expanded upon by the BLM to provide better clarification to Wyoming BLM Field Offices.

Aside from these clarifications, the current direction in the ARMPA should be retained. The management directions are part of healthy rangeland efforts for proper grazing; and improper grazing practices should be corrected – and should have been even without the amendments.

(d) Required Design Features (RDF) should not be removed.

Industry has suggested that the RDFs in the WY ARMPA are onerous. This section of the ARMPA requires the BLM to review the design features that are outlined for consideration and applicability to the specific site and document why they are not being used. Almost all of these design features are already found in the BLM's Gold Book, previous RMPs, current management direction or other agency instructional memorandum. Very few of the design features labeled as RDFs are new. It appears that the BLM is mainly stating an expectation that project proponents will reduce their footprint on the landscape and protect important resources; and consider this goal in designing proposed projects. The ARMPA explains this flexibility. Appendix C states (emphasis added):

> RDFs are required for **certain** activities in GRSG habitat. RDFs establish the minimum specifications for **certain** activities to help mitigate adverse impacts. **However, the applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known.**

(e) Density and Disturbance Limits must be maintained.

The BLM Review of the ARMPAs indicates that there are variations among states in how no surface occupancy (NSO), density and disturbance calculations are completed, but there is not a resulting discrepancy in the protection of the sage-grouse. The differences are due to the fact that several of the states chose not to pursue a state and private land/minerals regulatory mechanism, while others, such as Wyoming, take into account all land ownership.

The density and disturbance calculations in Wyoming have been in place since 2012. Wyoming's landscape approach allows for flexibility in determining development activities while protecting sage-grouse. They should be maintained in its present form.

(f) Protection for Winter Concentration Areas must be strengthened.

It has never been the intent of the wildlife and land management agencies to limit protection for winter concentration areas to timing stipulations. This was an oversight in the editing of the ARMPA. The ARMPA and MD SSS10 should contain additional language to protect wintering sage-grouse and the habitat on which they depend. The stipulation for MD SSS10 contains the need for protective measures. Wyoming is working to define the conservation measures necessary to protect wintering sage-grouse.

> ***MD SSS 10 Stipulation: Sage-grouse winter concentration areas:***
> Surface disturbing and/or disruptive activities in sage-grouse winter concentration areas would be prohibited from December 1–March 14.
>
> Activities in unsuitable habitats within PHMAs would be evaluated under the exception and modification criteria and could be allowed on a case-by-case basis.
>
> Protection of additional mapped winter concentration areas in GHMAs would be implemented where winter concentration areas are identified as supporting populations of sage-grouse. Appropriate seasonal timing restrictions and habitat protection measures would be considered and evaluated in consultation with the WGFD in all identified winter concentration areas.

(g) Mitigation (avoidance, minimization, net conservation gain and no net loss) must be retained in the BLM's sage-grouse conservation plans.

Unfortunately, for the past several decades, the BLM has demonstrated a narrow view of its mitigation responsibilities, focusing mostly on minimizing impacts when permitting activities in sage-grouse habitat, with little attention paid to avoidance, nor to offsetting, or compensating for, the continued loss of habitat. However, with the approval of the ARMPA in 2015, the BLM finally acknowledged its responsibility to manage its activities with the intent of full habitat restoration. Because the BLM failed to properly mitigate the impacts from, previous permitted activities, past reclamation delays and failures have resulted in significant cumulative loss of habitat. Not only did past policy negatively affect the directly impacted habitat, delays and failures have led to the creation of additional threats in non-developed areas, for example, through the spread of invasive plant species such as cheat grass.

The Wyoming ARMPA directs the BLM in PHMA to: *Require and ensure mitigation that provides a net conservation gain to GRSG for actions that result in habitat loss and degradation.* We applaud the BLM's effort to continue to restore the habitat that previous administrations impacted through improper compliance and a lack of mitigation actions.

We agree that avoidance and minimization should continue to be the first steps the BLM and the proponent should take. It is easier and more effective to avoid and minimize habitat loss. It is very difficult to apply compensatory mitigation for the loss of effective sage-grouse habitat unless the habitat is already in place and is functioning as at least one of the sage-grouse's key life cycle habitats. Keeping important sage-grouse habitat intact is the most effective conservation measure for the sage-grouse. However, economic and political interests rarely allow the BLM to pursue avoidance due to valid existing rights, and with the BLM proposing to remove required design features, BLM could also be limiting its tools to apply minimization.

The ARMPA directs mitigation to be coordinated with proponents in a collaborative manner:

> **MD GMD 2:** Field offices will work with project proponents, partners, and stakeholders to avoid or minimize impacts and/or implement direct mitigation (e.g., relocating disturbance, timing restrictions, etc.), and utilize best management practices (BMP). When necessary, offsite compensatory mitigation will be applied consistent with Wyoming's Core Area Strategy.

Concerns about mitigation unduly and unnecessarily burdening energy development are unfounded. The BLM has the authority and responsibility to require all forms of mitigation and should retain these requirements in the plans.

(h) Effective adaptive management and monitoring measures must be maintained.

Although much is known about sage-grouse behavior in relationship to anthropogenic activities and disturbances, it remains difficult –due to the range of activities permitted in sage-grouse habitat - to establish precisely which activity creates the habitat degradation that may lead to population loss from which recovery is not possible. Because of the delay in population response to disturbances, it could be three or more years before a downward population trend is noted. It is important, therefore, to look at all activities that have taken place during the previous three to five years to determine if the cause or causes of population loss can be identified. Accordingly, monitoring of both habitat and population is necessary. In Wyoming, the strategy involves a collaborative approach to monitoring that tracks habitat loss from permitted activities, habitat gain through restoration, and population cycles. It is necessary to monitor both in order to determine long term non-cyclical trends. The State of Wyoming and the Wyoming BLM have been working together since 2010 creating, modifying and testing the strategy, and have an established track record with respect to carrying out adaptive management. The BLM's Washington, DC office should refrain from taking any action that would interfere with or disrupt these important and ongoing collaborative monitoring efforts.

3. <u>Protections for general habitat in Utah should not be eliminated; they should be strengthened.</u>

The Review Team Report includes evaluation of removing GHMA as a classification in the Utah plan amendment. The COT Report states that conservation of sage-grouse habitats outside of priority areas for conservation may be essential, since these areas also have the potential to provide important habitat. This is to ensure that seasonal habitats not included in priority areas receive some protection, and to allow for expansion of recovering populations into newly restored areas. In addition, general habitat can serve as a location for mitigation and restoring degraded habitat. The 2015 plan for Utah does not include any special stipulations for oil and gas leasing. The GHMA classification should be retained in the Utah RMP Amendments and should be strengthened to include protective stipulations.

4. Colorado stakeholder outreach effort should be evaluated.

The State of Colorado is seeking consensus around a narrow set of changes to the Northwest Colorado RMP Amendments. We generally support these efforts and hope to be part of reaching consensus. Specifically, we support:

- Providing a mechanism to update habitat maps on a regular basis working collaboratively with the Colorado Division of Parks and Wildlife and local governments and ensuring accuracy.
- Clarifying the manner in which lek buffer distances will be applied as a management prescription or an element of analysis.
- Applying a no surface occupancy stipulation within one mile of an active lek (instead of a closure to leasing), provided such stipulation is not subject to waiver, exception or modification.
- Clarifying the role of FWS in approving waivers, exception or modification to no surface occupancy stipulations in PHMA.
- Endorsement and use of suitable state compensatory mitigation efforts in the BLM plan.

Thank you for considering our comments. We hope to see these recommendations reflected in the next steps that the BLM takes in regard to the 2015 Sage-grouse Plans. Please provide all future information regarding this process to the undersigned.

Very truly yours,

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Attachments:
1. The Wilderness Society and Audubon Society Analysis of August 4, 2017, Report.
2. Letter from The Wilderness Society to Acting Director, Bureau of Land Management, August 15, 2017.
3. Sage-Grouse Task Force Compensatory Mitigation Report, December 2016.
4. Letter to Secretary Ryan Zinke from Dr. Matt Holloran, et al., October 13, 2017.

Analysis of Secretary Zinke's August 4, 2017 Memorandum and Report in Response to Secretarial Order 3353

This document provides an overview of key implications of concern and areas for pushback in response to the Secretary's August 4th Memo and the Report issued in Response to Secretarial Order 3353 , which called for this review of the 2015 Sage-Grouse Plans.

The sage-grouse plans were premised on a few key principles: identify the habitat areas that are the most important to protect and implement science-based measures to protect those places.

Our concerns with the Secretary's Memo and Report fall into two major categories – (1) removing key elements of the plans - both by shrinking what areas are protected and by weakening how they are protected and (2) the process through which the next steps will go forward.

1. **Key elements of the plans are targeted for removal or modification, putting the structure, function and reliability of the plans at risk.**

As the Western Governors Association's Sage-Grouse Task Force has stated, including in the context of the review being conducted by the Department of the Interior, while there may be opportunities to improve the 2015 Sage-Grouse Plans, wholesale changes are not likely needed.

There are a number of elements of the plans that must be maintained in order to support U.S. Fish and Wildlife Service's continued confidence that listing isn't needed and to ensure the greater sage-grouse and the more than 350 species that depend on these lands are not put at risk.

The structure of the plans was developed to provide the greatest protection to the highest value habitat while providing more flexibility for other uses and activities to occur in lower value habitat or outside habitat altogether. In addition, the plans ensure ongoing monitoring and adjustment to ensure they are succeeding as we move toward interim reviews by the USFWS that confirm whether or not the 2015 listing decisions as "not warranted" will remain justified.".

a. The Memorandum and Report focus on accommodating oil and gas development

Promoting oil and gas development as a guiding priority is fundamentally at odds with the purpose of the plans, which was to identify the habitat areas for which conservation is the priority, and is not a robust commitment to conserving greater sage-grouse. Yet the report states: 'There are multiple opportunities to be responsive to the Executive Order on "Promoting Energy Independence and Economic Growth" and the Secretarial Order on "American Energy Independence," while continuing a robust commitment to the conservation of GRSG.' Report, p. 5. This approach is also in keeping with Secretarial Order 3353, which stated: "The review will include identification of . . . provisions that may require modification or rescission, as appropriate, in order to give appropriate weight to the value of energy and other development of public lands..." S.O. 3353, p. 3.

The intent here is further highlighted in the Secretary's Memo that identifies actions to be priorities: "Modify or issue new policy on fluid mineral leasing and development, including the prioritization policy." Memo, p. 1.

b. Removing Sagebrush Focal Areas

Sagebrush Focal Areas, are a subset of priority greater sage-grouse habitat defined as "strongholds" for the bird in the 2015 Sage-Grouse Plans. SFAs receive the highest protective measures and also serve as the basis for recommendations for mineral withdrawal. The SFAs were temporarily protected from new mining claims in September 2015 and a Draft Environmental Impact Statement was released this year to evaluate alternatives for moving forward with mineral withdrawal.

Nonetheless, the report includes consideration of a "[p]otential plan amendment to consider removing SFA designation…" Report, Appendix A, p. 17.

c. Revising habitat boundaries

In addition to removing the SFAs, the report also contemplates plan amendments to change all other habitat designations, including both Priority Habitat Management Areas and General Habitat Management Areas. This would affect the conservation measures required for activities such as oil and gas development, but also other types of energy development and other surface-disturbing activities. Report, Appendix A, p. 17. The Report also contemplates eliminating the classification of GHMA altogether in Utah, which would reduce the lands subject to conservation measures in the state. Report, Appendix A, p. 18.

d. Removing and undermining enforceability of oil and gas lease stipulations

The report contemplates removing protective stipulations (such as "conditional surface use") in General Habitat Management Areas. Report, Appendix A, p. 1. The Report also contemplates eliminating the classification of GHMA altogether in Utah, which would reduce the lands subject to conservation measures. Report, Appendix A, p. 18.

The report contemplates removing the currently required approval from the U.S. Fish and Wildlife Service before BLM can approve waivers, exceptions and modifications of lease stipulations (i.e. habitat protection requirements), in particular the "no surface occupancy" stipulations that protect priority habitat from destruction, as well as broadening the set of circumstances that can justify waivers, exceptions and modifications. Report, p. 5; Report, Appendix A, p. 1. USFWS was focused on ensuring certainty for conservation measures, so meaningful sideboards on waiver, exception or modification of these stipulations is a foundation for the USFWS finding that the plans will succeed and listing was no longer needed. The BLM does not currently track how stipulations are waived, excepted, or modified and may be undermined through these processes (http://www.gao.gov/assets/690/684254.pdf). To ensure the exceptions do not swallow the rules, more concrete procedures are needed.

The report also looks to rescind agency guidance on prioritizing leasing outside of important habitat areas and contemplates plan amendments to change this policy. Report, Appendix A, p. 2. Notably, the commitment to prioritize leasing and development outside of habitat is set out in all of the individual plan revisions and amendments, as well as the records of decision for the 2015 Sage-Grouse Plans, and is also a factor cited in USFWS's 2015 decision to find listing of the sage-grouse was no longer warranted (*see*, https://www.fws.gov/greatersagegrouse/findings.php). Given that only a very small amount of land acreage was actually closed to leasing and drilling (less than 225,000 acres in Colorado, the rest of the plans in other states did not close lands as part of protecting sage-grouse habitat), this commitment is a vital part of showing that oil and gas development, a key threat identified by USFWS (https://www.fws.gov/greatersagegrouse/findings.php), is being managed effectively.

e. Lek buffers and surface disturbance caps

Lek buffers provide important protections around grouse breeding areas, but do necessarily limit activities like oil and gas development. Nonetheless, the report commits to "revisit the scientific literature pertaining to lek buffers ahead of initiating new science for buffers…evaluate a potential plan amendment to consider adjusting lek buffers…." Report, Appendix A, p. 16.

Surface disturbance caps are also vital to ensure that viable habitat remains intact. The report, looking to perceived inconsistences between states, includes a recommendation to consider plan amendments to change disturbance caps, stating (Appendix A, p. 2):

> If inconsistencies, then resolve using best available science and/or initiate new research to further clarify disturbance and density requirements for different types of uses, which may require future consideration of a plan amendment process.

While some states allow a higher percentage for disturbance, those states also count more activities as disturbance – thus, consistent results are currently being achieved and should not be risked.

f. Habitat Objectives Table

The habitat objectives were set out based on site-specific information and scientifically-based conditions that were and will be monitored, in order to set clear management goals for achieving functioning and identify when management changes may be necessary. The report commits to "[e]xplore the possibility to remove habitat objectives from the plans" and an "amendment to consider updating habitat objectives may be necessary." Report, Appendix A, p. 7.

g. Adaptive Management

The plans also contain "triggers" to ensure immediate actions are taken when monitoring shows habitat is at risk. The report will consider potential plan amendments for "allowing reversion to less restrictive decisions when habitat/population recovers to above original trigger" and "options for alternative approaches to hitting a hard trigger, such as a temporary suspension…" Report, Appendix A, p. 8.

Without the monitoring and resulting adaptive management, it will be difficult to both show the plans are succeeding and adjust the plans to ensure problems are addressed and remedied quickly.

h. Mitigation and net conservation gain

By designing appropriate mitigation measures, the plans provide a path forward for permitting more activities on the public lands that may harm greater sage-grouse habitat (such as activities that would otherwise exceed the scientifically-set surface disturbance caps) while ensuring those harms will be remedied to compensate for lost habitat (such as restoring habitat or protection for new intact habitat). Mitigation is a necessary part of the plans' structure to allow for development without compromising conservation and is also a key part of the management approaches taken by the western states, including those states that have formal sage-grouse conservation plans.

The Report looks to undermine this part of the structure, stating (Appendix A, p. 3):

> BLM plans have a net conservation gain standard while the State mechanisms have adopted differing standards…Consider the policy on options to use the State's mitigation standard if it meets the intent of the mitigation standard in the GRSG plans. If policy does not address the

concern, then consider a potential plan amendment to change the net conservation gain standard.

Mitigation measures have been developed based on years of experience with various industries that now rely on compensatory mitigation to provide certainty on requirements associated with development and assurances that the mitigation will be successful to actually compensate for the harm that has occurred. While these provisions in the plans can certainly be clarified, they must be maintained.

i. Additional measures that are not supported by accepted science.

Some of the actions focused on in S.O. 3353 and mirrored in the Memo and Report are not accepted by current science and will also undermine the function of the plans.

For instance, as detailed by the Western Association of Fish and Wildlife Agencies, focusing on population objectives or using captive breeding, are unlikely to be successful as tools to measure the status of the species or support its health. (*See* WAFWA Sage-grouse White Papers, available at: http://www.wafwa.org/initiatives/sagebrush_ecosystem_initiative/).

Nonetheless, and even acknowledging these concerns, the Report commits to fully consider use of these methods.

- "*B*ecause captive breeding of GRSG has not yet proven effective, requires expenditures that would limit funding availability for other priority efforts and may require the removal of potentially viable eggs from the wild, further work is needed to fairly evaluate captive breeding. **The DOI Team recommends that new captive breeding efforts continue to be investigated to improve effectiveness**." Report. p. 10 (emphasis added).

- "While States support efforts to estimate and explain populations, fluctuations, and trends, any such effort must recognize and account for the relationship between the species and its habitat...Ultimately, the best method for determining GRSG viability will be to assess a combination of habitat availability and populations, which are inseparable. **The DOI Team recommends that establishing Statewide or range-wide GRSG population objective or target should be pursued**." Report, pp. 10-11 (emphasis added).

Notably, USFWS's 2015 finding that BLM's sage-grouse plans provided the necessary measures to avoid an ESA listing was based "on the best available scientific and commercial information." DOI must continue to use the best available science and information going forward, or it will run the risk of undermining the sage-grouse plans and USFWS's 2015 finding.

2. <u>Process contemplated for moving forward could shut out the public and proceed without meaningful contemplation of impacts to the plans, the species and the ecosystem</u>.

The 2015 Sage-Grouse Plans were prepared over many years with millions of comments from the public and robust opportunities for stakeholder engagement. The radical recommendations in the Report were developed from a 60-day review period with no formal input from stakeholders, although the WGA Sage-Grouse Task Force was permitted an opportunity to participate after multiple requests. The next

steps for evaluating and ultimately implementing changes to the plans should include proactive and meaningful opportunities for involvement of all stakeholders.

Concerns from the Memo and Report include:

a. Directing agencies to act with all due speed

The Report (at p. 1) explicitly directs action to be taken as soon possible, including those with no requirement for public involvement and no such commitment is being made.

> Whenever possible, the options identified by the DOI Team provide near-term opportunities to resolve concerns and issues and achieve the purpose of the Order, including development of policies, clarification, memoranda of understanding (MOUs), and training, many of which can be completed within 6 months (see Section IV and Appendix A). The DOI Team also identified longer term options, including potential plan amendments, which would be completed in accordance with applicable laws and policies (see Section IV and Appendix A).

b. No DOI/BLM commitments to lead outreach or engage the public

Although DOI and BLM have mandates related to managing public lands for the American people and are acting with the backdrop of the collaborative effort that created the 2015 Sage-Grouse Plans, the only references to outreach defer to action from the WGA Sage-Grouse Task Force. While we appreciate the Task Force's engagement in the plans and its steadfast commitment to the overall structure, the federal agencies have a different mandate and much broader obligations to the public. The below statements are absolutely insufficient commitments to public outreach – they have no commitments by DOI or BLM to take any action.

- "As part of this effort, the BLM should collaborate with the Sage-Grouse Task Force to engage with stakeholders..." Memo, p. 1.
- "In coordination with the SGTF, initiate additional discussions with Congressional delegations, counties, local governments, and tribes, as well as ranchers, landowners, industries, conservation organizations, and other interested parties, to review the issues and recommendations included in this report, and identify any additional issues or recommendations for consideration. The DOI Team recommends that this outreach begin as soon as practicable after the report is submitted, continuing for approximately 2 months." Report, p. 13.

While we agree that there may be helpful improvements to the plans and that training of staff implementing the plans will be beneficial, decisions to make alterations should be made in the same collaborative spirit that brought so many stakeholders to the table originally and made them willing to accept balanced measures for the good of the grouse and the ecosystem in plans that recognize the multiple uses and users of America's public lands.

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August 15, 2017

Via electronic mail

Mike Nedd
Acting Director
Bureau of Land Management
1849 C Street NW, Rm. 5665
Washington DC 20240

Re: Review of 2015 Sage-Grouse Plans

Dear Acting Director Nedd:

We are writing to emphasize our interest and concerns in the review of the greater sage-grouse plans conducted pursuant to Secretarial Order (S.O.) 3353. The Wilderness Society has been engaging in efforts to conserve the greater sage-grouse for more than a decade, including in the plans developed by the Bureau of Land Management and U.S. Forest Service. We take pride in the collaborative efforts that resulted in the management plans signed in September 2015 and the finding by the U.S. Fish and Wildlife Service (FWS) that listing of the greater sage-grouse under the Endangered Species Act was no longer warranted. As part of implementing the recommendations of the August 4 Memorandum from Secretary Zinke and the Report from the Sage-Grouse Review Team, we urge you to take the following into consideration.

Maintain the critical elements of the 2015 Sage-Grouse Plans.

As the Western Governors Association's Sage-Grouse Task Force has stated, including in the context of the review being conducted by the Department of the Interior, wholesale changes are not likely needed although there may be opportunities to improve the 2015 Sage-Grouse Plans. There are a number of critical elements of the plans that must be maintained in order to support the finding of the FWS and to ensure the greater sage-grouse and the more than 350 species that depend on these lands are not put at risk.

1. Protect the highest value habitat.

The structure of the plans was developed to provide the most protections to the highest value habitat (thus ensuring it is sufficiently protected) while providing more flexibility for other activities to occur outside habitat and in other habitat areas. For example, while most plans did not close any lands to oil and gas development, no surface occupancy is permitted in priority

habitat management areas; development outside priority habitat is permitted subject to less restrictive conditions. Further, the vast majority of high and moderate oil and gas potential is outside of priority habitat.[1] Consequently, maintaining the overall structure of the plans to focus on protecting the highest value habitat is not only the most likely to succeed in conserving the species, it is also having limited impacts on activities like oil and gas development. It is essential for the functioning of the plans that Priority Habitat Management Areas (and/or Core Habitat), including Sagebrush Focal Areas, are maintained and provided with the most protections.

2. Maintain provisions to address the key threats to the greater sage-grouse.

In addition to invasive grasses and wildland fire, which are highlighted in S.O. 3353, FWS has identified other "leading threats" to the greater sage-grouse and its habitat. While these threats are particularly important in the Great Basin region, oil and gas development is identified as a primary threat in most of the Rocky Mountain region, except for Montana, where the principal threat is agricultural conversion. Further, development and habitat fragmentation are identified as priority threats by both the FWS and the states.[2]

Consequently, in order for the plans to be effective, provisions addressing energy development and other causes of habitat fragmentation must be incorporated. These provisions include:

- No surface occupancy provisions for oil and gas development;
- Similar direction on appropriate locations for development of wind, solar and transmission lines; and
- Limitations on the amount and timing of surface-disturbing activities, such as surface disturbance caps and buffers around leks.

Notably, these types of provisions are also integral parts of the approaches that western states utilize in managing and conserving greater sage-grouse, including in those states that have formal sage-grouse conservation plans.

3. Ensure unavoidable impacts to greater sage-grouse habitat are mitigated.

The 2015 Sage-Grouse Plans comply with the mitigation hierarchy (i.e., avoid impacts where possible; minimize impacts where avoidance is not practicable; and mitigate or offset unavoidable impacts) and this compliance is necessary for their success. By providing the greatest protection for the highest value habitat and setting out specific management provisions for different activities, the 2015 Sage-Grouse Plans seek to avoid or minimize impacts to sage-grouse habitat. Nonetheless, the plans also recognize that some harm to habitat cannot be sufficiently avoided or minimized, and therefore mitigation through compensatory actions is required to restore or replace the damaged habitat. Evaluation of mitigation is required by the

[1] *See* https://d3n8a8pro7vhmx.cloudfront.net/backcountryhunters/pages/3172/attachments/original/1497040181/Sage-Grouse_Energy_Overlap_Report_060917_(1).pdf?1497040181

[2] *See* https://www.fws.gov/greatersagegrouse/findings.php

National Environmental Policy Act[3] and management for multiple use and sustained yield and avoidance of unnecessary or undue degradation to these uses and values of the public lands (including wildlife) is required the Federal Land Policy and Management Act.[4] The BLM's current manual and handbook on mitigation (Manual 1794, Handbook H-1794-1) acknowledge the BLM's authority to condition land uses on mitigation and to deny approval of uses when impacts cannot be sufficiently mitigated.[5] Similarly, the Department of Interior's Manual on Mitigation "affirms its authority to identify and plan for the extent, nature, and location of mitigation, including compensatory mitigation, and to require the implementation of effective mitigation."[6]

By designing appropriate mitigation measures, the plans provide a path forward for permitting more activities on the public lands that may harm greater sage-grouse habitat (such as activities that would otherwise exceed the scientifically-set surface disturbance caps) while ensuring those harms will be sufficiently addressed to offset unavoidable harms (such as restoring habitat or providing intact habitat). Mitigation is a necessary part of the plans' structure and is also a key part of the management approaches taken by the western states, including those states that have formal sage-grouse conservation plans. Mitigation measures have been developed based on years of experience with various industries. These industries now rely on compensatory mitigation to provide certainty regarding requirements associated with development and assurances that the mitigation will be successful to actually offset the harm that has occurred. While these provisions in the plans can certainly be elaborated upon, they need to be maintained.

4. Provide for ongoing monitoring and adjustment of the plans.

In order to ensure that key goals of the plans are met, the plans must also be nimble - showing that any major problems (such as precipitous drops in population or habitat condition) will be identified and can be addressed quickly. The plans include a Habitat Objectives Table, Habitat Assessment Framework, and Assessment, Inventory and Monitoring procedures that provide for data collection and measurement of conditions and analysis. These elements of the plans yield detailed information to show that the plans are working. They can also feed into the plans' adaptive management framework, which leads to immediate action when certain triggers are met.

This constellation of tools is needed to demonstrate to FWS that its finding that listing is not warranted continues to be justified, including during the review expected no later than five years from the date the applicable records of decision were signed. While aspects of the adaptive management framework could be clarified going forward, its elements must be maintained.

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[3] *See* 40 C.F.R. §§ 1508.8, 1502.14, 1502.16.
[4] *See* 43 C.F.R. §§ 1701, 1732(b).
[5] *See, e.g.,* BLM Handbook, H-1794-1 Mitigation (P) (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM%20H-1794-1%20Mitigation%20FINAL.docx, and BLM Manual, MS-1794 Mitigation § 1.6.E.2 (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM_MS-1794%20Mitigation%20FINAL.docx
[6] See U.S. Dep't of Interior Manual, 600 DM § 6.5, Landscape-Scale Mitigation Policy (Oct. 23, 2015) https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf

Any changes to the 2015 Sage-Grouse Plans must be scientifically-supported.

We understand and support the need for additional clarifications regarding implementation of the 2015 Sage-Grouse Plans, including, for instance, updating habitat maps, elaborating on standards for mitigation and detailing various aspects of the monitoring and adaptive management process. Nonetheless, alterations to the plans, including both clarifications and more substantive changes, must be consistent with scientific standards.

For instance, as detailed by the Western Association of Fish and Wildlife Agencies, focusing on population objectives or using captive breeding, are unlikely to be successful as tools to measure the status of the species or support its health.[7]

In addition, current aspects of the plans, such as surface disturbance caps and lek buffers, are based on scientific consensus and cannot simply be ignored or reduced without accounting for the likely impacts from activities that would then harm grouse habitat, such as energy development. The scientific basis for the key provisions of the 2015 Sage-Grouse Plans, including the certainty in how they are applied, is the reason that FWS could rely on the plans to find that listing under the Endangered Species Act was no longer warranted. Any changes to the plans must meet this high standard.

Provide for public participation in implementation of the report.

Both the Secretary's Memorandum and the Report provide that BLM should work with the Sage-Grouse Task Force to engage with stakeholders, but does not commit the agency to public outreach or engagement. The Sage-Grouse Task Force is a key part of implementing the 2015 Sage-Grouse Plans and, as a vital partner in developing the plans, will also play a similar role in any changes. However, the Task Force is part of the Western Governors Association and does not owe the same obligation to the public as the BLM, which is obligated under its statutory mandate to manage the public lands for all Americans according to principles of multiple use and sustained yield.

BLM is subject to a multiple-use mandate, which prohibits the Department of the Interior from managing public lands primarily for energy development or in a manner that unduly or unnecessarily degrades other uses. *See* 43 U.S.C. § 1732(a).[8] Instead, the multiple-use mandate directs the agency to achieve "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations." 43 U.S.C. § 1702(c). Further, as co-equal, principal uses of public lands, outdoor recreation, fish and wildlife, grazing, and rights-of-way must receive the same consideration as energy development. 43 U.S.C. § 1702(l). The context of BLM's decisions requires the proactive engagement of the public.

[7] *See* WAFWA Sage-grouse White Papers, available at: http://www.wafwa.org/initiatives/sagebrush_ecosystem_initiative/

[8] *See also New Mexico ex rel. Richardson v. BLM,* 565 F.3d 683, 710 (10th Cir. 2009) ("It is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses.").

Where actions trigger the application of the National Environmental Policy Act (NEPA), BLM must make all diligent efforts to engage the public. NEPA requires BLM to meaningfully engage the public in analyzing the environmental effects of proposed federal actions, including soliciting and considering public comments, making "diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a). However, in this situation, BLM should not seek to avoid or delay public engagement unless or until there is a formal NEPA process.

The 2015 Sage-Grouse Plans were created with the input of millions of comments and extended efforts from a host of interested members of the public. Although the public was not provided an opportunity to provide input into the 60-day review that led to this report, numerous members of the public still echoed the input of the Western Governors Association's Sage-Grouse Task Force in urging that the fundamental structure of the plans be preserved. The BLM should not exclude the public from the evaluations that are being conducted pursuant to the recommendations in the report. Rather, the agency should provide opportunities for meaningful public participation as it considers and implements the report.

We appreciate the BLM's efforts to both implement and improve the 2015 Sage-Grouse Plans and hope these recommendations will be helpful. We would welcome the opportunity to discuss this letter and the ongoing process further at your convenience.

Sincerely,

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Report to the Sage-Grouse Task Force

Greater Sage-Grouse
Compensatory Mitigation

December 2016

I. Introduction

In December 2015, the Bureau of Land Management (BLM) provided a presentation to the Sage-Grouse Task Force (SGTF) addressing BLM's commitments made in its Greater Sage-Grouse (GRSG) Records of Decision (RODs), including the development of mitigation strategies. Following the presentation, the SGTF called for the formation of a group to discuss the implementation of mitigation requirements, including compensatory mitigation, across the range of the GRSG. The objective was to provide consistency and greater certainty for implementing mitigation across the range to better meet plan objectives and encourage private investment in mitigation.

This Report identifies the key principles for successful compensatory mitigation efforts for impacts to Greater Sage-Grouse (*Centrocercus urophasianus*) habitat, as identified by federal and state agency representatives through the discussions of the Greater Sage-Grouse Mitigation Workgroup (Workgroup). The Workgroup comprises representatives of the Department of the Interior (DOI), including the BLM and the U.S. Fish & Wildlife Service (FWS), the Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and U.S. Forest Service (USFS), and the States of Colorado, Idaho, Montana, Nevada, Oregon, Utah, and Wyoming (GRSG States).

The Workgroup met five times in 2016 to identify the key elements of compensatory mitigation programs and activities. The Workgroup discussed the varying approaches employed by DOI and USDA agencies and the GRSG States to mitigate impacts of land use activities on the species and its habitat. In addition to being responsive to the SGTF, BLM intends to use the final Report as technical guidance in evaluating state and other GRSG mitigation programs and to guide mitigation decision-making for residual impacts to GRSG habitat resulting from actions authorized or performed by the BLM.

The Report explains and builds upon BLM support for state GRSG mitigation programs to avoid, minimize, and compensate for unavoidable or residual impacts to GRSG and their habitat consistent with BLM's respective statutory and regulatory authorities, policies, and guidance. Appendix B of the Report provides a brief overview of the GRSG compensatory mitigation programs and efforts in the states of Colorado, Idaho, Montana, Nevada, Oregon, Utah and Wyoming.

This Report reviews the development of BLM's GRSG conservation strategies and BLM's adoption of a net conservation gain standard for GRSG mitigation actions, and sets forth BLM's proposed approach to implementing GRSG compensatory mitigation efforts in partnership with State mitigation efforts for the GRSG. It will be used by BLM to support and guide federal and state collaborative conservation efforts, in consultation with affected Indian tribes, where appropriate. It is also intended to clarify the need, opportunity, and approaches to compensatory mitigation for public land users, conservation interests, and other stakeholders.

II. Background

The GRSG has repeatedly been considered for listing as a threatened or endangered species under the federal Endangered Species Act (ESA). In 2010, the FWS determined that the listing of the GRSG was "warranted, but precluded" by other listing priorities. Subsequently, the FWS issued several documents that highlighted the conservation needs of the species. In February 2013, the FWS issued its Greater Sage-grouse Conservation Objectives: Final Report (COT Report), which identified threats to GRSG and its habitat and the degree to which those threats need to be reduced or ameliorated to provide for the conservation of the species (**USFWS 2013**). In 2014, the FWS issued the Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0 (GRSG Mitigation Framework) (**USFWS 2014**). The GRSG Mitigation Framework recommended the development of flexible and innovative mitigation approaches across the range of the GRSG, and the use of avoidance, minimization, and compensatory mitigation measures *to achieve a net conservation gain to the species* [emphasis added].

The 2010 FWS determination prompted substantial efforts by federal land managers and the GRSG States to develop conservation strategies and programs intended to address the conservation needs of GRSG and to avoid the need to list the species under the ESA. The BLM and the USFS, in collaboration with the GRSG States, developed a landscape-level management strategy to provide for the conservation of GRSG habitat and reduce impacts to GRSG from land use actions under their jurisdiction. That effort culminated in the execution by the BLM and the USFS of GRSG RODs in September 2015 which amended or revised 98 land or resource management plans to conserve, enhance, and restore habitat for the GRSG and other wildlife species dependent on healthy sagebrush-steppe landscapes (**BLM 2015a, 2015b and USFS 2015a, 2015b**). In June 2014 the BLM executed a ROD for the Resource Management Plan for the Lander Office Planning Area in Wyoming (**BLM 2014**) that includes a conservation strategy for GRSG. The RODs adopted GRSG conservation measures that generally call for:

- Achieving net conservation gain for GRSG;
- Avoiding and minimizing new and additional surface disturbances in priority and general habitat management areas;
- Compensating for unavoidable impacts to habitat;
- Reducing threat of rangeland fire and juniper encroachment to GRSG and sagebrush habitat;
- Monitoring and evaluating the effectiveness of conservation measures and implementing adaptive management; and
- Habitat assessment.

On October 2, 2015, the FWS published its determination that the GRSG did not warrant listing under the ESA. (**80 Fed. Reg. 59858 (Oct. 2, 2015)**). The FWS determined that based on the best available scientific information, the federal and state GRSG conservation plans and programs had significantly reduced the threats that had led to the 2010 determination, and declined to list the species. The 2015 decision relied significantly on the conservation commitments made by the BLM and the USFS in the RODs for amendments and revisions to

land use plans (LUPs) across the range of GRSG, state GRSG conservation efforts, and the federal agencies' development of new policy guidance and management direction for the management of wildfire and invasive plant species in the sagebrush ecosystems. The FWS also announced that it would review the status of the GRSG five years following its decision not to list the species, to allow the FWS to evaluate the success and effectiveness of the federal and state plans and private conservation efforts and to inform whether a formal revisitation of the 2015 determination was necessary.

III. Framework for Implementing GRSG Mitigation

A. Overview

Mitigation was identified as an essential mechanism in the federal LUPs for achieving the objective of avoiding and minimizing anticipated disturbance in GRSG habitat areas (identified primarily as Priority Habitat Management Areas (PHMAs) and General Habitat Management Areas (GHMAs) in each plan) and for restoring GRSG habitat to offset unavoidable disturbance through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions. The RODs included commitments to develop compensatory mitigation strategies in each WAFWA GRSG management zone to support achieving net conservation gain for the species.

As the GRSG LUPs were completed and implementation efforts began, several states had completed or had begun efforts to develop compensatory mitigation strategies to implement GRSG conservation measures on state and private lands. It became apparent that developing federal mitigation strategies for each WAFWA Zone would be redundant and could, in fact, create conflicts between state and federal mitigation strategies. As the GRSG States' mitigation strategies evolved, it became clear that the state mitigation strategies could contribute to achieving GRSG compensatory mitigation for development on federal lands. This recognition led to the establishment of the Workgroup and its charge to identify key principles for compensatory mitigation strategies, and to identify mechanisms to support and institutionalize collaborative state and federal GRSG mitigation efforts.

B. Collaborative Process

The Workgroup identified the need both for overarching consistency in certain fundamental principles of compensatory mitigation, and for the development of common metrics to be used to measure both mitigation requirements and the success and failure of compensatory mitigation actions. The Workgroup also identified the need to support innovation in compensatory mitigation programs and actions, recognizing that compensatory mitigation (particularly at the scale represented by the GRSG), is very much a developing practice.

While federal and state agencies are required to reserve and make all final decisions with regard to administration of public lands and wildlife under their respective authorities, those agencies recognize each other's regulatory jurisdiction, experience, and expertise regarding

GRSG and GRSG conservation. The Workgroup believes that GRSG mitigation efforts provide an opportunity for collaboration in addressing the potential adverse effects of certain management actions on state and federal lands and resources. In addition to federal land use planning efforts and commitments, the states have provided leadership and have invested significant time and resources in developing GRSG compensatory mitigation programs to conserve GRSG. Working together, federal and state governments will develop, support and implement a coherent and consistent compensatory mitigation practice across the range of the species.

GRSG conservation and the goal of avoiding the need for a future ESA listing for the species is best served by collaborative conservation efforts. The BLM is committed to working with the GRSG States individually and collectively to develop intergovernmental communication and decision-making mechanisms that will support and implement the BLM's commitment to utilize compensatory mitigation products meeting the requirements of the LUPs as well as the respective state's GRSG conservation and mitigation programs. Such mechanisms may be in the form of memoranda of understanding or similar vehicles between BLM and each (or potentially multiple) states. The BLM could utilize such agreements to support and further conservation efforts on a multi-state level. The BLM intends to partner with the GRSG States to the greatest extent possible in identifying and implementing effective mitigation measures, including compensatory mitigation, and achieving the net conservation gain standard for GRSG. Continued support and coordination with FWS in this effort is essential, particularly in light of that agency's anticipated future review of GRSG for potential listing under the ESA.

C. State Coordination

The Workgroup will continue to work to finalize a collective understanding of and commitment to the key principles for compensatory mitigation. The Workgroup members intend to identify the degree and manner in which the state compensatory mitigation programs provide compensatory mitigation that reflects the key principles set out in this document.

The purpose of this effort is to support the use of state GRSG mitigation products by the BLM and the USFS as appropriate and consistent with applicable policy, regulation, and law. The Workgroup anticipates these state program reviews would involve the USFS, the FWS, and the Natural Resource Conservation Service (NRCS), as well as the BLM, so that the GRSG States and mitigation providers and consumers (i.e., project proponents who commit to implementing compensatory mitigation) have greater assurance of consistency in mitigation requirements and greater assurance that their conservation efforts would be appropriately considered in conjunction with status reviews or in the event of a future GRSG listing, as applicable. The Workgroup believes that this process should be embodied in implementing memoranda of understanding or similar vehicles involving the individual states, which memorialize the collaborative process and approach to GRSG mitigation that underlies this Report.

The federal and state GRSG programs will continue to evolve. Accordingly, it is important that the federal and state partners continue to engage with each other in their respective policy

review and development efforts and ensure that their respective efforts remain consistent with and equivalent to the principles set forth in this Report.

IV. Key Principles

The Workgroup identified a set of "key principles" drawn from generally accepted attributes of effective compensatory mitigation efforts. The key principles include: (1) the use of a mitigation standard; (2) the use of best available science in mitigation decision making; (3) the requirement of a reasonable relationship between an impact and compensatory mitigation; (4) timeliness; (5) additionality; (6) duration; (7) durability; (8) risk Identification and management; (9) measurable outcomes and effectiveness monitoring; and (10) adaptive management. These principles are interrelated and cumulative. Each must be read (and implemented) in the context of the whole. The key principles are summarized below.

A. Mitigation Standard – Net Conservation Gain

Implementation of compensatory mitigation programs should be guided by a mitigation standard for the resources in question. The Workgroup identified "net conservation gain" as the appropriate mitigation standard for GRSG and is committed to achieving this standard through compensatory mitigation actions,[1] in combination with avoidance and minimization.

"Net conservation gain" refers to actual benefit or gain above baseline conditions. It means that mitigation actions should result in conditions where the long-term population prospects of the species are improved after mitigation actions are performed for activities impacting GRSG and/ or their habitat. "Net conservation gain" is intended to achieve a benefit or gain above baseline conditions, which includes accounting for uncertainty relating to the effectiveness of mitigation. The accomplishment of net conservation gain can be observed as a detectable improvement or functional increase in population trends, habitat quality, or occupied habitat quantity (as a proxy for populations) above baseline conditions. Actions that remove or ameliorate a potential threat to GRSG or its habitat from human activities (and which are additional to avoidance and minimization measures employed in connection with the action giving rise to compensatory mitigation obligations) are adequate for compensatory mitigation purposes when it can be shown that the actions will be biologically sound and meet the key principles outlined in this Report. Baseline, discussed in detail in Appendix A Section C. of this Report, means the pre-existing condition of a resource or a defined area, at all relevant scales (i.e., information is necessary at the site-, fine-, mid- and broad-scales), which can be quantified by an appropriate metric(s) or attribute(s). Baseline represents the affected environment that exists absent the action's implementation, and is used to compare predictions of the effects of

[1] The States of Idaho and Utah have challenged the BLM's authority for utilizing the "net conservation gain" standard in separate legal proceedings, but have participated throughout the Workgroup process. In a related lawsuit a number of Nevada plaintiffs, including the Nevada Attorney General and several Nevada counties, have also challenged the agency's authority to use a net conservation gain standard.

the proposed action. Compensatory mitigation actions that comply with a net conservation gain standard should have a positive influence on and lead to improvement of the conservation status of the resource.

With respect to GRSG, a detectable population-level change is not likely to result from each compensatory mitigation project implemented, but the resultant mitigation effort should be designed and expected to produce positive changes in GRSG habitat which, over time, are anticipated to result in a positive outcome for sage grouse populations. Determining whether positive changes in GRSG habitat can be anticipated will require the consideration of multiple factors, including but not limited to habitat quality, habitat quantity, seasonality of use of both impacted and mitigation habitats, habitat enhancement actions, and threats or risk to GRSG or GRSG habitat. Which factors are appropriate for consideration will depend on the nature and location of the habitat impact requiring compensatory mitigation, and the proposed compendatory mitigation solution. Where risk reduction or removal is an objective of mitigation efforts, both the magnitude of the threat in terms of the potential reduction in GRSG habitat values from incompatible uses or events (e.g., wildfire), and the likelihood that such uses or events will occur, should be considered. In practice, comparing the magnitude of the mitigation to the magnitude of the impact will assist in determining whether the mitigation measure will contribute toward achieving the net conservation standard.

B. Best Available Science

Mitigation decisions and efforts must be based on best available science.

C. Reasonable Relationship

The objective of compensatory mitigation is to address direct and indirect residual impacts that remain after avoidance and minimization measures have been applied. It is accomplished by replacing or providing substitute resources or environments through the restoration, creation, enhancement, or preservation of resources and their values, services, and functions (**600 DM 6**). To achieve this objective, a mitigation measure should provide habitat values, services and functions that bear a reasonable relationship to the lost values, service and functions for which mitigation is required, determined by reference to the conservation objectives of the mitigation requirement (here net conservation gain of GRSG).

GRSG use different habitat types at differing times, and for different life-history requirements. Application of the reasonable relationship principle does not require that impacted GRSG habitat resources automatically be replaced with in-kind habitat, without regard to whether the mitigation solution provides the greatest benefit to GRSG. Rather, the functions, values and services to be provided as mitigation should be demonstrably and rationally linked (1) to the significance to GRSG of the residual impacts in question, in light of (2) the ecological relationship between impacts and mitigation benefits to accomplishing net conservation gain. In some circumstances, *in kind* mitigation for habitat types (e.g., an impact to nesting habitat offset with restoration of nesting habitat functions and values) may be preferred. In other

circumstances, *out of kind* compensatory mitigation for sage-grouse habitat may be appropriate where priority recovery needs can be addressed (for example, a loss of wintering habitat could be offset with brood rearing habitat in a situation where where the latter is a limiting factor or otherwise of greater ecological significance). The driving consideration is that compensatory mitigation choices must provide the greatest biological benefit to GRSG in order to achieve the net conservation gain standard.

To determine whether a proposed compensatory mitigation measure meets the reasonable relationship principle and will contribute to net conservation gain, the evaluation should recognize that GRSG utilize multiple types of habitat (e.g., wintering habitat, nesting habitat, brood-rearing habitat) that can provide services in relatively discrete locations and during discrete periods of the year. Both the anticipated residual impact and proposed mitigation solutions should be considered at a variety of geographic scales, ranging from landscape level (e.g., WAFWA Zone), to population level, to project and impact site level, in order to identify whether reasonable relationship and net conservation gain principles will be accomplished. Performing such a multi-scalar analysis may be difficult especially where data or spatial information is lacking but is important in determining if, in fact, the reasonable relationship standard is met; in all circumstances, the best available scientific information should be used to make these determinations.

D. Timeliness

Effective compensatory mitigation projects consider the expected duration of unavoidable impacts and the timing necessary to achieve targeted biological conditions in a timeframe that benefits GRSG. In general, compensatory mitigation should avoid lag times between the time unavoidable impacts occur and the time mitigation benefits are provided. Requiring that the benefits of compensatory mitigation be provided in advance of the action that adversely impacts GRSG provides certainty that the desired mitigation result is in place and is benefitting GRSG prior to the occurance of impacts. Accordingly, mitigation that meets these criteria is deemed to be "timely" and is strongly preferred absent demonstration that the conservation benefits to GRSG will be increased through an alternative approach that will achieve the net conservation gain standard through measure(s) that adequately compensate for temporal loss of conservation benefits.

In assessing the timeliness of compensatory mitigation, it is particularly important to distinguish between when mitigation commitments are *made*, and when the mitigation is implemented and verified as successful. The timeliness principle pertains to the latter. In circumstances where compensatory mitigation will not produce the desired mitigation benefits until after impacts occur, the time lag between habitat impact and mitigation benefits can itself be an impact to GRSG that should be recognized and compensated for through some means, such as an increased mitigation requirement that reflects the degree of temporal loss.

There may be circumstances where accomplishing effective conservation (including effective application of mitigation principles) may warrant the selection of compensatory mitigation

measures that do not strictly adhere to the timeliness principle. For example, the eradication of invasive vegetation and restoration of native plant species may be a critical conservation objective for a particular GRSG population. Accomplishing those objectives may require restoration activities that will take years to mature and provide the desired mitigation values. In those circumstances, strict application of the timeliness principle would make it highly unlikely that such mitigation would be deemed appropriate in considering project authorization requiring the use of compensatory mitigation. Rigid adherence to timeliness considerations should not result in giving undue preference to low priority compensatory mitigation measures.

E. Additionality

A key principle of compensatory mitigation is that compensatory mitigation measures must provide conservation benefits that are truly "additional" to what would have occurred in the absence of the compensatory mitigation measure. Mitigation is "additional" when it provides resource benefits that are demonstrably new and that would not have occurred without the compensatory mitigation measure, or where habitat risks or threats are reduced and management plans are in place to ensure habitat values are enhanced or secured. Additionality considerations generally include both resource and financial additionality.

Resource additionality occurs where the value of the resources provided as compensatory mitigation is an effective improvement upon the baseline condition of the resources. What is required to demonstrate "additionality" may vary depending on the nature of the proposed mitigation measure, and whether the measure is to be performed on private or public lands. For example, where a compensatory mitigation measure utilizes a conservation easement on private lands to preserve GRSG habitat that is not adequately protected from the risk of human development, the inclusion of a habitat management plan that will ensure improvement or maintenance of the habitat values provided over the term of the easement may be required to demonstrate desired additionality.

Private land-based compensatory mitigation additionality determinations may involve closely-related questions concerning the financial additionality of a particular compensatory mitigation action. Financial additionality issues may arise because a landowner has participated in one or more government programs that provide incentives for private land wildlife conservation efforts. Ascertaining financial additionality includes ensuring that a landowner is not paid twice for the same conservation action. For example, a landowner enrolled in a federal government conservation incentive program can only receive compensatory mitigation credit for conservation actions that are supplementary to the actions funded by the incentive program (including the required matching funds invested by the landowner). State law requirements applicable to financial additionality may differ.

Public land–based compensatory mitigation raises different additionality issues. For public lands upon which uses such as mineral resource development, grazing, or other activities have been previously authorized, activities that are a permit obligation of the permit holder (such as restoration or reclamation to a specific standard after mineral development or maintenance of

rangeland health) would not be "additional," as such activities are the legal obligation of the permittee, and thus should occur in the absence of the compensatory mitigation program. Conservation actions that exceed existing permit, lease, or other land use authorizations or regulatory obligations are, on the other hand, additional and that portion of the conservation benefit generated above the regulatory obligation could be eligible for mitigation credit.

Where compensatory mitigation actions are proposed for public lands, assessing additionality may require determining whether the mitigation action will provide conservation benefits that are supplemental to conservation actions the public land manager reasonably would be expected to implement as a part of its general management responsibilities. Such an evaluation may be informed by considerations of agency budget, timing, and committed conservation actions.

F. Duration

The purpose of compensatory mitigation is to offset unavoidably lost or degraded resource values. Accordingly, it is important to accurately identify the duration of the resource impact in question. Determining duration requires identifying when the resource impact will occur, and how long it will last. Some impacts may last for a limited period of time until the affected resource regains its baseline values, while other impacts may be perpetual. The duration of an impact includes both the length of the action causing the impact, and the amount of time necessary for the affected resource values to recover following the cessation of the action. If damaged resources will never recover, it is appropriate to provide for and secure compensatory mitigation in perpetuity.

GRSG life cycle behaviors create additional issues in determining both when an impact will be experienced by GRSG, and how long it will last. Because GRSG populations and habitats fluctuate over time in response to environmental factors, ecological durability must be evaluated over the long term. Additionally, because GRSG exhibit fidelity to seasonal ranges, and established individuals generally do not move in response to anthropogenic impact, GRSG "avoidance" of an area occurs as yearlings abandon an area of disturbance and establish fidelity in a new area. Over time, the original lek location may become inactive as the mortality rate for the older birds exceeds the recruitment rate for younger males. This behavioral time lag in the face of disturbance can also be seen once disturbance is eliminated. The birds now established in the new lek location do not move back; it is their chicks that will over time inhabit the restored area. This behavior is important when determining the duration of an impact. After disturbance is removed it may take years for the area to again be used by GRSG, so the mitigation projects meant to offset the effects of that disturbance need to be in place until the impacted area is again providing habitat that is being or is reasonably likely to be used. These and other ecological factors must be considered in determining the period of the impact. (**Holloran et. al, 2010; Holloran et. al, 2015**). Similar considerations go into determining the duration of benefits to be provided by compensatory mitigation actions.

With respect to mitigation mechanisms such as habitat exchanges, a variety of permanent, term, dynamic or static credits may be used to fully offset the duration of anticipated impacts, provided they are responsive to the lifecycle issues and other biological considerations of the GRSG, and meet the other key principles.

G. Durability

"Durability" means the assurance that the conservation benefits provided by a compensatory mitigation measure will be secured and effective over the full timeframe of the impact for which they compensate. Compensatory mitigation should provide benefits and be "durable" for at least the duration of the residual impacts of the associated public land use. Durability considerations include the ecological, administrative, legal and financial assurances that secure the biological benefits of a compensatory mitigation project and protect the conservation status of a compensatory mitigation site.

Ensuring compensatory mitigation measures are durable requires evaluating multiple factors, including the ownership and management status of the lands upon which the mitigation activity is being performed. Public lands–based compensatory mitigation can give rise to different durability issues than would be the case for private land-based actions given the statutory management mandates for uses of public lands. Administrative mitigation tools (including land use planning and land use authorizations) can provide for durability by permitting and maintaining land uses that are supportive of the compensatory mitigation measure, or by limiting or excluding land uses that are incompatible with the mitigation measure. For example, the use of administrative tools such as land use planning, protective leases for public purposes under the Recreation and Public Purposes Act, or the issuance of a lease or easement for conservation purposes under Title III of FLPMA or a right-of-way under Title V can be appropriate. Modification of future or existing land use authorizations could also be an appropriate durability tool.

Different durability tools may be appropriate for compensatory mitigation measures located on private or nonfederal lands. Examples of such tools include habitat management contracts, easements, and deed restrictions. Where mitigation is being provided through lands secured in a conservation bank or through a habitat exchange, the documents governing management of such lands should make clear what measures are necessary to achieve the desired durability. In addition to habitat management tools, financial tools should be used to ensure funding to maintain, monitor, and adaptively manage mitigation for the duration of the residual impacts from the associated land use. Where a conservation bank or an exchange is involved, the banking or exchange documents and financial assurances associated with the bank or exchange, and the employment of credit reserve mechanisms, must address financial durability concerns. Alternatively, bonding, endowments, or other mechanisms should be used to ensure there will be either funding or alternate compensatory mitigation that is sufficient and accessible to ensure durability. Lastly, where mitigation requirements are associated with a land use authorization, BLM's legal authority to require performance by the responsible party

can help assure durability. These tools likewise should be used to ensure that risk of failure of compensatory mitigation actions is adequately addressed, as discussed in the following section.

H. Risk Identification and Management

Compensatory mitigation programs must include strategies to assess and manage a number of risk considerations, including the risk that characterization of residual direct and indirect impacts may underestimate their magnitude, extent and duration, the risk that characterization of the benefits of mitigation solutions similarly may be over-stated, and that mitigation solutions may not be durable. Each of these potential risks must be addressed and compensated for to ensure impacts are appropriately and fully compensated.

With regard to residual impacts, impact assessment must consider and address both the risk that the impact may be understated in magnitude and extent, and the risk that the duration of the impact (i.e., how long it will take for GRSG habitat to recover) may be underestimated. Determining how long the effects of impacts to GRSG habitat will remain (i.e., how long it will take for GRSG habitat to recover from an impact) can be very difficult. To ensure impacts are fully compensated, the risk of understating the magnitude and extent of the impact, and the risk or underestimating how long an impact will be experienced, must both be assessed and factored into determining the nature and duration of compensatory mitigation.

Similar risk considerations exist regarding proposed compensatory mitigation. Substantial levels of uncertainty (and, therefore, risk) exist regarding the relative success in restoring vegetation in some GRSG habitat types as well as the timelines necessary to achieve the level of enhancement or restoration required to meet compensatory mitigation objectives. Likewise, relatively little is known regarding implementation of habitat restoration and enhancement projects and associated GRSG population outcomes. The risk of overstating the anticipated conservation benefits of the measure, and the risk that such benefits may not come to pass due to failure of the mitigation action, must be assessed in quantifying mitigation benefits. Additionally, the risk that a mitigation solution will be disturbed or otherwise fail must likewise be assessed. The goal of each of these risk determinations is to ensure that the actual residual impacts to GRSG are fully compensated.

A central premise identified by the Workgroup for this Report is that the risk that a proposed mitigation action may fail or not achieve its desired objectives should be borne by the entity responsible for the resource impacts requiring mitigation. In the case of third-party activities on public lands causing impacts to GRSG habitat, that responsible party is the permit holder. Project authorizations should clearly identify the potential risk that a compensatory mitigation measure may not accomplish the intended objectives, and should clearly assign to the responsible party the responsibility for addressing the failure of a compensatory mitigation measure. A variety of mechanisms can be used to provide assurances that responsibility and resources to accomplish the resource objectives of the failed conservation measure will be achieved, including performance bonding, other financial mechanisms, and permit conditions.

I. Adaptive Management

The use of compensatory mitigation to accomplish landscape-scale conservation is a relatively new concept. The Workgroup recognized that it is important to encourage new and innovative strategies and to learn from compensatory mitigation actions. Accordingly, adaptive management is a key principle of effective mitigation. Adaptive management is a structured approach to decision making that essentially means learning by doing, and adapting management strategies based on what has been learned. The DOI defines adaptive management as "a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood." (**Williams et al. 2009**). The feedback between learning and decision making is the central feature of adaptive management. (**Williams et al. 2009, Williams and Brown 2012**).

Adaptive management is integral to the effective implementation of a mitigation program, not a component of the program to be initiated upon failure to attain an objective. In contrast to learning by *ad hoc* trial and error, adaptive management involves a system of management practices based on clearly identified outcomes and monitoring to determine (1) whether management actions are meeting required outcomes, (2) if not, determining what factors are the cause of or contributing to this failure, and (3) facilitating management changes that will best ensure that outcomes can be met.

Adaptive management plans require the identification of measurable objectives and adaptive management thresholds that can effectively track movement toward a defined conservation goal. Thresholds (i.e., the limiting value of a resource attribute that triggers a change in management action) should be clearly defined and measurable, and will be unique depending on the objectives, management actions being considered, and the scale of implementation. Adaptive management plans should identify a process to (1) establish clear objectives for alternative management actions, (2) implement one or more of the alternatives as prioritized from predictions (including previously untested options), (3) monitor to learn about the impacts of the implemented management actions, (4) use results from the assessments of monitoring data to update knowledge and inform future management actions, and (5) reinitiate the process. (**Williams et al. 2009, Williams and Brown 2012**).

Adaptive management principles should be implemented at each scale: project-level, regionally and range-wide. The specifics (e.g., goals, objectives, thresholds) associated with each project and scale of inference likely will be unique, requiring discrete adaptive management approaches. Successful implementation of the adaptive management process will require commitment of staff and resources to monitor performance and evaluate success in achieving desired outcomes, and is essential to ensuring the success of compensatory mitigation for GRSG habitat.

J. Measurable Outcomes and Effectiveness Monitoring

Identifying and monitoring success or failure in achieving the desired resource outcomes for proposed compensatory mitigation actions (generally the habitat attributes sought to be obtained or secured) is essential to demonstrating that the mitigation will contribute to net conservation gain and to ensuring the proposed compensatory mitigation bears a reasonable relationship to the nature of the residual impacts for which mitigation is being required. Desired outcomes (performance measures) should be clearly articulated and analyzed in conjunction with project planning. Potential compensatory mitigation sites and measures should be identified in advance of project initiation to allow analysis during environmental review and to ensure that proposed compensatory mitigation can be addressed in a manner that is consistent with the principles of effective compensatory mitigation (e.g., is measurable, can be monitored during the duration of the impact for which the compensatory mitigation measure is in effect, incorporates measures to address risk, etc. and can be altered, if necessary, through adaptive management).

Identification and establishment of clear and measurable monitoring and reporting requirements is essential to support assessment of the effectiveness of the compensatory mitigation measure and to ensure that compensatory mitigation is accomplishing its intended objectives. Monitoring and reporting also allows tracking of the degree to which mitigation is contributing to net conservation gain. Monitoring and reporting requirements, discussed in Appendix A, also inform the use of adaptive management of compensatory mitigation. The Workgroup believes it is essential to apply outcome measurement and effectiveness monitoring to mitigation programs, as a whole, as well.

An effectiveness monitoring strategy should be based on and employ the factors and metrics used to inform determination of baseline, the level of residual impacts, and off-setting compensatory mitigation. Potentially applicable factors and metrics are discussed in detail in Appendix A Section C.

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VI. Appendices

APPENDIX I. -- DETERMINING COMPENSATORY MITIGATION REQUIREMENTS FOR GREATER SAGE-GROUSE

This Appendix is intended to guide BLM decision-making for mitigation of residual impacts to GRSG habitat from actions authorized or performed by the BLM, consistent with the Key Principles identified in this Report and BLM's adoption of the "net conservation gain" standard. Subject to valid existing rights and where consistent with applicable law and agency land use plans, the BLM will implement the mitigation hierarchy (as described in 600 DM 6) when considering proposed actions (federal agency actions and third party actions under federal authorization) with reasonably foreseeable effects on GRSG and its habitat. After applying appropriate avoidance and minimization measures, the BLM will identify residual impacts to GRSG habitat and employ appropriate compensatory mitigation requirements consistent with BLM's adoption of "net conservation gain" of GRSG (the actual benefit or gain above baseline) as a conservation standard.

Determining compensatory mitigation requirements will require an understanding of the relevant baseline of the species and the area impacted, and a system to determine the lost or degraded habitat values requiring compensation. Choices among available compensatory mitigation options similarly will require a means of quantifying the habitat values associated with available compensatory mitigation options, and criteria for selection of appropriate mitigation actions. These and related implementation issues are discussed below.

A. When Compensatory Mitigation is Required

In considering its own actions, and subject to valid existing rights and consistent with applicable law when authorizing third-party activities on public lands that result in residual impacts to GRSG after the application of avoidance and minimization measures, the BLM will require compensatory mitigation that provides a net conservation gain to the species.

1. Renewal or reauthorization actions

Public land use activities frequently require renewal or reauthorization actions by land management agencies. For the purposes of this Strategy, the unchanged, continued use or operation of a previously-authorized activity is assumed not to cause loss or degradation of GRSG habitat. However, where monitoring data indicates a decline in condition or where a permit renewal or other land use reauthorization action would lead to new, expanded, or different impacts to GRSG habitat, review of potential residual impacts and application of mitigation requirements (including compensatory mitigation requirements) is necessary.

2. Relationship between compensatory mitigation requirements and disturbance and density caps

As part of their avoidance and minimization strategies, the federal GRSG LUPs limit surface disturbance and infrastructure in priority areas (e.g., PHMAs, sagebrush focal areas, core areas) using disturbance limits and infrastructure density caps. These limits or caps are based on the premise that GRSG populations will tolerate a certain level of anthropogenic disturbance on the landscape. Under the disturbance and density cap paradigm and consistent with applicable law, additional actions or projects are not approved if a surface disturbance cap (e.g., 3 or 5% surface disturbance; 1 infrastructure/640 acres) for a particular area has been reached.

The RODs commit to mitigate residual impacts to GRSG habitat to achieve net conservation gain for activities in PHMA and GHMA (limited to PHMAs in Wyoming). In considering whether a surface use activity will give rise to residual effects, it is important to document that adverse impacts were actually avoided through avoidance and minimization measures and to quantify, to the extent practicable, the avoidance and minimization achieved. Where it cannot be demonstrated that avoidance and minimization efforts totally eliminate adverse impacts to GRSG habitat, compensatory mitigation will be required for residual impacts, consistent with applicable law, to ensure net conservation gain.

B. Determining Residual Impacts

Residual impacts requiring compensation may be either direct or indirect. Direct impacts associated with habitat loss (e.g., infrastructure development) are caused by the action and occur at the same time and place; they are generally discrete and have a distinct measurable impact in space and time. Most anthropogenic disturbances that contain a definitive footprint (e.g., roads, gas or oil wells), cause direct, physical impacts to GRSG habitat such as surface disturbance due to road construction. Indirect impacts are likewise caused by the action but may be later in time or farther removed in distance; they occur as a result of a project's influence on lands or resources (including wildlife populations) proximate to the project area. (**BLM National Environmental Policy Act Handbook H-1790-1 at 56**). As an example, increased predation rates due to the existence of power lines, or behavioral avoidance of lines by GRSG, would be indirect impacts.

Indirect impacts can be further described as disruptive or diffuse. Disruptive disturbances include any human activity occurring within the project area that disrupts GRSG habitat use, behavior, or reproduction.

Diffuse disturbances generally impact GRSG via degradation of the processes and functioning of sagebrush habitat (Knick and Connelly 2011). As an example,the potential effects of such activities as improper grazing and dispersed recreation,including the spread of invasive weeds, represent diffuse disturbance. The impacts of diffuse disturbances on GRSG are difficult to measure and address in compensatory mitigation programs. Where they cannot be estimated or measured practicably, mitigation of the impacts of diffuse disturbances should be

accomplished by avoidance and minimization through the requirement of the use of best management practices rather than the use of compensatory mitigation.

Once residual impacts to GRSG habitat have been identified, they should be quantified. Quantification of residual impacts may be accomplished by measuring the change in habitat condition from the baseline condition to the anticipated condition after avoidance and minimization measures.

C. Baseline

Sage-grouse biology is complex and multi-scale. Johnson (1980) described this complexity using four orders of habitat selection in which each higher order is dependent on the previous order. These orders are rooted in habitat characteristics and linked to different spatial scales. Baseline will need to identify habitat characteristics at multiple scales. Monitoring will need to validate the status and trend of those characteristics. Impacts will be determined by one or more habitat characteristics that are adversely modified by an authorized land use action. Uplift will be determined by one or more habitat characteristics that are modified by a mitigation action. Habitat characteristics used to determine baseline may also be dependent upon the season of use by GRSG.

Baseline is an important concept and is critical to understanding the impact of a debit, the benefit of a credit, GRSG population trends, and whether mitigation actions are contributing to achieving the net conservation gain standard. Baseline is defined as the pre-existing condition of a resource at all relevant scales which can be quantified by appropriate metrics. During environmental reviews, the baseline is considered the affected environment that exists absent the project's implementation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives. A single year of data does not represent baseline conditions. Due to variation from year to year and the possibility of large ecological events, such as wildfire, baseline conditions must be documented based on a multi-year monitoring approach. Ideally, baseline assessment of an area would be determined using, at a minimum, three years of data collected within a five year time frame. Remote imagery and other existing data, such as legacy data, may also be important to consider when estimating baseline conditions. It is also important that baseline data be collected during the same phenological stages over consecutive years.

Even if all the habitat characteristics at a site are in excellent condition, if there are threats that prevent birds from using the habitat, it is of little habitat value. Conversely, birds may occupy sites that are not typically considered GRSG habitat. Thus, when capturing the baseline conditions at the site scale, it is important to document how the site is used, or not used, by the birds. Specific indicators for measuring habitat characteristics are listed in the Habitat Assessment Framework (Stiver et al. 2015). These and other indicators may be beneficial when estimating baseline, habitat quality and quantity, effectiveness of mitigation actions, and extent by habitat type. Potential indicators include:

- GRSG occupancy
- Sagebrush Cover
- Sagebrush Height
- Predominant Sagebrush Shape
- Perennial Grass and Forb Heights
- Perennial Grass Cover
- Perennial Forb Cover
- Preferred Forb Availability
- Riparian Stability
- Availability of Sagebrush Cover
- Proximity of Detrimental Land Uses
- Proximity of Trees or Other Tall Structures
- Seasonal Habitat Availability
- Seasonal Use Area Connectivity
- Anthropogenic Disturbances
- Habitat Availability
- Patch Size and Number
- Patch Connectivity
- Linkage Area Characteristics
- Landscape Matrix and Edge Effect

Many states are developing habitat quantification tools (HQTs) that use baseline data, models, and other data to determine the functional equivalency of the habit that will be compromised through development and the uplift that will be provided through a corresponding mitigation action. The baseline provides the consistency across the range of GRSG and the HQTs provide the flexibility to accommodate local and state habitat characteristics. This approach will increase industry confidence and incentivize engagement in the development and use of state-based HQTs for compensatory mitigation projects to offset project-impacts on public lands. The use of common indicators will provide the BLM with data adequate to report on the status and trend of GRSG habitat and use in NEPA analyses, yet provide flexibility for the States to administer their mitigation programs.

Measurements of the various indicators must be repeatable and the BLM must have confidence in the precision of the data collected in order to report valid conclusions regarding the status and trends of GRSG populations. Therefore, calibration is critical and results must be recorded and available to properly account for observe bias. For example, if the objective is to detect a 2 percent change in an indicator and the observer bias is 2 percent, change cannot be detected with confidence. Not all of the listed indicators will be required for mitigation considerations. Indicators are relevant to the site potential and the habitat objectives in the context of the proposed action and proposed compensation for any residual effects resulting from the action. Proximity to occupied habitat and linking populations to habitat will also be important. BLM State Offices will work with the States to develop specific step-down protocols that provide for sufficient data collection.

D. Determining and Quantifying Debits and Credits

This Report utilizes the terms "debit" and "credit" to refer to impacts requiring compensatory mitigation, and offsetting changes in habitat condition to be provided by compensatory mitigation. In this context, impacts decreasing the value of GRSG habitat (from baseline condition) will be referred to as "debits." Compensatory mitigation actions that offset impacts to baseline habitat values will be referred to as "credits."

Debits can be defined as a quantification of the loss of ecological functions and/or services for GRSG. For most purposes, debits are likely to be habitat-based. Debits should be quantified using the same methodology used to determine baseline. Both direct and indirect impacts remaining after application of avoidance and minimization measures should be considered in quantifying debits.

Credits represent changes in habitat conditions that increase the value of GRSG habitat relative to baseline. Credits can be defined as a quantification representing the accrual or attainment of ecological functions and/or services for GRSG. Credits should likewise be quantified using the same methodology employed to determine baseline and debits, and in light of both direct and indirect impacts from existing disturbances, if any.

Although credits are quantified as increases in habitat condition from baseline, not all habitat improvement actions will generate "credits" for compensatory mitigation purposes. Compensatory mitigation measures must provide resource additionality; accordingly, to qualify as compensatory mitigation credits, the conservation practice must generate habitat benefits above those otherwise expected to occur [based on objectives established in land use or similar plans or as indicated by baseline conditions and otherwise expected habitat trends].

E. Types of Compensatory Mitigation

Compensatory mitigation may occur by replacing or providing similar or substitute resources or values through restoration, establishment, enhancement, or preservation. This Report uses these terms to mean:

- Restoration is the process of assisting the recovery of a resource (including its values, services, and/or functions) that has been degraded, damaged, or destroyed, to its pre-existing condition. In other words, it is the process of making non-habitat (that was habitat previously) or unsuitable habitat suitable again—e.g. well pad restoration.
- Establishment is the introduction of a resource at a site. It is distinct from restoration in that a resource or value is developed through manipulations of the physical, chemical, and/or biological characteristics of the site where the resource or value did not previously exist.

- Enhancement is the heightening, intensifying, or improving of one or more resources of value. In other words, making suitable habitat better (e.g. enhancing the herbaceous understory in a sagebrush stand to increase habitat quality for GRSG).
- Finally, preservation is the permanent or long-term protection of important resources or values through the implementation of appropriate legal and physical mechanisms (e.g. conservation easements, title transfers, or land use plan decisions). This includes the reduction or exclusion of incompatible uses, maintaining high quality habitat in high quality conditions.

A wide variety of activities can be used as compensatory mitigation actions. Mitigation actions should be selected that are appropriate for the resources in the project area for the landscape(s) involved and that are consistent with the key principles identified in this Report.

Net conservation gain, as measured through the increase in habitat functions and values, can be realized directly from restoration, establishment, and enhancement actions. Preservation actions (e.g., conservation easements, title transfers, or other methods) do not directly increase habitat functions and values but can be an important tool in generating net conservation gain. For example, preservation as a tool for achieving the reduction of threats to important resources from incompatible future development actions can be an important contributor to GRSG viability and can contribute significantly to ecological sustainability. Preservation actions likewise can (and should) support high standards for monitoring, management, and maintenance of good habitat.

Because preservation actions do not generate or increase habitat functions or values, measuring their contribution to net conservation gain presents unique issues. Where preservation is used to protect high value habitats, its contribution to net conservation gain can be measured in terms of the threat avoided (e.g., the decrease or loss of habitat functions or values avoided). Where preservation actions are accompanied by commitments to enhance and/or manage habitat to benefit GRSG, the management action would provide additional habitat benefits to GRSG.

Other types of actions that reduce risk can likewise contribute to net conservation gain. For example, the provision of funding or other resources for wildfire protection, e.g. funding to Rangeland Fire Protection Associations, can be a valuable mitigation action as it can contribute to risk reduction and securing and maintaining important habitat values. Determining the benefit to GRSG of such actions will require identifying and assessing the ecological benefits to GRSG in terms of risk or threat avoidance or reduction.

F. Risk and Uncertainty

The concept of risk is an important element in identifying the duration of anticipated residual impacts, and in evaluating the risk of failure of a proposed compensatory mitigation measure. In particular, when identifying the anticipated duration of residual impacts, the length of time

necessary for the resource to recover as a result of "natural" restoration and resiliency should not be underestimated.

The risk of underestimating residual impacts to GRSG habitat, and the risk of underperformance or failure associated with a proposed compensatory mitigation action (both described above in the Key Principles section of this Report) should be identified and accounted for explicitly and transparently during project development. Evaluation and selection of compensatory mitigation measures should balance risk associated with the mitigation project and the predicted effects. Risk assessments will be context specific and could take many forms depending on the compensatory mitigation project. Land managers can account for risk of failure or reversals using a variety of mechanisms, such as adaptive management, phased credit release and mitigation ratios.

This Report should not be interpreted as discouraging high-risk projects where substantial conservation gain is possible (e.g., experimental approaches to decrease invasive annual grasses). Innovation in new strategies and practices should be considered and explored to advance our understanding and ability to achieve landscape scale conservation (and conservation of GRSG); a failure in outcomes does not mean that the project itself was ill-considered. However, the interest in seeking new and effective mitigation strategies must be balanced against the risk of failure when assessing compensatory mitigation measures and, in particular, whether the net conservation gain standard has been met. Net conservation gain should not be determined to have been accomplished when considering the projected or anticipated outcomes of compensatory mitigation measures prior to evidence and quantification of their actual results; failed projects will not contribute to net conservation gain. Risk of failure may not need to be considered as strongly in situations where compensatory mitigation projects are timely and the achievement of net conservation gain can be directly assessed.

G. Evaluating Compensatory Mitigation Effectiveness

Monitoring and reporting of the results of compensatory mitigation projects is essential to determining their contribution to the GRSG net conservation goal. Monitoring and reporting is likewise essential to adaptive management.

H. Monitoring

Monitoring for mitigation actions should include methodologies and metrics consistent with those used to determine baseline conditions at both debit and credit sites. These methodologies should employ reliable, repeatable, and quantitative scientific methods using common metrics for both credits and debits. Data collection and monitoring efforts should be sufficient to assess trends in GRSG habitats across all relevant scales while accounting for region-specific GRSG-habitat relationships.

I. Reporting

The frequency of reporting will depend on the scale in question and the sensitivity of the indicator(s) to change. Reports should verify credits and debits, provide transparent assurance that compensatory mitigation projects meet program standards, and allow BLM to ensure net conservation gain has been achieved. Project-specific reporting should be conducted on an annual basis to monitor progress toward the project's intended mitigation objectives.

J. Other Considerations

Accomplishing net conservation gain for GRSG will require making wise decisions regarding the use of compensatory mitigation to meet the conservation needs for the species. Landscape-scale conservation practices provide the foundational flexibility to identify and consider conservation opportunities (including compensatory mitigation) wherever they may provide the greatest benefit to the species or resource values of concern. (**600 DM 6**). Achieving net conservation gain will require pursuit of those conservation opportunities that provide the greatest benefit to GRSG.

This Report anticipates and supports the development of WAFWA Zone-specific information to guide the collaborative effort detailed in in this Report, consistent with the ROD commitment to develop WAFWA Zone mitigation strategies. The WAFWA Zones represent an appropriate ecological and geographic construct to focus federal, state and tribal efforts on GRSG conservation. Building from the key principles identified in this Report, the Workgroup anticipates conservation goals, objectives and opportunities will be developed based on recognized threats and best available science and addressing the principles of "risk, resilience, and resources" for each WAFWA Zone. These zone-based strategies will identify and prioritize the conservation needs of GRSG within each zone and compensatory mitigation opportunities, as available, for use by the federal agencies and the GRSG States in the collaborative conservation decision-making described in the Report. It is anticipated that BLM's ongoing Rangeland Conservation and Restoration program will provide input into these zone-based strategies, as will the FWS GRSG Mitigation Framework.

The zone-based strategies will be incorporated as appendices to this Report as they become available.

APPENDIX II. STATE COMPENSATORY MITIGATION APPROACHES

A number of commonly recognized mitigation mechanisms or systems exist, including proponent-sponsored compensatory mitigation, conservation banking, habitat exchanges, and in-lieu fee systems. Each of those approaches may be appropriate to provide compensatory mitigation for GRSG provided they adhere to the mitigation principles discussed above. Differences between the mechanisms are principally based on the responsibility for implementation and when mitigation actions occur relative to impacts. For instance, a conservation bank is managed by a bank sponsor (can be a private or public entity) while an in-lieu fee program is sponsored by government agencies or not-for profit environmental organizations. A habitat exchange is a market-based system that facilitates the exchange of credits (i.e., compensatory mitigation actions) to offset debits (i.e., unavoidable impacts) between interested parties, such as industry and landowners.

Compensatory mitigation mechanisms vary by state, and the GRSG States are evaluating which mitigation mechanisms work best for their GRSG programs. States such as Wyoming (and, eventually Montana) use a "core area" approach to manage the kind of disturbance and mitigation allowed in priority conservation areas (defined as "core habitat"). Colorado, Oregon, and Nevada have or are developing habitat exchanges. Wyoming has an established conservation bank, and bank enabling and mitigation agreements intended to proactively conserve and restore GRSG populations are likewise in place in Nevada. Oregon is developing a conservation banking and in-lieu fee program. Idaho is developing a mitigation program centered on an in-lieu fee framework. Montana uses competitive funding to facilitate free-market mechanisms for voluntary, incentive-based conservation efforts. Other mechanisms may emerge as increasing experience with compensatory mitigation for GRSG develops.

The GRSG states have provided the following information regarding their respective mitigation programs.

A. State of Colorado

Colorado Parks and Wildlife (CPW) consults in local, state, and federal permitting processes involving GRSG. Fluid and solid mineral development is a primary impact to GRSG, so the majority of CPW's consultation efforts relate to state and federal leasing actions, and state and federal permitting of oil and gas facilities through the Colorado Oil and Gas Conservation Commission (COGCC) and the BLM. CPW also consults with local, state, and federal regulatory agencies on a variety of other types of development and approvals for land use activities that may impact GRSG, including other types of mining activities, transmission lines, gas lines, roads, hydro projects, residential developments, grazing permit renewals, etc.

During consultation, CPW makes recommendations regarding measures that may be implemented to avoid and minimize impacts. CPW may also request that energy companies offset their unavoidable adverse impacts with compensatory mitigation.

One option for developers who need to offset unavoidable adverse impacts is to use the Colorado Habitat Exchange (CHE) to calculate the impact and credit obligation (debits) and to purchase the corresponding amount of credits. The CHE is a private, non-profit 501(c)3 organization with an independent board of directors. The State holds two seats on the board, which plans to have a functional exchange with the ability to sell credits in Spring 2017.

Using the CHE for compensatory mitigation provides developers the benefits of streamlined permitting by foregoing lengthy offset mitigation negotiations with CPW through the use of the pre-approved standardized credit and debit calculations provided by the CHE. Credits acquired by developers through the CHE to offset unavoidable adverse impacts provide durability and increased value to GRSG because credits meet the *pre-listing mitigation* guidance of the FWS, as described in the FWS Greater Sage Grouse Range-Wide Mitigation Framework. The CHE incorporates all of the key mitigation principles described in this Report.

COGCC rules also give energy companies the option to enter into a Wildlife Mitigation Plan (WMP) in order to streamline consultations with CPW. A WMP is a landscape-scale mitigation plan created in consultation with CPW to address the development of multiple facilities over several years. In a WMP, energy companies commit to implementing specific Best Management Practices (BMPs) designed to avoid and minimize impacts, as well as off-site mitigation to compensate for unavoidable adverse impacts to wildlife. CPW also consults on proponent-sponsored mitigation proposals.

B. State of Idaho

The Idaho Sage-Steppe Mitigation Program (Mitigation Program), currently under development, will provide a mechanism to achieve sage-grouse conservation goals (as well as goals for other sage-steppe species) while also preserving the culture and economy of the State of Idaho. This program will employ an "in-lieu fee" approach to compensatory mitigation through which a project developer pays funds into an account managed by the mitigation program for performance of mitigation actions that provide measureable benefits for sage-grouse and their habitats within Idaho. The Sage-Grouse Mitigation Framework, developed by members of the Idaho Sage-Grouse Advisory Committee in 2010, serves as the foundation for the Mitigation Program. This framework was referenced in Governor Otter's 2012 Sage Grouse Conservation Strategy and was included within the BLM's Land Use Plan Amendments for Idaho and SW Montana.

The Mitigation Program will include the following attributes:

- Employment of the mitigation hierarchy;
- A Program Administrator (state agency) to direct the Mitigation Program and ensure strong oversight;
- Technically sound and transparent guidelines for estimating compensatory mitigation costs with the goal of using advanced mitigation to inform mitigation costs and/ or require mitigation projects to be selected before determining mitigation costs;

- A science-based statewide strategy to guide the selection of mitigation actions for funding;
- Costs of operating the Mitigation Program will be borne by infrastructure developers that use the Mitigation Program to deliver compensatory mitigation;
- Monitoring the implementation and effectiveness of mitigation actions funded by the Mitigation Program;
- Systematic tracking of benefits provided by the Mitigation Program to GRSG habitat in Idaho; and
- Periodic evaluation and adaptation of the Mitigation Program.

The State of Idaho has contracted with a team of mitigation consultants to assist in the design and development of the program. Products under development include: a science plan, a habitat quantification tool, and a mitigation manual which will include a governance structure. It is the intent of the State of Idaho to address the elements of the BLM mitigation strategy (additionality, durability, etc.) within the mitigation program. A series of stakeholder workshops (currently underway) is designed to help inform the development of the program. Multiple state and federal agencies, along with NGO and industry reps have been participating and will continue to participate in the workshops.

C. State of Montana

Montana's Sage Grouse Conservation Strategy is based on a "core-areas" approach and is implemented through Executive Order 12-2015 and the Greater Sage Grouse Stewardship Act (Act). Both require observance of the mitigation hierarchy (avoidance, minimization, reclamation / restoration, and compensation) for development activities in core areas and general habitat areas as mapped and designated in Executive Order 21-2015. Compensatory mitigation is required for remaining direct, indirect, and temporary impacts after avoidance, minimization, and reclamation. Mitigation must be implemented within GRSG habitat areas designated as a core area, general habitat, or a connectivity area. A variety of mitigation tools can be used, including: conservation banks, habitat exchanges, making a contribution to the Sage Grouse Stewardship Fund, funding stand-alone mitigation actions, and approved conservation plans. At the present time, there are no established GRSG exchanges or banks in Montana. The Montana Sage Grouse Oversight Team reviews and approves all compensatory mitigation plans developed by the Sage Grouse Habitat Conservation Program in collaboration with project proponents.

In 2016-17, Montana will promulgate administrative rules to administer methods of compensatory mitigation available to project developers and for the designation of a habitat quantification tool. The FWS must approve Montana's habitat quantification tool and any habitat exchanges operating in Montana. Although not statutorily required by the Act, presumably any potential conservation bank administrator would also seek approval from the FWS. All mitigation must be consistent with the *Greater Sage-Grouse Range-wide Mitigation Framework* (FWS, 2014).

Montana also established the Sage Grouse Stewardship Fund in 2015 to provide competitive grant funding and establish ongoing free-market mechanisms for voluntary, incentive-based conservation measures that emphasize maintaining, enhancing, restoring, expanding, and benefitting GRSG habitat and populations on private land and public lands as needed within core areas, general habitat, or connectivity areas. The majority of grant funds must be awarded to projects that generate credits that are made available for compensatory mitigation. Eligible projects include: conifer reduction, incentives to reduce conversion, cropland restoration, fence marking, reduction of predator subsidies, term leases or easements, permanent easements, and other endeavors that benefit GRSG and sagebrush habitats. Credits generated through Stewardship Fund dollars will be calculated using the FWS-approved habitat quantification tool and made available. The Stewardship Fund is reimbursed, and funds can be reallocated towards future grants.

D. State of Nevada

Nevada has adopted a Conservation Credit System (CCS) that enables the stewardship and restoration of a resilient and resistant sagebrush ecosystem. The CCS works within the regulatory mitigation hierarchy, where anthropogenic disturbance impacts are first avoided, then minimized. Residual unavoidable impacts are then mitigated using the CCS.
The CCS uses a state clearinghouse to calculate, track, and monitor debit and credit projects. Quantification of credits and debits uses ecological and other criteria developed with input from a variety of stakeholders. Final approval of the system comes from a multi-stakeholder council appointed by the Governor that holds regular public meetings.

The CCS program is managed by a state technical team made up of a program manager and one staff member each from the Department of Wildlife, Department of Agriculture, Division of State Lands, and Division of Forestry.

The CCS is designed to incentivize avoidance, minimization and conservation of quality habitat, and ensure durable and additional mitigation. To do so, the CCS:

- Quantifies habitat in functional acres (credits) or functional acres lost (debits) (each based on quality and quantity);
- Analyzes habitat on three levels – Landscape, Local, and Site (each based on best available science and vetted processes);
- Requires site level verification prior to any disturbance (debit);
- Ensures credit verification prior to credit release, additional credit releases, and every 5th year, periodic spot checks;
- Is designed to achieve net-gains from unavoidable disturbances by (a) using same metric for credits and debits, (b) using mitigation ratios to ensure more credits are generated than debits incurred, (c) requiring advanced mitigation, using a reserve account and applying regular verification of performance standards for all credit projects through the term of the projects to ensure there are always more credits than debits in the State even in the case of project failure, and (d) requiring credit terms to be at least 10 years

longer than debit term;
- Addresses both intentional and unintentional reversal of credits using both a reserve account and financial assurances;
- Discourages development in high quality habitats, and incentivizes conservation in high quality habitat;
- Ensures durability through a variety of tools (reserve account, participant contract, management plan, financial assurances, pre-project recovery of debit sites, etc.); and
- Allows for continual improvements through an adaptive management protocol implemented annually starting in 2015.

E. State of Oregon

The Governor's office convened the SageCon Partnership in 2012 which takes a collaborative, "all lands, all threats" approach through coordination of federal, state and local efforts to address the multiple threats to sage-grouse. ODFW hired a Greater Sage-grouse Mitigation Coordinator in April of 2015 to develop and implement its mitigation program.

In July 2015, the Oregon Department of Fish and Wildlife (ODFW) Commission adopted a Greater Sage-grouse Conservation Strategy for Oregon (OAR 635-140). The goals of the Conservation Strategy are to maintain and enhance sagebrush habitats within the GRSG range, to manage those habitats in a variety of structural stages while minimizing threats and promoting resilience, to avoid development actions in GRSG core, general and low density habitat which adversely affect GRSG habitat, to limit the extent, location and negative impacts of development actions over time, and to require compensatory mitigation for development actions.

ODFW uses avoidance, minimization and compensatory mitigation for direct and indirect habitats. Mitigation must be in-kind and create a net benefit. ODFW is currently developing a conservation banking and in-lieu fee program, and will allow project specific mitigation where that will create a net conservation benefit.

The Department of Land Conservation and Development (DLCD) requires counties to limit development in GRSG core areas to 3% and 1% per decade. As described above. ODFW's mitigation policy requires an in-kind net conservation gain. While preservation is identified as needed, preservation is not allowed as mitigation measure under ODFW mitigation policy as it does not create a net benefit.

Mitigation must be concurrent and completed by the end of construction (until the mitigation banking system is established and implemented, this may not be feasible given the duration for restoration uplift measures to develop in sagebrush steppe environments) and must persist for the life of the impact (in many cases, this will be in perpetuity). ODFW also requires additionality and credits are developed based off of the uplift mitigation measures create. ODFW requires monitoring, adaptive management and continued maintenance for mitigation

sites. ODFW is currently testing a Habitat Quantification Tool to determine impact debits and mitigation measure credits.

F. State of Utah

The State of Utah will utilize three basic approaches to provide compensatory mitigation to offset direct and indirect impacts from disturbance to GRSG habitat.

1. For any disturbance on private or state school trust lands where compensatory mitigation is not mandated by a regulatory agency, the State of Utah will develop habitat counted as credits to offset the development. Those credits will not be sold or transferred. Instead, those credits will be held in a reserve account by the State to assist in providing additionality and realize a net conservation gain for GRSG. Also, any federal agency may allow a federal land developer to pay an in-lieu fee to the state to create credits to be held, monitored, and maintained by the state.
2. The State will regulate the creation of habitat exchange agreements and conservation banks. Under banks, and term agreements a credit generator may create or restore habitat to be transferred as a credit to any person who is directly and/or indirectly impacting GRSG habitat.
3. The State of Utah will regulate the person or entities creating and maintaining credits within the State. The State will also regulate and monitor the transfer of credits between a person who generates credits and a developer who is required to acquire credits to offset impacts from development.

   a. **Additionality and Mitigation Standard**: Utah is recommending an acre for acre approach because the best available science for GRSG in Utah shows that the main limiting factor for GRSG in Utah is space (available habitat). Thus, for every acre of disturbed habitat, the State will work with credit generators (i.e. DNR, Conservation Banks, exchange agreements) to create, restore, or enhance 4 acres of additional functional GRSG habitat adjacent to occupied habitat.
   b. **Duration**: All credits develop in Utah must persist for at least the estimated timeframe of any estimated direct and indirect impacts for GRSG.
   c. **Durability**: Utah will assure that any credits developed by the Department of Natural Resources will be maintained for the life of any disturbance. The State will not sell any credits developed by the DNR. The credits developed under exchange agreements or conservation banks will remain durable through the use of legal and financial assurances, as outlined in the individual exchange agreement or conservation bank agreement.
   d. **Timeliness**: In most cases, credits need to be available prior to any disturbances. However, a federal regulatory agency may allow federal land developers to pay an in-lieu fee to Utah for restoring or creating new GRSG habitat.
   e. **Monitoring**: Any credits generated will be monitored through the life of the credit. The person who generates the credits will conduct maintenance activities to ensure that the habitat remains functional for the duration of the Credit.

G. State of Wyoming

Wyoming's Sage Grouse Conservation Strategy is based on a "core-areas" approach and is implemented through Executive Order 2015-4 (EO) and the House Bill 102, Sage Grouse Implementation Team. The EO requires the observance of the mitigation hierarchy (avoidance, minimization, reclamation / restoration, and compensation) for development activities in core areas and general habitat areas as mapped and designated in the EO.

The State of Wyoming has worked closely with federal land management agencies in creating an all-lands approach to implementing conservation actions reducing the threats and restoring habitat. In addition to an all-lands approach Wyoming has also adopted an all-disturbance approach to limiting disturbance levels. Wyoming considers this "all-disturbance" approach to be stricter than the federal agency direction.

When appropriate thresholds cannot be met through avoidance and minimization actions, a project may be denied. There are circumstances when a project has valid existing rights and the project has the legal protection to proceed. When projects proceed and exceed the recommended thresholds, Wyoming has developed a Greater Sage-Grouse Compensatory Mitigation Framework (WY Framework) to cover the impacts related to the project.

The WY Framework establishes the condition of credits that can be considered to offset the debits associated with a project. The WY Framework establishes criteria to meet characteristics including timeliness, additionality, occupancy, durability, financial assurance, habitat suitability, landscape context.

The WY Framework has been built on Wyoming's EO implementation experience and GRSG research. The debit calculation is not based on any point in time condition of the debit or credit habitat, but rather on the known science related to GRSG persistence. Debits are created as a result of direct and indirect impact, special landscape vulnerability, and the need to show net conservation gain.

The WY Framework allows for the use of all mitigation tools provided the credit can meet the WY Framework requirements.

October 13, 2017

The Honorable Ryan K. Zinke
Secretary of the Interior
United States Department of the Interior
1849 C Street, NW
Room 6612
Washington, DC 20240

Dear Interior Secretary Mr. Zinke,

The purpose of this letter is to express our concerns regarding the *Report in Response to Secretarial Order 3353* (Report) and the October 11 Notice of Intent to reopen to amendment the Bureau and Land Management (BLM) and U.S. Forest Service's (USFS) Land Use Plans (LUPs). As scientists who have spent decades studying greater sage-grouse (sage-grouse) and sagebrush habitats, we assisted in the BLM and USFS efforts to revise and amend applicable LUPs to effectively conserve this important species. We are concerned that many of the specifics outlined in the Report as well as the decision to take public comment on possible amendments to the plans may weaken approaches in place to conserve sage-grouse populations before the measures established have been fully implemented or assessed. We want to emphasize that the science community continues to be available to provide ongoing consultation about how science can help inform strategies to sustain the conservation of sage-grouse on our federal public lands.

Our concerns stem from three basic observations about the Report:

1) Many recommendations have the potential to result in fewer acres of priority and general sage-grouse habitat limiting management options for the species;
2) Many recommendations have the potential to limit the ability of managers to effectively manage anthropogenic aspects of the sagebrush biome; and
3) Many recommendations have the potential to limit the ability of managers to effectively manage vegetative aspects of the sagebrush biome.

We recognize that the Report does not change policy, and we applaud several of the recommendations made in the Report. We fully support the collaborative approach being pursued, especially the full engagement of the States from the initiation of the LUP review and engagement with the Western Association of Fish and Wildlife Agencies (WAFWA). We also support the focus placed on improving coordination, increasing data sharing, initiating monitoring and research, and prioritizing staff and funding to implement on-the-ground conservation and restoration actions (Report pp. 1-4). We recognize that not everything is known, especially in regards to managing sagebrush ecosystems to improve the quality of those habitats for sage-grouse. Thus, a consistently applied and rigorous approach to plan implementation, management direction, evaluation and adaptation is critical moving forward. The LUPs were developed considering the best available science with the short-term goal of stabilizing populations by conserving key habitats throughout the sage-grouse range. The habitat preservation framework provided by the LUPs is critical as a foundation for realizing the long-term goal of increasing sage-grouse populations by restoring and enhancing sagebrush habitats. Given the uncertainty surrounding proactive management of sagebrush habitats coupled with the need to pursue innovative management approaches to achieve landscape-scale conservation of sage-grouse, the process of how the LUPs are implemented and evolve is as important as the actual management actions outlined in the plans. We are concerned that the current focus on amending the LUPs will detract from the critical task of building from those plans to realize enhanced conditions in currently designated priority and general habitats and stabilized or increasing sage-grouse populations.

An unprecedented level of collaboration among States, Federal agencies, and other stakeholders was required to amend and revise BLM and USFS LUPs to address sage-grouse populations and habitats. Those revising the LUPs considered the consistency, adequacy and durability of conservation measures relative to recommendations provided through the National Technical Team (BLM) and Conservation Objectives Team (USFWS) sage-grouse reports, ensuring that recommendations from the foremost sage-grouse experts were taken into account through the revision process. Further, decades of extensive published literature on sage-grouse and sagebrush habitats helped frame the BLM and USFS's management strategies. This literature is summarized in volume 38 of Studies in Avian Biology (*Greater sage-grouse: ecology and conservation of a landscape species and its habitats* edited by Dr. S. T. Knick and Dr. J. W. Connelly) as well as the USGS's Summary of Science report: *Summary of science, activities, programs, and policies that influence the rangewide conservation of Greater sage-grouse* (Manier et al. 2013).

It is worth noting that the Policy to Evaluate Conservation Efforts (PECE) (68 FR 15100) was used heavily as part of the September 2015 decision when considering the overall efforts of the States, private landowners, and the Federal LUPs. The PECE policy provides regulatory flexibility and is used by the USFWS to ensure regulatory certainty of conservation measures that have yet to be fully manifested. But the requirements of certainty of implementation and effectiveness of the plans must be met for those assurances to develop and support the USFWS' not warranted decision for sage-grouse in the future. Thus, the successful implementation of the LUPs is necessary to maintain the not warranted listing decision through interim reviews by the USFWS.

The sage-grouse is an indicator species for the health of the interior West's sagebrush steppe ecosystem, and healthy sagebrush habitats not only support over 350 plant and animal species including some of America's most iconic species of wildlife, but are essential for the economic sustainability of human communities in the western U.S. Today, sage-grouse are present in just over half their historical range, and the number of males counted each spring for the majority of populations across the range of the species has declined since the 1960s. A recent analysis by WAFWA suggested a long-term decline of approximately 1% annually from 1965 to 2015 (http://www.wafwa.org/). Declining populations and reduced distribution led the USFWS to conclude that the sage-grouse warranted protection under the Endangered Species Act, but this decision was overturned largely because of the regulatory certainty established by the amended and revised LUPs in combination with State conservation plans and efforts on private lands across the West.

In the following sections we elaborate on our three primary concerns and address some miscellaneous issues we identified in the Report.

1) Priority and General Habitat Management Areas

The Report makes several recommendations that could influence the amount of habitat being managed for sage-grouse. The DOI Sage-grouse Review Team (DOI Team) identified the need for flexibility to modify priority (PPH) and general (PGH) habitat management areas, including a potential plan amendment to "develop criteria for making future adjustments to habitat management area boundaries" (Report Appendix A, p. 17). Further, the DOI Team recommended potential plan amendments to consider eliminating general habitat management areas in Utah (Report Appendix A, p. 18) and removing Sagebrush Focal Area (SFA) designation (Report Appendix A, p. 17). Priority and general habitat designations were based on distributional patterns of nesting females from breeding areas (leks) in combination with the number of sage-grouse breeding on those leks and, in most instances, include the diversity of habitats required to sustain populations from lek complexes through their annual life-cycle. Sage-grouse are considered a landscape-scale species as populations generally inhabit large, interconnected expanses of sagebrush. Within this landscape, sage-grouse rely on habitats with a diversity of species and subspecies of sagebrush interspersed with a variety of other habitats (e.g., riparian

meadows, agricultural lands, grasslands). Habitats not dominated by sagebrush are usually intermixed with stands of sagebrush and are used by sage-grouse during certain times of the year (e.g., summer) or during certain years (e.g., severe drought). The research is unequivocal that those developing management approaches should view the landscape holistically from the need to provide large, functional, connected habitat patches that include the diversity of resources sage-grouse require seasonally and annually.

Approximately 30% of the area identified as the sage-grouse conservation area delineated in the Conservation Assessment of Greater Sage-grouse (2004) is designated habitat (i.e., PPH plus PGH), with approximately 14% of this area being designated as priority habitat. Further, approximately 42% of the current distribution of the species is designated as priority habitat. It is worth noting that because development is still allowed in PPH and, to a greater extent, PGH, degradation of designated habitats will continue to occur over time. Therefore, it is vital that we at least maintain the amount of habitat under greater protection established in the plans while also moving to increase habitat quality in these areas by improving sagebrush range health through enhancement and restoration.

We recommend that any modifications to sage-grouse habitat management boundaries consider the extent and diversity of habitats required by the species. The total amount of land currently identified as priority and general habitat should, at a minimum, not be reduced as a result of boundary modifications, and any areas meant to replace PPH or PGH lost as a result of boundary modifications should provide the species with high quality, diverse sagebrush habitats. SFAs should not be necessary if the quantity (at a minimum) and quality of priority habitats are maintained and managed appropriately.

2) Anthropogenic Considerations

The Report makes several recommendations meant to facilitate and promote the development of oil and gas reserves in sage-grouse habitats. The DOI Team recommends considering a potential plan amendment to rescind agency guidance on prioritizing leasing outside of important habitats, emphasizing to staff that all habitats are open for leasing (Report Appendix A, p. 2), and investigating "opportunities to provide additional waivers, modifications, and exceptions through policy or potential plan amendments" for leasing (Report p. 5) and "accommodating the need for mineral material sales" (sand and gravel) in priority habitat management areas (Report Appendix A, p. 13). The DOI Team further recommends evaluating potential plan amendments "to consider adjusting lek buffers" (Report Appendix A, p. 16), to "clarify disturbance and density requirements" (Report Appendix A, p. 2), and to "determine if a controlled surface use (CSU) stipulation could be changed" (Report Appendix A, p. 1). Although the DOI Team did not elaborate, no surface occupancy (NSO) stipulations in priority habitat management areas were also identified as an issue (Report Appendix A, p. 1). Surface disturbance thresholds and avoidance measures established in the LUPs are based on a substantial amount of data resulting from more than 25 investigations of the response of sage-grouse to energy development. All of the studies investigating the response of sage-grouse to oil and gas development report negative impacts of development on sage-grouse and no studies identify a positive influence of development on individuals, populations or habitats. Sage-grouse population-level declines in response to energy development result from avoidance of infrastructure during one or more seasons and reduced recruitment, productivity, and/or survival. Population declines have consistently been reported when well pad densities exceed 1 pad/square mile. Impacts to sage-grouse are most severe if the infrastructure associated with energy development occurs near sagebrush habitats, but population-level effects remain consistently discernible out to a distance of approximately 4 miles and impacts to 11 miles on trends in the number of males counted on leks range-wide have been reported.

We recommend maintaining current oil and gas infrastructure density and avoidance stipulations in priority habitats as the objective in priority habitats range-wide, and only considering changing these objectives in defined areas where site-specific sage-grouse data empirically and rigorously suggest these

stipulations can be modified without negatively impacting habitat use, fecundity or population growth-rate of the local sage-grouse population. It is important to note that changes to these objectives should be considered in both directions—e.g., increases to NSO distances and decreases to density thresholds should also be considered on a site-by-site basis based on local data.

With the intention of increasing flexibility to develop in priority habitats, the DOI Team recommends considering "changes to the Federal compensatory mitigation standard" (Report pp. 6-7) and a "potential plan amendment to change the net conservation gain standard" (Report Appendix A, p. 3). Compensatory mitigation is used to compensate for unavoidable impacts that remain after all appropriate avoidance and minimization measures have been applied, and is accomplished by replacing or providing substitute resources or environments through the restoration, creation, or enhancement of resources and their values, services, and functions. However, the literature suggests that a tremendous amount of uncertainty exists as to the vegetative and sage-grouse population outcomes of manipulations intended to restore, create or enhance sagebrush habitats. As such, compensatory mitigation measures should balance the spatial and temporal risk associated with mitigation projects and the predicted long-term effects. This should not be interpreted as discouraging high risk projects where substantial conservation gain is possible; in many respects, innovation in new mitigation strategies and practices need to be considered and explored to advance our understanding and ability to achieve landscape-scale conservation of sagebrush habitats. A net conservation gain standard is necessary to allay the inherent spatial and temporal risk associated with compensatory mitigation projects meant to create, enhance or restore sagebrush habitats.

We recommend strictly adhering to the mitigation hierarchy of avoidance, minimization, and compensation for unavoidable impacts. We additionally recommend maintaining a net conservation gain standard to balance the spatial and temporal risk associated with sagebrush habitat management. To achieve long-term success, it will also be necessary to strictly adhere to adaptive management principles when managing sagebrush habitats for sage-grouse. Following these principles will inherently facilitate the application and advancement of the LUPs and the conservation principles described therein and increase the likelihood of attaining net conservation gain long-term across the sage-grouse range. Further, it is important to ensure any measure of mitigation success be evaluated in biological and functional terms for sage-grouse.

3) Vegetation Management

The Report makes several recommendations that could limit the effectiveness of vegetation management, including livestock grazing, in sage-grouse habitats. The DOI Team recommends "a potential plan amendment to revise the habitat objectives tables" included in the LUPs (Report p. 7). The DOI Team further recommends clarifying "existing policy and regulations that allow animal unit months (AUMs) to increase based on forage availability" (Report Appendix A, p. 10). As with the scientific evidence supporting the energy development stipulations, the habitat objectives established in the LUPs are based on extensive published literature. These habitat objectives were established to provide sage-grouse with quality habitat conditions across seasons, and represent one of the few places in the LUPs where the underlying issue with sage-grouse of prevalent vegetative degradation across the sagebrush biome is directly addressed. Livestock grazing is the most widespread land use across the sagebrush biome. The long-term effects of grazing the sagebrush system are primarily seen as shifts in the state of the vegetation from native understory grasses and forbs to plant species more tolerant of grazing; this shift occurred in much of the West over a relatively short time-period of extensive overgrazing during drought conditions in the early 1900s. Because of historic impacts of livestock on plant species composition combined with successional change in sagebrush ecosystems, reduced numbers of livestock in the modern era has not reduced effects of grazing, but rather slowed the rate of vegetative degradation.

We recommend that vegetation goals are established relative to the ecological site paradigm and management strives towards restoring and maintaining vegetative conditions in the reference state. In

situations where results from the rigorous evaluation of site-specific data are not available, we recommend that the guidelines established for vegetation structure, cover, and composition in the LUPs be maintained as the objective in priority habitats. Because the values included in the habitat objectives tables were based on vegetative conditions measured at sage-grouse seasonal use locations throughout the species' range that were, in virtually all cases, grazed by livestock, we emphasize that areas where it is empirically demonstrated that site potential does not allow for the vegetative guidelines to be met will be infrequent and small (e.g., soil inclusions).

Miscellaneous Issues

1. The DOI Team recommended that "new captive breeding [of sage-grouse] efforts continue to be investigated" (Report p. 10). The scientific literature is conclusive in establishing that the captive-rearing of wildlife in general should be used sparingly and as a last resort when other conservation alternatives are unavailable or have been exhausted. The most extensive research on raising sage-grouse in captivity is from Colorado, where the brood augmentation approach pursued was met with limited success recruiting individuals into wild populations. The Attwater's Prairie-Chicken, a species similar to sage-grouse, has been bred in captivity since 1992, yet this program has yet to result in a self-sustaining wild population. Therefore, we recommend that the current focus remain on conserving and restoring the habitats sage-grouse depend on, and that resources that could help habitat efforts not be diverted to investigate a management alternative that is currently unnecessary.

2. The DOI Team recommended investigating "options for corvid control, including streamlining approval and reporting requirements" (Report p. 11). Limited information suggests predator control may benefit some game bird populations short-term in small areas with degraded and fragmented habitat. However, there is no evidence supporting the implementation of predator control programs long-term over large areas as an effective sage-grouse conservation tool. We recommend that the focus of sage-grouse management remain on habitat quantity and quality except in isolated cases where the empirical and rigorous assessment of site-specific data establishes that predation is limiting a population. In these isolated cases, the cause of the problem (e.g., habitat fragmentation) needs to be addressed concomitantly with the implementation of predator control.

3. The DOI Team recommends pursuing "statewide or range-wide population objectives or targets" (Report p. 11). Although we do not disagree with setting population objectives, we want to emphasize that a focus on populations cannot come at the expense of a focus on habitats. We agree with the DOI Team in that "the best method for determining sage-grouse viability is to assess a combination of habitat availability [and quality] and populations [assuming reliable population data], which are inseparable" (Report p. 11).

LUP Implementation

Ultimately, all conservation and management must occur at the local level. To be accomplished effectively and sustainably, conservation needs to be an integral facet of a community's identity—it needs to reflect the values of the community and meet the needs of its individuals. Given the commitment established in the Report of continuing "to work with partners to prioritize staff and funding to implement on-the-ground actions to conserve and restore sage-grouse habitats" (Report p. 1), partnership building and coordination needs to occur at all management and conservation levels (i.e., Federal, State, regional and local). Science-based, community-level programs built on a regional framework and conducted across the sagebrush ecosystem are the most efficient way we can successfully and sustainably engage in proactive conservation of this system. We recommend putting more thought into the bullet list included in Section IV d of the Report (p. 12), and developing the cross-scale coordination suggested by the narrative in this Section into a holistic science-based conservation program that benefits the wildlife and people reliant on sagebrush ecosystems across the West.

We are concerned that following many of the Reports' recommendations will lead to an overall loss of sage-grouse habitat quantity and quality which in turn may result in additional population declines. We are further concerned that the Federal focus on altering the current status could derail developing efforts that will progress our ability to effectively manage the sagebrush ecosystem—for example: WAFWA's Sagebrush Conservation Strategy; NRCS' Sage-Grouse Initiative; the Southern Rockies and Great Northern LCC Green River Basin LCD project; multiple local-scale collaborations between conservation, industry and agricultural interests; etc. It is our opinion that now is not the time to look backwards and challenge the work done by countless stakeholders in support of sage-grouse conservation. Now is the time to build on the momentum and allow the process to mature and evolve from the foundation provided by the LUPs to realize the sustained conservation of sagebrush landscapes and the wildlife and people dependent thereon.

To reiterate, the science community is available to meet with you and your staff and provide ongoing consultation about the available science as well as how we can collectively move forward with a science-based approach to managing and conserving sage-grouse and sagebrush habitats on our federal public lands. We thank you for your consideration of our points and recommendations.

Respectfully,

Matt J. Holloran, PhD
William L. Baker, PhD
Joseph R. Bohne
Clait E. Braun, PhD
John W. Connelly, PhD
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From:	Nada Culver
To:	Clayton, Bridget
Cc:	luke.conservationco
Subject:	FW: Comments on Sage-grouse Plan Amendments - TWS, Conservation Colorado, Audubon, WOC
Date:	Friday, December 1, 2017 11:29:30 AM
Attachments:	Sage-grouse Plan Amendments- Scoping Comments - TWS, ConsCo, WOC, Audubon 12-1-17.pdf Analysis of DOI 8-4-17 Sage-Grouse Memo and Report final.pdf TWS Sage-grouse Plans Review letter - 8-15-17.pdf Sage-Grouse Task Force Final GRSG Mitigation Report - Dec. 2016.pdf Letter to Secretary Zinke from Sage-Grouse Scientists_10.13.17.pdf

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Hi Bridget – We wanted to make sure you also had the comments we submitted today.

Nada Culver

Senior Counsel and Director, BLM Action Center

The Wilderness Society

1660 Wynkoop Street #850

Denver, CO 80202

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Nada_Culver@tws.org <mailto:Nada_Culver@tws.org>

From: Nada Culver
Sent: Friday, December 1, 2017 8:59 AM
To: 'blm_sagegrouseplanning@blm.gov' <blm_sagegrouseplanning@blm.gov>
Subject: Comments on Sage-grouse Plan Amendments - TWS, Conservation Colorado, Audubon, WOC

Attached please find scoping comments on potential amendments and other changes to the BLM's sage-grouse plans, along with the referenced attachments, submitted on behalf of The Wilderness Society, Conservation Colorado, the National Audubon Society and the Wyoming Outdoor Council. We appreciate your consideration.

Nada Culver

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*The Wilderness Society * National Audubon Society * Conservation Colorado * Wyoming Outdoor Council*

December 1, 2017

Submitted via electronic mail (blm_sagegrouseplanning@blm.gov)

Re: Scoping comments
Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation and Prepare Associated Environmental Impact Statements or Environmental Assessments

To Whom It May Concern:

Please accept these scoping comments on behalf of The Wilderness Society, National Audubon Society, Conservation Colorado and Wyoming Outdoor Council.

All of the undersigned organizations care deeply about the survival of the greater sage-grouse and the sagebrush ecosystem, and have been integrally involved in the multi-year efforts that resulted in the 2015 amendments and revisions to Bureau of Land Management (BLM) resource management plans ("2015 Sage-grouse Plans). We are concerned that this administration is considering significant changes to the plans, which will risk the habitat upon which the sage-grouse and more than 350 other species depend for their survival.

We support the plans and oppose any significant changes. Overall, we do not believe that amendments are needed, although we recognize that some clarifications may be made without rising to the level of amendments. To the extent any changes are made to the plans, they must be accomplished through a transparent process with sufficient opportunities for public oversight and input. The core aspects of the plans, including providing the most protections for the most important habitat, are based on science and the input of a wide range of stakeholders; they must be maintained. The plans should be allowed to continue working and should not be dismantled or otherwise undermined. Undermining the plans will undermine the basis for the U.S. Fish & Wildlife Service's finding that the greater sage-grouse no longer warrants listing under the Endangered Species Act.

I. THE 2015 SAGE-GROUSE PLANS WERE INTEGRAL TO THE U.S. FISH AND WILDLIFE SERVICE'S "NOT WARRANTED" FINDING; THEIR RANGE-WIDE STRUCTURE MUST BE PRESERVED.

A. The 2015 Sage-grouse Plans were designed to address primary threats to greater sage-grouse and to provide adequate regulatory mechanisms, providing the foundation for the FWS decision.

In 2010, the U.S. Fish and Wildlife Service (FWS) found that the greater sage-grouse warranted listing under the Endangered Species Act (ESA). 75 Fed.Reg. 13910 (March 23, 2010). In 2015, FWS found that the greater sage-grouse no longer warranted listing under the ESA based on the

"status of the species, potential threats, regulatory mechanisms, and conservation efforts." 80 Fed.Reg. 59857 (October 2, 2015).

FWS summarized the primary to greater sage-grouse as follows:

> In the Rocky Mountain portion of the range, sagebrush habitats have become increasing degraded and fragmented due to fossil fuel and renewable energy development, infrastructure such as roads and power lines, mining, improper grazing, the direct conversion of sagebrush to croplands, and by urban and ex-urban development.
>
> In the Great Basin, incursions of invasive plants such as cheatgrass and conifer, increases in wildfire size, frequency and intensity fueled by invasive plants, along with improper grazing from domestic livestock and free-roaming horses and burros, drought, and mining have eliminated the habitat and degraded the value of large areas of sagebrush habitat for greater sage-grouse. The threat of habitat loss to fire and invasive species can be exacerbated by even small amounts of development in important habitat.
>
> Impacts from these stressors have been exacerbated by the lack of adequate regulatory mechanisms to control their effect on sagebrush habitat. In the finding the Service discusses how these threats have been ameliorated.[1]

FWS also highlighted the 2015 Sage-grouse Plans were highlighted as the basis for finding adequate regulatory mechanisms now exist:

> The Bureau of Land Management (BLM) and U.S. Forest Service (USFS) have each completed amendments or revisions to 98 land management plans governing greater sage-grouse habitat. The Service provided technical assistance during the development of these federal land use plans, which are the principal regulatory documents for the activities allowed on BLM and USFS lands. This federal greater sage-grouse planning effort is unprecedented in scope and scale, and represents a significant change from managing within administrative boundaries to managing with an ecosystem approach with a goal of balancing the agencies' multiple-use mandates with conservation objectives.[2]

FWS also acknowledged state plans, but only cites Wyoming, Oregon and Montana as having "regulatory provisions that provide certainty and will help to reduce habitat loss and fragmentation in the best remaining greater sage-grouse habitat."[3] Consequently, it is the 2015 Sage-grouse Plans that are the foundation for the FWS finding – based on their ability to address the wide range of potential threats "with an ecosystem approach" and to provide adequate regulatory certainty. Therefore, it is of primary importance that the range-wide structure of the plans be preserved, as well as measures to address the potential threats FWS identified.

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[1] FWS, 2015 Endangered Species Act Finding, Frequently Asked Questions, discussing potential threats: https://www.fws.gov/greatersagegrouse/findings.php

[2] *Id.*, discussing regulatory measures.

[3] *Id.*

Significant changes to the plans will risk the FWS finding and the function of the plans, which benefit the entire sagebrush ecosystem.

B. The Nevada court's decision does not require amendments or major changes to the 2015 Sage-grouse Plans.

In addition to the report to Secretary of the Interior Ryan Zinke that was prepared by the Department of the Interior's (DOI) Sage-Grouse Review Team and adopted by the Secretary on August 4, 2017[4] (hereinafter the Report), BLM's Notice of Intent states that the agency is also responding to the decision in *Western Exploration, LLC v. U.S. Dep't of the Interior,* 250 F. Supp. 3d 718 (D. Nev. 2017), stating:

> In order to comply with the court's order . . . the BLM seeks comments on the [Sagebrush Focal Area] SFA designation, mitigation standards, lek buffers in all habitat management types, disturbance and density caps, habitat boundaries to reflect new information, and reversing adaptive management responses when the BLM determines that resource conditions no longer warrant those responses.

82 Fed. Reg. 47248, 47249 (Oct. 11, 2017). However, the court's decision does not require or justify amendments or major changes to the plans. In fact, the court's decision only requires the BLM to conduct supplemental analysis of limited aspects of the SFA designations.

While the plaintiffs in *Western Exploration* argued that a supplemental environmental impact statement (EIS) was required for several issues — changes to the lek buffer requirements, the application of a "net conservation gain" mitigation strategy, the use of hard-trigger adaptive management strategies, and SFA designations in Nevada — the court found that only the SFAs required supplemental review. 250 F. Supp. 3d 718 at 749. The court agreed that "the designation of 2.8 million acres as Focal Areas in Nevada amounts to a substantial change relevant to environmental concerns" requiring the BLM and Forest Service to prepare a supplemental EIS. *Id.* However, the court refused to vacate the records of decision that implemented the sage grouse protection plans. Per the Court's order, these plans remain in effect while BLM reconsiders only the narrow issue of the SFAs. *Id.* at 750-51.

Notably, the court refused to vacate the records of decision because of potential "undesirable consequences," stating:

> The parties do not dispute that protecting the greater sage-grouse species and their habitat is an important goal. The State and several of the counties argue that existing state and local land use plans provide for the greater sage-grouse's protection, thus recognizing that a certain level of protection is warranted. Moreover, FWS found in part that "listing the greater sage-grouse (rangewide) is

[4] Report in Response to Secretarial Order 3353, available at https://www.eenews.net/assets/2017/08/07/document_gw_08.pdf.

> warranted, but precluded by higher priority listing actions," and that existing regulatory mechanisms available to federal agencies were essentially inadequate to provide for the species' protection. (75 Fed. Reg. 13910, 13982 (Mar. 23, 2010).

Id. at 750-51. The court found that continuing to protect the sage-grouse weighed against suspending the plans while a supplemental EIS is prepared to analyze the SFAs.

Based on the plain language of the court ruling, the only issue that should be reconsidered based on the *Western Exploration* opinion is eliminating developed areas from SFAs and ensuring low priority habitats and non-habitats are not included in SFAs. *See* 250 F. Supp. 3d 718 at 749 (noting these issues in the SFAs). The addition of SFAs did not change the basic management prescriptions in the land use plans, it only affected where those decisions would apply. *Id.* at 750. The core concept of SFAs is not in question. In fact, SFAs were a key part of the FWS "not warranted" decision. SFAs were created in response to data provided by the FWS in documents such as the Conservation Objectives Team (COT) report, which was prepared by the FWS and which will be discussed in more detail below. *See* 250 F. Supp, 3d 718 at 749 (noting the "new information" that the FWS provided in the plan development process). The BLM cannot abandon this best available science by revoking the concept and practice of SFAs. The basic management is not at issue, only the specific boundaries of the SFAs.

Other aspects of the *Western Exploration* decision also point to the validity and importance of the 2015 Sage-grouse Plans. First, the court found that the BLM adequately considered local land use plans when it developed the BLM sage grouse plans for Nevada, which met the Federal Land Policy and Management Act (FLPMA) consistency requirement. 250 F. Supp. 3d 718 at 744. Thus, local land use plans were adequately considered and reconciled with the BLM sage-grouse land use plans.

Second, the court found that BLM had fully complied with its multiple use mandate when it developed the Nevada sage-grouse plan, concluding:

> Plaintiffs contend that BLM Plan's closure of millions of acres of land for multiple use — specifically the proposed withdrawal of 2.8 million acres of land from mineral entry [under the SFA provision], onerous travel restrictions on 16 million acres, and restrictions on grazing — fails to meet FLPMA's requirement that BLM balance diverse resource uses based on the relative values of those resources. . . . Plaintiffs insist that BLM provided inadequate analysis of the relative value of Nevada resources, based the restrictions to multiple use on faulty science, and did not meaningfully consider viable alternatives that balanced resources and met local economic goals. … A review of the administrative record shows that BLM considered the relative value of Nevada's resources.

250 F. Supp. 3d at 746.

Further, the court rejected claims that BLM's net conservation gain mitigation standard was invalid because it violated the unnecessary or undue degradation prohibition found at 43 U.S.C. § 1732(b). *Id.* at 747.

The *Western Exploration* decision primarily endorsed the validity and scope of the 2015 Sage-grouse Plans. The opinion states that BLM must conduct a supplemental EIS regarding SFA boundaries in Nevada, but otherwise validated the authority, purpose, and scope of the current land use plans. This opinion makes it clear that the BLM plans address the primary threats to the species and put in place adequate regulatory mechanisms to address those threats, which was a primary reason for the FWS "not warranted" finding.

II. KEY ELEMENTS OF THE 2015 SAGE-GROUSE PLANS MUST BE RETAINED.

As discussed above, the rangewide structure of the 2015 Sage-grouse Plans and the manner in which they address the potential threats to greater sage-grouse with regulatory certainty are vital to the continued function of the sagebrush ecosystem, forming the basis for the FWS finding that listing under the ESA was no longer warranted. While some of these provisions could be clarified, retained or better interpreted through additional guidance or plan maintenance actions, the core elements must be retained in order to support the function and effectiveness of the plans. Further, all of these elements are needed to demonstrate that the FWS "not warranted" finding continues to be justified, including during the FWS review expected no later than five years from the date the applicable Records of Decision (RODs) were signed (i.e., 2020). Key elements of the plans are discussed below.

A. Protect the highest value habitat with the strongest management guidelines.

The structure of the 2015 Sage-grouse Plans was developed to provide the most protections to the highest value habitat (thus ensuring it is sufficiently protected) while providing more flexibility for other activities to occur outside habitat and in other habitat areas. Consequently, maintaining the overall structure of the plans to focus on protecting the highest value habitat is not only the most likely to succeed in conserving the species, it is also having limited impacts on activities like oil and gas development. It is essential for the functioning of the plans that Priority Habitat Management Areas (PHMA) (and/or Core Habitat), including Sagebrush Focal Areas (SFA), are maintained and provided with the most protections, while appropriate levels of protection are also incorporated for General Habitat Management Areas (GHMA).

The 2015 Sage-grouse Plans currently incorporate key commitments of agency resources to support this structure. For instance, oil and gas leasing and development are prioritized outside of both priority and general habitat management areas. *See*, Rocky Mountain ROD, p. 1-25.[5] At the same time, SFAs are to be "prioritized for vegetation management and conservation actions

[5] https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

in these areas, including land health assessments, wild horse and burro (WHB) management actions, livestock grazing permit and lease review, and habitat restoration." Rocky Mountain ROD, p. 1-22. These habitat classifications and the corresponding protections must be retained as a core principle of the plans.

Within PHMA, the 2015 Sage-grouse Plans also identify SFAs, based on such factors as population density and habitat integrity. The additional layer of habitat protections provided in the SFAs responds directly to the concerns raised in the FWS's 2010 greater sage-grouse finding that listing under the ESA was warranted based on habitat disturbance and the lack of adequate regulatory measures to prevent continued losses. The RODs for the plans committed BLM to seek mineral withdrawals within the SFAs specifically to address the threat of surface disturbance from hardrock mining. BLM has now canceled its SFA withdrawal application and the proposed withdrawal of 10 million acres from location and entry under the mining law in six Western States. Based on the FWS concerns, the mineral withdrawal should not be abandoned.

Even without the mineral withdrawal, however, the SFAs serve as a landscape-level anchor for the sustained conservation and restoration of sage-grouse, including addressing habitat linkages. SFAs are closed or excluded from discretionary surface disturbances. In addition, SFAs are used to prioritize fire protection, habitat restoration and other habitat management actions. This approach allows BLM to target limited resources to those areas identified by FWS and state agencies as most important to long-term sagebrush ecosystem health and species persistence. As a result, SFAs are particularly valuable as sites for concentrating initial efforts to build sustained populations of birds and should be maintained.

B. Retain measures to reduce destruction and fragmentation of habitat.

As summarized by FWS "[t]he most significant threat to the species is habitat loss and fragmentation due to a variety of causes."[6] Consequently, in order for the 2015 Sage-grouse Plans to continue to be effective, provisions addressing energy development and other causes of habitat fragmentation must be retained and enforced. These provisions include:

- No surface occupancy provisions for oil and gas development within PHMAs;
- Similar direction on appropriate locations for development of wind, solar and transmission lines; and
- Limitations on the amount and timing of surface-disturbing activities, such as surface disturbance caps and buffers around leks.

Without these safeguards, the plans are not likely to effectively protect habitat or prevent habitat fragmentation. Many of the states that have developed their own sage-grouse conservation plans use similar measures because they are most reliable and effective measures available.

[6] FWS, 2015 Endangered Species Act Finding, Frequently Asked Questions, discussing potential threats: https://www.fws.gov/greatersagegrouse/findings.php

C. Ensure unavoidable harms are mitigated

By designing appropriate mitigation measures, the 2015 Sage-grouse Plans provide a path forward for permitting more activities on the public lands that may harm greater sage-grouse habitat (such as activities that would otherwise exceed the scientifically-set surface disturbance caps) while ensuring those harms will be sufficiently addressed to offset unavoidable harms (such as restoring habitat or providing intact habitat). Mitigation is a necessary part of the plans' structure and is also a key part of the management approaches taken by the Western states, including those states that have formal sage-grouse conservation plans. The plans are set up to ultimately improve and restore habitat, using a "net gain" standard, which should also be retained to continue expanding suitable habitat and making up for years of precipitous loss.

Protections in the plans will only be effective if the full mitigation hierarchy, including avoidance, minimization and mitigation or compensation, is rigorously employed. The Report states that both the Review Team and the Western Governors Association's Sage Grouse Task Force agree that consistent application of the mitigation hierarchy (avoid, minimize, and mitigate), including compensatory mitigation standards and other requirements between State and Federal plans, policies, and procedures, is desirable. The 2015 Sage-grouse Plans comply with the mitigation hierarchy (i.e., avoid impacts where possible; minimize impacts where avoidance is not practicable; and mitigate or offset unavoidable impacts) and this compliance is necessary for their success. By providing the greatest protection for the highest value habitat and setting out specific management provisions for different activities, the 2015 Sage-Grouse Plans seek to avoid or minimize impacts to sage-grouse habitat. Nonetheless, the plans also recognize that some harm to habitat cannot be sufficiently avoided or minimized, and therefore mitigation through compensatory actions is required to restore or replace the damaged habitat.

Evaluation of mitigation is required by the National Environmental Policy Act (NEPA).[7] Management for multiple use and sustained yield and avoidance of unnecessary or undue degradation to the uses and values of the public lands (including wildlife) is required by FLPMA.[8] The BLM's current manual and handbook on mitigation (Manual 1794, Handbook H-1794-1) acknowledge the BLM's authority to condition land uses on mitigation and to deny approval of uses when impacts cannot be sufficiently mitigated.[9] Similarly, DOI's Manual on Mitigation "affirms its authority to identify and plan for the extent, nature, and location of mitigation, including compensatory mitigation, and to require the implementation of effective mitigation."[10]

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[7] *See* 40 C.F.R. §§ 1508.8, 1502.14, 1502.16.
[8] *See* 43 C.F.R. §§ 1701, 1732(b).
[9] *See, e.g.,* BLM Handbook, H-1794-1 Mitigation (P) (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM%20H-1794-1%20Mitigation%20FINAL.docx, and BLM Manual, MS-1794 Mitigation § 1.6.E.2 (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM_MS-1794%20Mitigation%20FINAL.docx
[10] See U.S. Dep't of Interior Manual, 600 DM § 6.5, Landscape-Scale Mitigation Policy (Oct. 23, 2015) https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf

Application of strict avoidance and minimization principles is critical because impacts to sage-grouse habitat cannot be reduced if development continues to occur on functioning habitat. In addition, restoration resulting from compensatory mitigation continues to be challenging in sagebrush habitat. The difficulty in achieving successful restoration, as well as the years of habitat loss, are also justifications for the use of the net conservation standard for mitigation.

BLM should not restrict the use of multipliers for mitigation. There are large variations in the quality of sage-grouse habitat and, as noted above, there are currently low success rates of restoration. In addition, because the 2015 Sage-grouse Plans already allow fragmentation and additional disturbance in all types of habitat, ongoing habitat loss is inevitable. The use of multipliers provides a mechanism to address the challenges in restoration and is an important part of many state mitigation programs, including Nevada and Wyoming.

Compensatory mitigation programs must include strategies to assess and manage risks and benefits. Characterization of both the risks associated with mitigation approaches and their likely benefits are necessarily predictive and require monitoring to ensure solutions are successful and durable. The BLM must ensure that it continues to monitor both the risks and benefits resulting from compensatory mitigation and that it employs and requires those provisions that are shown to be most successful and durable.

D. Monitor and adjust the plans, based on best available science, as conditions on the ground change.

The 2015 Sage-grouse Plans provide regulatory certainty by incorporating mechanisms to demonstrate that any major problems (such as precipitous drops in population or habitat condition) will be identified and can be addressed quickly. The plans include a Habitat Objectives Table, Habitat Assessment Framework, and Assessment, Inventory and Monitoring procedures that provide for data collection and measurement of conditions and analysis. These elements of the 2015 Sage-grouse Plans yield detailed information to show that the plans are working. They can also feed into the plans' adaptive management framework, which leads to immediate action when certain triggers are met.

The Report suggests the option of policy guidance for conducting a "causal factor analysis" when applying those triggers to determine what caused the trigger to be tripped, and implies that this could be a requirement before responses are instituted. Exhaustive casual factor analyses are very expensive, often speculative and time consuming, and in the end, may not be feasible in a short time frame once a trigger is tripped. While identifying causal factors can be valuable, such an analysis must not delay critical corrective actions.

Further, as discussed in more detail below, the 2015 Sage-grouse Plans are based on accepted science. Some of the changes discussed in the Report are clearly not supported by science, such as captive breeding or relying solely on population counts. At the same time, many of the key

elements of the current plans, such as surface disturbance caps and lek buffers, are accepted as the most likely to succeed based on available science. Any changes to the conditions monitored and actions taken must similarly be consistent with the current, accepted science.

E. Maintain the rangewide framework of the 2015 Sage-grouse Plans, while addressing the need for state-specific measures.

While the 2015 Sage-grouse Plans have variations among states, the approach and the result (and the basis for the FWS decision that listing was no longer warranted) were based on a rangewide conservation strategy, which aggregated the commitments and their effects. The 2015 Sage-grouse Plans provided for certain measures to be tailored to be more consistent with state plans or to address specific concerns. However, these state-specific management approaches were limited so that they did not undermine the rangewide, "ecosystem approach" that the FWS highlighted. This cohesive and comprehensive strategy must be maintained; state-specific approaches must not interfere with its ability to succeed.

III. RECOMMENDATIONS IN THE REPORT IN RESPONSE TO SECRETARIAL ORDER 3353 DO NOT SUPPORT DEVELOPMENT OF AMENDMENTS TO THE 2015 SAGE-GROUSE PLANS.

Secretarial Order No. 3353, entitled "Greater Sage-Grouse Conservation and Cooperation with Western States," directed the BLM to take actions to review the 2015 Sage-grouse Plans and find ways to modify them to give "appropriate weight to the value of energy and other development of public lands."[11] In addition, in response to the Report generated in response to the Secretarial Order, submitted on August 4, 2017, Secretary Zinke issued a memorandum to the Deputy Secretary of the Interior entitled "Improving the BLM's 2015 Sage-Grouse Plans" (hereinafter the Memorandum).[12]

The Report and Memorandum provide no basis for amending BLM's land use plans protecting the sage-grouse. The shortcomings of this report were outlined in an analysis The Wilderness Society and National Audubon Society prepared after the Report was issued. That analysis is also relevant to this formal scoping process and is included herewith. We ask the BLM to fully consider it in connection with this scoping process. In addition, on August 15, 2017, The Wilderness Society submitted a letter to BLM Acting Director Michael Nedd outlining concerns with the Report. That letter too is submitted herewith and we ask that it be fully considered.

A. Concerns with Recommendations in the Report Outlined in The Wilderness Society and Audubon Analysis.

The Wilderness Society and Audubon analysis outlined two key concerns with the DOI Memorandum and Report: (1) they proposed to remove key protections of the plans by shrinking the areas subject to protection and weakening the protections in the plans; and (2) they provided for an inadequate public review and involvement process.

[11] https://www.doi.gov/sites/doi.gov/files/uploads/so_3353.pdf.
[12] https://www.eenews.net/assets/2017/08/07/document_gw_07.pdf.

Key elements of the plans that are targeted for removal or modification that are criticized in the analysis include:

1. **There is a focus on increasing oil and gas development in sage-grouse habitats that is contrary to the current plans**. We note that there is only a 4 percent overlap between PHMAs and existing coal and oil and gas leases on federal lands; approximately 79 percent of federal lands and minerals in PHMAs have a zero to low oil and gas development potential; and approximately 71 percent of federal lands and minerals in the principal sage-grouse states that have a medium to high oil and gas development potential are located outside PHMAs.[13] Protections of sage-grouse habitat from oil and gas development should be maintained; and this can be done with little impact on oil and gas development opportunities.

2. **The Report proposes to amend the 2015 Sage-grouse Plans to remove SFAs.** SFAs are strongholds for sage-grouse and support protections in PHMAs. The BLM has already cancelled the withdrawal of these areas from mineral entry, as had been proposed and analyzed by the agency. 82 Fed. Reg. 47,248 (Oct. 11, 2017). SFAs are the "most highly valued sagebrush ecosystem areas" and are a subset of the PHMAs,[14] so they should be maintained. Putting in place SFAs was a key reason for the FWS not warranted listing decision in 2015.

3. **The Report considers amending the 2015 Sage-grouse Plans to modify the boundaries of protected areas, including PHMAs and GHMAs**. These protected areas are key to the effectiveness of the plans and their modification or removal would destroy the plans and would make listing the sage-grouse under the ESA a necessity. Under the recommendations in the Report, GHMAs in Utah might be removed altogether, which is not acceptable.

4. **The Report considers eliminating conditional surface use stipulations in GHMA**. It is also considering eliminating the review of waivers, exceptions, and modifications by the FWS where no surface occupancy (NSO) requirements can be put in place. As we said in the analysis, FWS review "was focused on ensuring certainty for conservation measures, so meaningful sideboards on waiver, exception, or modification of these stipulations is a foundation for the [FWS] finding that the plans will succeed and listing was no longer needed." Stipulations in GHMA must be retained.

5. **The Report considers modifying or removing buffers around sage-grouse leks and modifying the surface disturbance caps that are found in the 2015 Sage-grouse Plans**. These provisions are key to protecting the sage-grouse and are a hallmark of many state plans. The science is overwhelmingly in support of providing for these lek buffers

[13] *See* http://westernvaluesproject.org/wp-content/uploads/2014/10/Greater-Sage-Grouse-Priority-Habitats-and-Energy-Development.pdf (report of the Backcountry Hunters and Anglers).
[14] See Great Basin and Rocky Mountain Region sage-grouse land use plan amendment records of decision. https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf and https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/ Great_Basin_ROD_9.21.15_508.pdf

and surface disturbance caps. Recently, preeminent sage-grouse scientists provided a letter to Secretary Zinke outlining their concerns about amending the plans, which included changing these elements of the plans. The letter states:

> Surface disturbance thresholds and avoidance measures established in the LUPs are based on a substantial amount of data resulting from more than 25 investigations of the response of sage-grouse to energy development. All of the studies investigating the response of sage-grouse to oil and gas development report negative impacts of development on sage-grouse and no studies identify a positive influence of the development on individuals, populations or habitats. Sage-grouse population-level declines in response to energy development result from avoidance of infrastructure during one or more seasons and reduced recruitment, productivity, and/or survival. Population declines have consistently been reported when well pad densities exceed 1 pad/square mile. Impacts to sage-grouse are most severe if the infrastructure associated with energy development occurs near sagebrush habitats, but population-level effects remain discernable out to a distance of approximately 4 miles and impacts to 11 miles on trends in the number of males counted on leks range-wide have been reported.

October 13, 2017 letter to Ryan Zinke, which is included herewith and discussed in more detail below.

6. **The Report considers removing or updating the habitat objectives tables, which are found in the 2015 Sage-grouse Plans**. These objectives should not be changed because they were based on site-specific information and scientifically-based conditions. They help establish clear management goals and achieve functioning habitats, allowing BLM to identify when management changes are needed.

7. **The Report considers changing adaptive management in the 2015 Sage-grouse Plans.** Adaptive management is a key component of the land use plans, including "hard" and "soft" triggers for management modifications. These are key provisions that should not be eliminated—adaptive management has become a hallmark of compliance with the NEPA and the land use plans adopted under FLPMA. *See* https://www.ntc.blm.gov/krc/krc_search.php?searchterm=adaptive (BLM adaptive management website); https://www.energy.gov/sites/prod/files/2016/02/f29/finalreport.pdf (Council on Environmental Quality report on adaptive management).

8. **The Report considers major changes to mitigation measures in the 2015 Sage-grouse Plans**. As with adaptive management, mitigation is a hallmark of, and required by, NEPA. As we noted in The Wilderness Society and Audubon analysis, "Mitigation is a necessary part of the plans' structure to allow for development without compromising conservation and is also a key part of the management approach taken by the western states . . ." The net conservation gain standard is a key part of mitigation in the existing plans, and while the plans might be clarified, these provisions must be maintained. These

provisions have been accepted by industry and they now rely on these mitigation measures to provide certainty when they propose development.

9. **The Report considers adopting captive breeding as a means to augment sage-grouse populations. The Report also considers setting population objectives as the basis for management, not habitat condition or quality as the current plans—and best science—provide for and recognize**.

These recommendation raises significant concerns. The best science clearly shows that these proposals are not likely to be effective in conserving the sage-grouse. This is made clear in the white papers prepared by the Western Association of Fish and Wildlife Agencies (WAFWA) that are included as Appendix F in the Report, which includes the following discussion:

Captive Breeding: "In general, if environmental conditions that precipitated sage-grouse declines have not been mitigated, transplants of additional and locally naïve birds is not likely to succeed . . . . Sage-grouse have been maintained, hatched and bred in captivity successfully, but only in research settings . . . . Sage-grouse captured in the wild do not adapt well to captive conditions . . . . Techniques for captive rearing of sage-grouse are still in their infancy . . . . Pending refinement and demonstration of the effectiveness of captive breeding and release of sage-grouse, other approaches to augmentation appear to be more certain and likely to be less costly and impactful to source populations . . . . Augmentation by any means are not necessary for recovery from declines in relatively large contiguous habitats in good condition. Augmentations are unlikely to have any success in small and isolated populations until and unless the environmental conditions that precipitated sage-grouse declines have been mitigated. *See* WAFWA White Paper entitled "Augmenting Sage-Grouse Populations Through Captive Breeding and Other Means," attached as Appendix F to the Report.

Population Objectives: "Management approaches must include conservation of seasonal sagebrush habitats to be successful . . . . The overall goal of the range-wide Strategy is to maintain and enhance populations and distribution of sage-grouse *by protecting and improving sagebrush habitats and ecosystems that sustain these populations* [emphasis in original] . . . . Sage-grouse have become a conservation reliant species . . . . Setting and managing to population goals is not realistic unless we have the capability to estimate sage-grouse population size . . . . Population level management actions to benefit sage-grouse don't provide benefits to other sagebrush-dependent species . . . . For this reason, any significant retraction of habitat based protections afforded in BLM Land Use Plan Amendments . . . may lead to additional petitions on sagebrush species of conservation concern such as pygmy rabbits . . . . Goals should be population ranges that recognize and account for the large population fluctuations (cycles) typical for this species . . . . Efforts to enhance, restore, and protect habitats from conversion and degradation will be necessary to achieve population goals that are

in aggregate sufficient to deter listing. Habitat efforts will benefit other sagebrush obligates and make petitions and listing of these species less likely." *See* WAFWA White Paper entitled "Population and Habitat-Based Approaches to Management of Sage-Grouse," attached as Appendix F to the Report.[15]

With respect to providing for public involvement in this process, The Wilderness Society and Audubon analysis pointed out that the 2015 Sage-grouse Plans were the product of a massive, long-term level of public engagement and participation, which sought to balance sage-grouse conservation and the use of federal lands for economic activities. Yet the Report and Memorandum were developed with only a 60-day review period and no public involvement, and this scoping comment period was similarly set for only 45 days. The reference in the Report to Executive Order No. 13783 ("Promoting Energy Independence and Economic Growth"), shows that BLM is focused on expanding energy development and is not giving sufficient attention to required public engagement. In the Report, BLM made no commitments to lead outreach or to engage the public, referring to expected actions by the Western Governors Association's Sage-Grouse Task Force, which does not operate under the legal mandates that BLM has under FLPMA and NEPA. Further, BLM did not wait for the Task Force to conduct stakeholder engagement before commencing this comment period and it is not clear that additional outreach by the states will be supported.

The BLM needs to correct this approach and ensure there is a public engagement and participation process that is on par with the level of engagement that led to the 2015 Sage-grouse Plans. This is necessary to meet the BLM's multiple use mission as well as the land use planning requirements of FLPMA, not to mention the public participation requirements of NEPA. *See* 43 C.F.R. § 1610.2 (outlining the requirement for a robust public involvement process in BLM land use planning); 40 C.F.R. § 1506.6(a) (agencies shall "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures").

As The Wilderness Society and Audubon analysis made clear, maintaining sage-grouse protections is needed because as recognized by Western governors, wholesale changes to the plans are not needed. In addition, maintaining the plans is needed to support the FWS "not warranted" decision and to protect the more than 350 additional species that rely on the sagebrush ecosystem from the need for listing. Maintaining these plans is also needed as a sign of respect for the thousands of stakeholders representing mining, oil and gas, livestock, local government, and environmental interests who engaged in the development of the 2015 Sage-grouse Plans.

B. Concerns with Recommendations in the Report Outlined in The Wilderness Society Letter to the BLM.

The letter to then-Acting Director Michael Nedd reiterates and expands on The Wilderness Society's concerns with the actions the agency might take based on the Report and Memorandum; and the BLM should similarly consider this letter. In that letter we emphasized a need to maintain critical elements of the 2015 Sage-grouse Plans. These included:

[15] The WAFWA white papers also addressed predator control issues and hunting and the BLM should also consider these reports as it considers land use plan amendments.

1. Protecting the highest value habitats (PHMA and GHMA) and maintenance of BLM's oil and gas prioritization process, which allows for development in non-habitat areas but which seeks to limit and provide for mitigation of development in high value habitats.
2. Maintain provisions that address threats to sage grouse such as continuing NSO provisions and limiting the amount of development by providing for surface disturbance caps and lek buffers. There was a particular need to address threats from oil and gas development in the Rocky Mountain region and prevention of agricultural conversion in Montana, with fire and invasive species being key threats in the Great Basin region, and a need to prevent habitat fragmentation in all cases.
3. Ensuring the mitigation hierarchy is complied with and avoidance and minimization of impacts is ensured in sage-grouse habitats. Compensatory mitigation is necessary where impacts cannot be avoided.
4. There must be continued maintenance of the Habitat Objectives Table, Habitat Assessment Framework, and Assessment, Inventory and Monitoring procedure. This is necessary so that the plans are monitored and can be adjusted if needed.

Underlying the maintenance of these key provisions in the plans is a need to ensure that any modifications are based on the best available science, as was clearly the case when the 2015 Sage-grouse Plans were adopted. This is specifically true with respect to the proposals to consider captive breeding and the use of population objectives for management, where the WAFWA white papers must be considered. We will address some of the best available science that BLM must take into account in making any changes to the 2015 Sage-grouse Plans below.

Finally, in our letter to Mr. Nedd we again emphasized the need for the BLM to ensure there are robust opportunities for public participation and engagement in this process.

C. Concerns with Recommendations in the Report Made in the Letter from Seventeen Prominent Sage-Grouse Scientists to Secretary of the Interior Ryan Zinke.

In addition to our analysis and the letter to the BLM, the BLM also needs to consider the letter from sage-grouse scientists to Mr. Zinke (cited above) when considering the recommendations in the Report. Again, that letter is included herewith. We ask the BLM to fully consider it. In their letter, these well-known sage-grouse scientists share three general concerns regarding the Report. These were:

1. Recommendations in the Report could result in fewer acres of PHMA and GHMA, "limiting management options for the species."
2. Recommendations in the Report have the potential to limit effective management of "anthropogenic aspects of the sagebrush biome", which were concerns about oil and gas development and compensatory mitigation and the net conservation gain standard.
3. The recommendations in the Report could limit the ability to "effectively manage vegetative aspects of the sagebrush biome."

Considering these concerns one at a time shows the importance of avoiding amendments to the 2015 Sage-grouse Plans and limiting any changes to their key provisions.

As the scientists point out, PHMAs and GHMAs include the diversity of habitats that are required to sustain sage-grouse populations from the lek complex level through their annual life-cycle. There is a need for holistic consideration of these habitats so as to "provide large, functional, connected habitat patches that include the diversity of resources sage-grouse require seasonally and annually." Thus, "it is vital that we at least maintain the amount of habitat under greater protection established in the plans while also moving to increase habitat quality in these areas by improving sagebrush health through enhancement and restoration." Based on the 'best available science," the scientists say the PHMA and GHMA areas should not be reduced as a result of boundary modifications and if areas are designated as replacements to PHMAs and GHMAs they "should provide the species with high quality, diverse sagebrush habitats."

As to anthropogenic aspects of recommendations in the Report, the scientists point to and cite the unequivocal research that has documented densities of oil and gas development that harm sage-grouse. The results of this scientific research were quoted above. Based on this, the scientists "recommend maintaining current oil and gas infrastructure density and avoidance stipulations in priority habitats as the objective in priority habitats range-wide, and only considering changing these objectives in defined areas where site-specific sage-grouse data empirically and rigorously suggest these stipulations can be modified without negatively impacting habitat use, fecundity or population growth-rate of the local sage-grouse population." And, in addition to stating that BLM should not consider reducing these protections, the scientists recommend that the agency consider *increasing* these protections by increasing NSO distances and decreasing the densities of permissible oil and gas development.

As for mitigation measures and the net conservation gain standard, the scientists emphasize that there is scientific uncertainty about the results of mitigation and therefore "compensatory mitigation measures should balance the spatial and temporal risk associated with mitigation projects and the predicted long-term effects." And, "a net conservation gain standard is necessary to allay the inherent spatial and temporal risk associated with compensatory mitigation projects meant to create, enhance or restore sagebrush habitats."

In considering vegetation management aspects of the recommendations in the Report, some of the focus of the scientists was on livestock grazing. However, they also considered the habitat objectives tables in the plans. They point out that "the habitat objectives established in the LUPs are based on extensive published literature." Management should seek to restore and maintain vegetative conditions in the reference state and "we recommend that the guidelines established for vegetation structure, cover, and composition in the LUPs be maintained as the objective in priority habitats."

In addition to these three general concerns, the scientists also provided their views on the captive breeding, predator control, and population objectives recommendations in the Report. Their recommendations mirror those made by WAFWA, as discussed above.

Finally, the scientists make several general statements that are noteworthy and which BLM should fully consider:

1. "We are concerned that the current focus on amending the LUPs will detract from the critical task of building from those plans to realize enhanced conditions in currently designated priority and general habitats and stabilized or increasing sage-grouse populations."
2. "We are concerned that following many of the Reports' recommendations will lead to an overall loss of sage-grouse habitat quantity and quality which in turn may result in additional population declines."
3. "It is our opinion that now is not the time to look backwards and challenge the work done by countless shareholders in support of sage-grouse conservation."
4. "Now is the time to build on the momentum and allow the process to mature and evolve from the foundation provided by the LUPs to realize the sustained conservation of sagebrush landscapes and the wildlife and people dependent thereon."

D. Conclusions regarding previously stated concerns with BLM's approach to changing the 2015 Sage-grouse Plans.

Based on the information in The Wilderness Society and Audubon analysis letter, the letter to BLM, and the scientists' letter, BLM should not be considering amendments to the 2015 sage-grouse protection plans at this time. This would be consistent with the direction that is found in the Report. Under the terms in the Report, plan amendments are only to be done at some point in the future after initial less drastic modifications to sage-grouse protections are considered and put in place. Plan amendments are "longer term options." Report at 1, 2, 5 and 13. Before any plan amendments should be considered, BLM should first evaluate the short-term approaches that are identified in the Report, such as policy clarifications and providing training to BLM personnel. We are not aware that any of these short- term actions have been completed. Therefore, any effort to amend the plans at this time is premature and should not be pursued.

IV. BLM MUST USE THE BEST AVAILABLE SCIENCE IN AMENDING THESE PLANS, INCLUDING SCIENTIFIC REPORTS USED IN CRAFTING THE 2015 SAGE-GROUSE PLANS.

It is imperative that the BLM employ the best available science as it considers amendments or any changes to the sage-grouse land use plans and especially if it moves to amend the plans. As stated in Secretarial Order No. 3353, "[a]s the Department moves forward in the management of Sage-Grouse habitat, it is imperative that it does so in a manner that allows . . . [it to] incorporate the expertise of Federal employees in the field, local conditions, and proven State and local approaches." The Memorandum from Secretary Zinke to the Deputy Secretary states that "I also believe we should examine a program to enhance scientific research."

The Report considered data management and the use of science, stating:

> Addressing priority science needs of managers and sharing high-quality science and information, including locally collected monitoring and assessment data, among all entities can further the application of a data-driven approach to conservation and management of GRSG and the sagebrush ecosystem. Continued development and integration of local data and information, peer-reviewed science, and other high-quality information forms the foundation for management decisions and identifies the need for new science and information. Attributes to assess the quality and reliability of new science, data, and information include peer review, repeatability of methods and analyses, quality assurance, strength of evidence, and relevance to local conditions.

Report at 11-12. Based on this statement, seven recommendations were made to "increase the use of science," including "[c]ontinue to emphasize the need for locally relevant science and data to inform implementation of management actions." Clearly the best available science should be employed in this NEPA review.

There is a tremendous amount of very high-quality science that formed the basis for the 2015 Sage-grouse Plans. These scientific reports remain valid and must be fully reconsidered and made the basis for this current NEPA review. We highlight some of these reports below.

BLM National Technical Team (NTT) Report (December 21, 2011).[16] This report, entitled "A Report on National Greater Sage-Grouse Conservation Measures", provides an analysis of the most scientifically up-to-date conservation measures for sage-grouse, particularly for use in PHMA. It considers many issues such as range management, wild horse and burro management, minerals (both fluid and solid), and wildfire issues, among others. This report was widely cited in the environmental impact statements prepared for the 2015 land use plan amendments, and in fact served as the basis for an alternative considered in many of these plans.[17]

Conservation Objectives Team (COT) Report (February 2013).[18] This report, entitled "Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report" was prepared by the FWS, the nation's premier wildlife management agency. Like the NTT report, it addresses all aspects of sage-grouse conservation from a scientific basis. And like the NTT report it is widely cited and forms the basis of many of the provisions in the 2015 land use plan amendments.[19] It was prepared with the support of the Western Governors Association Sage-Grouse Task Force. Like the NTT, it was prepared by a wide range of state and federal scientists

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[16] https://eplanning.blm.gov/epl-front-office/projects/lup/9153/39961/41912/WySG_Tech-Team-Report-Conservation-Measure_2011.pdf.

[17] See, e.g., Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region, https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/Great_Basin_ROD_9.21.15_508.pdf, and Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region, https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

[18] https://www.fws.gov/greatersagegrouse/documents/COT-Report-with-Dear-Interested-Reader-Letter.pdf.

[19] See, e.g., Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region, https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/Great_Basin_ROD_9.21.15_508.pdf and Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region, https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

from a number of backgrounds and agencies. Incorporation of this report into the land use plan amendments was an important reason for the FWS' not warranted determination in 2015.

U.S. Geological Survey Report (2013).[20] The Geological Survey, like the FWS, has preeminent scientific qualifications. Its report, "Summary of Science, Activities, Programs, and Policies That Influence the Rangewide Conservation of Greater Sage-Grouse (*Centrocercus urophasianus*)" is an extensive review of sage-grouse science and conservation needs and practices. USGS reports are cited many times in BLM's 2015 land use plan amendments, including for the proposition that they (and the NTT and COT reports, among others) represent the best available science.[21]

Sage-Grouse Task Force Compensatory Mitigation Report (December 2016). While this report from the Western Governors Association Sage=Grouse Task Force came out after the 2015 Sage-grouse Plans were issued, it still represents some of the best available science on this issue. It is entitled "Report to the Sage-Grouse Task Force: Greater Sage-Grouse Compensatory Mitigation". It is included herewith.

Studies in Avian Biology No. 38 (2011).[22] This 665-page compendium of sage-grouse science was authored by dozens of leading ornithologists and sage-grouse scientists. It is entitled "Greater Sage-Grouse: Ecology and Conservation of a Landscape Species and its Habitats." At this point, it is probably the leading scientific discourse on this species. While it does not appear to have been cited in the 2015 plan amendment NEPA documents, it should be incorporated in BLM's evaluations of proposed actions.

Scientists Letter to Secretary Zinke (October 13, 2017). We discussed this letter at some length above. But clearly this letter from seventeen prominent sage-grouse scientists must be treated as best available science on the issues it addresses and therefore it should be fully considered in any plan amendments BLM is contemplating. As mentioned, it is included herewith.

In addition to these reports, BLM's sage-grouse website lists many other reports that represent the best available science. *See* https://www.blm.gov/learn/blm-library/subject-guides/greater-sage-grouse-subject-guide/greater-sage-grouse-subject-guide-documents-and-resources. We would especially note the "November 2004 Guidance for Addressing Sagebrush Habitat Conservation in BLM Land Use Plans" and the "November 2004 Guidance for Management of

[20] https://pubs.usgs.gov/of/2013/1098/OF13-1098.pdf.

[21] See, e.g., Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region at 1-34, https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63385/68727/Great_Basin_ROD_9.21.15_508.pdf, Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region at 1-33, https://eplanning.blm.gov/epl-front-office/projects/lup/36511/63222/68471/RM_ROD_9.21.15_508_lowres.pdf.

[22] This book is only available for sale. But an extensive review of it can be found at https://books.google.com/books/about/Greater_Sage_Grouse.html?id=4NyQPESqM7EC&printsec=frontcover&source=kp_read_button#v=onepage&q&f=false.

Sagebrush Plant Communities for Sage-Grouse Conservation" reports. There is also a just-published report that the BLM should consider.[23]

As discussed above, the BLM has a responsibility to employ the best available science in this NEPA review. "Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. § 1502.24. As we will discuss below, an environmental impact statement should be employed in any land use plan amendments considered here, not an environmental assessment. The scientific reports we cited above clearly represent some of the best available science and they should be fully recognized and employed in this environmental impact statement.

V. THERE MUST BE OPPORTUNITIES FOR MEANINGFUL PUBLIC INPUT AND INVOLVEMENT IN THIS REVIEW PROCESS.

As we have mentioned several times, BLM must ensure there are sufficient opportunities for meaningful public input and engagement in this review process, including in any changes to the 2015 Sage-grouse Plans and especially if land use plan amendments are pursued. This need for public involvement also raises issues about the level of NEPA compliance that is needed: an environmental impact statement (EIS) versus a mere environmental assessment (EA) for plan amendments. This is also the place to consider the need for plan amendments versus more moderate resource management plan (RMP) maintenance actions.

A. The BLM must provide comprehensive opportunities for public engagement in this process.

Both NEPA and FLPMA require the BLM to ensure there are full and robust opportunities for public involvement in this process. Under the Council on Environmental Quality (CEQ) NEPA regulations, BLM shall "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a). BLM is to hold public hearings and public meetings and is to "[s]olicit appropriate information from the public." *Id.* §§ 1506.6(c) and (d). Scoping is to be an open process and the public is to be invited to participate. *Id.* §§ 1501.7 and 1501.7(a)(1). If a draft EIS is prepared, the agency must request comments from the public. *Id.* § 1503.1(a)(4).

Under the FLPMA planning regulations the public is to be provided the opportunity to "meaningfully participate in and comment on the preparation of plans, amendments and related guidance and be given early notice of planning activities." 43 C.F.R. § 1610.2(a). In addition, to the extent a plan amendment is pursued, BLM must provide at least a 90-day public comment period. 43 C.F.R. § 1610.2(e). BLM's planning efforts must comply with the requirements of NEPA. *Id.*

[23] Edmunds, D.R., C. L. Aldridge, M.S. O'Donnell, and A.P. Monroe. 2017. Greater Sage-Grouse Population Trends Across Wyoming. J. Wildl. Manage. 81(1): 46-57. http://www nrel.colostate.edu/ assets/nrel_files/labs/aldridge-lab/publications/Green_et_al-2017-The_Journal_of_Wildlife_Management.pdf.

While the BLM has held scoping meetings as part of this process and is accepting scoping comments, we are concerned that the public involvement process may be too limited. In our view, the level of public engagement in this process should at least match what was seen when the 2015 Sage-grouse Plans were developed. In 2015 and the time leading up to those amendments, the BLM put in place lengthy scoping periods, up to three months. Here the scoping period is only about 45 days. In 2015, EISs were prepared for the amendments, not more constrained EAs, and there were 90-day public comment periods with extensions granted in some cases. Many thousands of public comments were received, and many public hearings were held throughout the west. There was extensive outreach to tribes and local collaborators such as county governments. The agency issued press releases announcing public engagement opportunities and it established websites to give people more access to the process.

The outpouring of public involvement in the 2015 amendment process shows the depth of public interest and concern about sage-grouse management and planning. The 2015 Sage-grouse Plans represent a collaborative product that was developed cooperatively with many stakeholders in the west. They represent a scientifically-based effort to conserve the sage-grouse and prevent its listing under the Endangered Species Act. Obviously, thousands of Americans care deeply about the management of this bird, showing this by their wide and deep participation in the 2015 process. They should be given that opportunity again.

Yet the BLM has made no commitment to repeat the level of public involvement that was provided for in 2015. The Federal Register Notice announcing this scoping period does not commit to developing EISs for the potential plan amendments that are being contemplated; only EAs might be prepared, which could lead to much less public engagement. Scoping meetings were not even announced when the Notice of Intent was published, and the BLM only initially provided for a 45-day comment period—to November 27, 2017.[24] 82 Fed. Reg. 47248 (Oct. 11, 2017).

The Report, if anything, is even more noncommittal about engaging the public in the review of the sage-grouse land use plans. It says the DOI will "initiate additional discussions" with stakeholders in coordination with the Western Governors Association Sage-Grouse Task Force (SGTF). Report at 13. It says "outreach" will begin but it will only be "continuing for approximately 2 months." *Id.* This is a woefully inadequate commitment to public engagement. It is essentially no commitment at all. The SGTF is not a federal agency and it does not operate under the direction in NEPA and FLPMA, or any other federal environmental law. Unlike BLM, it does not have a multiple use mandate. It does not operate under the requirement to prevent unnecessary or undue degradation of the public lands as BLM does. 43 U.S.C. § 1732(b). The FLPMA land use planning requirements do not apply to the SGTF. And it has no responsibility to comply with NEPA and prepare detailed environmental analyses. As we noted above, when the DOI developed the Report it did not accept any public comment on that effort or provide any mechanism for public participation in that process.

[24] The comment period closure date has since been extended minimally to December 1, 2017, due to the dates some public scoping meetings were held.

BLM needs to develop a much more detailed and comprehensive plan for engaging the public in the review of the sage-grouse land use plans and any changes to the 2015 Sage-grouse Plans especially if any amendments are pursued.

Any changes to the plans must be conducted with full transparency and opportunities for meaningful public input prior actions be taken. In addition, to the extent states or state game and fish agencies are conducting stakeholder outreach, those efforts should be supported and their results incorporated into this process. Further, cooperating agency meetings should be open to the public.

B. Any plan amendments must be accomplished with environmental impact statements not environmental assessments.

The 2015 Sage-grouse Plans were accomplished by preparing EISs, not EAs. At least twelve EISs were prepared for sage-grouse conservation in the western states and there were two major records of decision implementing these plans.[25] The BLM must again pursue any land use plan amendments through preparation of EISs, not EAs.

The CEQ's NEPA regulations define when an EIS must be prepared. An EIS is required for "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). *See also* BLM National Environmental Policy Act Handbook H-1790-1 at section 7.3. Determining the significance of an action requires consideration of the context and intensity of the project. 40 C.F.R. § 1508.27. Context means an agency must consider the scale of the project and it "varies with the setting of the proposed action." *Id.* § 1508.27(a). Short and long-term effects are relevant. *Id.*

The context of the BLM plans, and any amendments to them, is enormous. The plans cover 10 western states and 67 million acres of public land, and amended 98 land use plans. As the prior EISs make clear, there are not only many short-term effects from implementing these plans, there are also numerous long-term effects, such as the ongoing, long-term efforts to improve habitats and provide for increasing sage-grouse populations. On the context basis alone, the significance standard is clearly met and EISs must be prepared for any sage-grouse RMP amendments.

The CEQ regulations define 10 intensity factors that must be considered when determining significance. 40 C.F.R. §§ 1508.27(b)(1)-(10). At least three of those factors indicate significance relative to any RMP amendments: First, this is a highly controversial action. *Id.* § 1508.27(b)(4). That is clearly true with respect to public concerns, but even if the BLM only focuses on scientific controversy, there is no doubt there is a great deal of debate about the scientific merits of the current plans, and BLM's plans for review of them. The recommendations in the Report raise many scientific controversies, such as the plan to consider captive breeding as a means to augment sage-grouse populations and the plan to base management on population

[25] . *See* https://www.blm.gov/programs/fish-and-wildlife/sagegrouse/state-sagegrouse-efforts and https://www.blm.gov/learn/blm-library/subject-guides/greater-sage-grouse-subject-guide/greater-sage-grouse-subject-guide-documents-and-resources (presenting the EISs and the records of decision).

objectives. The scientific controversy of these ideas was shown by the WAFWA white papers that are included in the Report and by the scientists' letter which was discussed above.
The effects of these proposals on the human environment are also highly uncertain and involve unique or unknown risks. 40 C.F.R. § 1508.27(b)(5). The outcomes of mitigation to protect sage-grouse populations are far from certain and involve many unknown risks of success. Plans to eliminate SFAs and even possibly PHMAs and GHMAs would raise many unknown risks, as shown by the deep scientific analysis that underlaid the 2015 Sage-grouse Plans. Modifying oil and gas lease prioritization guidance and modifying or even eliminating lek buffers and density and disturbance caps would raise many unknowns.

Amending the 2015 Sage-grouse Plans also raises issues regarding the cumulative impacts of these plans when considered alongside the many other actions affecting our public lands. 40 C.F.R. § 1508.27(b)(7). Clearly the level of cumulative impacts rises to the level of significance. "Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts." *Id.*

The CEQ regulations also make potential adverse impacts on an Endangered Species Act-listed species a factor to consider when determining intensity. 40 C.F.R. § 1508.27(b)(9). While the sage-grouse is not listed, it is a BLM sensitive species and the BLM should consider intensity from that vantage point.

We also note that impacts can rise to the level of being intense, and therefore significant, even if they are beneficial. 40 C.F.R. § 1508.27(b)(1). There is no doubt that the current plans have beneficial impacts, and we suspect BLM will view any modifications to the plans that it proposes as being beneficial. And the unique characteristics of an area also can contribute to significance. *Id.* § 1508.27(b)(3). There is no doubt that there are many, many unique (that is, wonderful) characteristics present in the 67 million acres of public lands that are covered by the sage-grouse plans.

The "severity of impact" that will result from any changes to the 2015 sage-grouse Plans is intense, and therefore significant, so an EIS(s) must be prepared if there are proposals to amend the plans. 40 C.F.R. § 1508.27(b). **Together the context and intensity factors clearly dictate preparation of an EIS for any plan amendments, not an EA.**

C. Plan maintenance can be used in narrow circumstances to make small-scale changes to land use plans.

Under BLM's regulations governing land use plans developed pursuant to FLPMA, provision is made for developing land use plans in the first instance but then provisions are made for amending existing plans or engaging in a "maintenance" action for such plans. 43 C.F.R. §§ 1610.5-4 and 1610.5-5. An amendment is needed when several conditions develop, including "a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan." *Id.* at § 1610.5-5. Amendments can be made through development of an EIS or an EA and shall comply with the public involvement provisions of section 1610.2.

Maintenance actions are used to reflect "minor changes in data." 43 C.F.R. § 1610.5-4. They further refine or document previously approved decisions. *Id.* Maintenance does not require the formal public involvement and interagency coordination processes for plan amendments that are prescribed in the BLM planning regulations. *Id.* Neither an EA or an EIS is required for maintenance; however, BLM must document the maintenance action in in the plans and supporting documents. *Id.*

The BLM is unclear about whether amendments or maintenance actions will be used to address the recommendations in the Report. BLM states that it "intends to consider the possibility of amending some, all or none of the BLM land use plans that were amended or revised in 2014 and 2015 . . . ." 82 Fed. Reg. 47248 (Oct. 11, 2017). "This Notice and potential planning effort does not preclude the BLM from addressing issues and inconsistencies through other means, including policy, training, or plan maintenance, nor does it commit the BLM to amending some, all, or none of the Greater Sage-Grouse plans." *Id.* at 47249.

Yet the recommendations in the plan make it clear that many of the actions would need to be accomplished via land use plan amendments. To accomplish many of the recommendations in the Report there will need to be "a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan", 43 C.F.R. § 1610.5-5, meaning land use plan amendments are required for any such meaningful changes.

Some other recommendations in the Report, particularly the short-term actions, might be suitable for maintenance actions or addressed through personnel training. But again, the BLM does not say when this will be the case.

We believe the BLM needs to evaluate the actions it is going to take for all of these recommendations and publish its plan as to whether it will amend, issue a maintenance action, issue new policy or engage in more training of personnel. **The public deserves to know what actions will be accomplished via mere maintenance actions, what policy or training BLM intends to issue, and what actions will need to be accomplished via land use plan amendments before the agency takes action**. The BLM should then open its process plans to public comment and involvement.

As we have made clear throughout these comments, we believe land use plan amendments should not be pursued as part of this review process. To do so based on the recommendations in the Report will lead to a weakening of the plans, which represent a vast scientifically-based collaborative process that was engaged in by many stakeholders. There will also likely be a need to list the sage-grouse under the ESA when the FWS completes its review in 2020 if the plans are weakened, as proposed in the Report.

Even for maintenance actions, where compliance with the planning rule public involvement provisions is not required, the BLM should still give the public an opportunity to engage. The prior level of public engagement in the sage-grouse land use plan amendments demonstrates the high level of public interest in sage-grouse management and planning. And, as the Report makes clear, not just one or two maintenance actions might be pursued; in fact, a dozen or more could

be developed. The sum of these maintenance actions could be significant, so the public should be given a chance to engage in them. This group of actions would not be a "one off" situation, which is what BLM's planning regulations contemplate for maintenance actions; rather, it would represent cumulatively significant actions and impacts, so public involvement is needed.

While BLM's regulations do not require the same level of public involvement as is required for amendments, the regulations do not prohibit providing for public involvement in plan maintenance actions. *See* 43 C.F.R. § 1610.5-4. And as the public involvement provisions provide, they apply not only to development of plans in the first instance and plan revisions and amendments, but also apply to "related guidance" where the public is to be given an opportunity to "meaningfully" participate and the public is to be given "early notice of planning activities." *Id.* § 1610.2(a). And maintenance actions are to be "documented in plans and supporting records." *Id.* § 1610.5-4. Accordingly, there should be meaningful opportunities for public engagement in any plan maintenance actions, especially if the count of these actions is more like 15 or 20 than 1 or 2.

Similarly, there should be opportunities for public engagement in BLM's overall approach to using amendments, maintenance, policy guidance and/or training to accomplish changes to the 2015 Sage-grouse Plans. **Given the importance of the overall structure of the 2015 Sage-grouse Plans, BLM should provide stakeholders, including the cooperating state agencies, local governments and other stakeholders, with an opportunity to provide input on all aspects of the potential changes to the 2015 Sage-grouse Plans before actions are taken or changes are made.**

D. BLM must coordinate with the Forest Service in ensuring adequate public review before changes are made to the 2015 Sage-grouse Plans.

On November 21, 2017, the Forest Service issued a formal Notice of Intent to consider amendments to its land management plan amendments that parallel the BLM's 2015 Sage-grouse Plans. 82 Fed.Reg. 55346. The Notice of Intent states that:

> The Forest Service intends to continue to work as a cooperating agency with the BLM in their planning process. This notice and the potential planning effort do not preclude the Forest Service from addressing issues through other means, including policy, training, or administrative changes, nor does it commit the Forest Service to amending some, all, or none of the greater sage-grouse plans.

Comments on this scoping process are due on January 5, 2018. No additional public meetings have been set at this time, so it is not clear how the Forest Service will be provided with the input BLM received at public meetings. BLM must ensure that the Forest Service is supplied with the input it receives, both from the recent public meetings and through this written comment process. Similarly, since the BLM and Forest Service plans work together across the range of the greater sage-grouse, BLM must ensure it receives and takes into account comments submitted to the Forest Service and its proposed approach to changing the 2015 Sage-grouse Plans before taking actions. Further, the two agencies should coordinate preparation of NEPA documents to ensure the full range of direct, indirect and cumulative effects are taken into account across both BLM

and Forest Service plans, and the public is provided an opportunity to review and comment on such analyses.

VI. IMPROVEMENTS TO 2015 SAGE-GROUSE PLANS AND STATE-SPECIFIC COMMENTS.

In addition to the comments regarding the overall changes to the 2015 Sage-grouse Plans, we are providing specific recommendations that are focused on improvements to the 2015 Sage-grouse Plans, as well as comments that focus on certain states.

A. Additional measures to strengthen the 2015 Sage-grouse Plans.

While we strongly recommend not weakening the 2015 Sage-grouse Plans, there are aspects of the plans that could be strengthened. For example:

1. Evaluating grazing measures based on site conditions.

BLM should issue new guidance regarding management of livestock grazing in grouse habitat pursuant to the 2015 Sage-grouse Plans. The lack of clear guidance has led to misunderstandings regarding decisions made in the plans and decisions to be made based on site-specific conditions. Guidance should clarify:

- No lands are closed to grazing in the grouse plans;
- Achieving habitat objectives for vegetation (such as grass or forb height) will be evaluated based on a specific site's ability to meet those conditions; there are no hard and fast requirements;
- Changes to management, including grazing practices, based on not meeting habitat conditions, will be based on the specific site conditions and determinations as to what activity is actually causing the habitat impacts. In other words, only if grazing activities are causing habitat impacts and if changing those activities can be expected to improve conditions will changes to authorized grazing be made.

2. Prioritizing oil and gas leasing and development outside sage-grouse habitat.

BLM should issue additional guidance regarding prioritizing oil and gas leasing and development outside sage-grouse habitat. This guidance should reiterate that such prioritization is an important requirement of the plans. Unfortunately, BLM's current guidance does not actually provide direction consistent with the plans. The 2015 Sage-grouse Plans make the intent of this requirement clear stating:

> In addition to allocations that limit disturbance in PHMAs and GHMAs, the ARMPs and ARMPAs prioritize oil and gas leasing and development outside of identified PHMAs and GHMAs. This is to further limit future surface disturbance and encourage new development in areas that would not conflict with GRSG. This objective is intended to

guide development to lower conflict areas and as such protect important habitat and reduce the time and cost associated with oil and gas leasing development by avoiding sensitive areas, reducing the complexity of environmental review and analysis of potential impacts on sensitive species, and decreasing the need for compensatory mitigation. *See* Rocky Mountain ROD, p. 1-25.

BLM should issue stronger guidance directing BLM personnel to take actions that will actually limit new leasing and development in sage-grouse habitat that can be avoided, including focusing on leasing parcels that have higher potential for development and less potential to harm sage-grouse habitat.

In light of BLM's stated approach of evaluating the 2015 Sage-grouse Plans in terms of how they affect energy development, it is important to note that the majority of federal lands within sage-grouse priority habitat have zero to low assumed potential for oil and gas development production. [26] Similarly, the majority of federal lands identified as having high or medium oil and gas development potential are located outside priority sage-grouse habitat.[27] Moreover, the use of directional drilling technology means that most oil and gas resources can continue to be developed, even if they are under important sage-grouse habitat.

B. States should be able to experiment with different mitigation approaches.

If state programs meet the standards in the 2016 Mitigation Report, then those programs should be available to accomplish mitigation required under the Plans. All states rely on mitigation as part of their approach to conservation of the greater sage-grouse. Where impacts are unavoidable, state mitigation programs, including compensatory mitigation and ratios that exceed 1:1, should be implemented. If BLM decides to recommend minimum standards, states should be able to exceed those standards.

C. Specific elements of state plans.

Certain state BLM plans have tailored aspects that should be maintained, while others should be improved.

1. <u>The exemption for certain multi-state transmission lines from mitigation should be removed</u>.

Most of the state-specific 2015 BLM Plans provide for both PHMA and GHMA to be classified as "avoidance" for large-scale transmission lines, subject to special stipulations prior to authorization. An exception is made, however, for certain transmission lines, such as the

[26] *See* http://westernvaluesproject.org/wp-content/uploads/2014/10/Greater-Sage-Grouse-Priority-Habitats-and-Energy-Development.pdf (report by Backcountry Hunters and Anglers).
[27] *Id.*

TransWest and Gateway South Transmission Line projects, where review is "well underway" and BLM is analyzing mitigation measures through those processes.

The special stipulations that would apply to transmission lines other than these specific lines were detailed in the Proposed Amendments and provide that:

> In GRSG PHMA or GHMA managed as avoidance, ROWs/Special Use Authorizations may be issued after documenting that the ROWs/Special Use Authorizations would not adversely affect GRSG populations based on the following criteria:
> • Location of proposed activities in relation to critical GRSG habitat areas as identified by factors including, but not limited to, average male lek attendance and/or important seasonal habitat
> • An evaluation of the potential threats from proposed activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see Chapter 2, Section 2.6.3, Regional Mitigation)
> • An evaluation of the proposed activities in relation to the site-specific terrain and habitat features. For example, within 4 miles of a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.
>
> Any new projects within PHMA would be subject to the 3 percent disturbance cap as described in Appendix H, Guidelines for Implementation. If the 3 percent disturbance cap is exceeded in PHMA in any Colorado Management Zone, no new ROW would be authorized in PHMA within that Colorado Management Zone, unless site-specific analysis documents no impact on GRSG. See, e.g., Northwest Colorado, Proposed Amendment at p. D-8, Management Action #10.[28]

The Northwest Colorado Proposed Amendment further provides:

> All authorizations in these areas, **other than the excepted projects**, must comply with the conservation measures outlined in this Proposed LUPA, including the [Required Design Features] RDFs and avoidance criteria presented in this document." Proposed Amendment at p. 2-16.

Unfortunately, none of the exempted transmission lines will be subject to these protective measures, even though they will still contribute to surface disturbance, impact the surface disturbance caps in the affected areas and impact other potential land uses. The exemption should be removed from the plans and/or the plans should clearly address how these projects will be managed to ensure they do not undermine the overall purpose of the plans.

[28] https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=48134

2. Wyoming plans are tied to the State's Core Area Strategy and that balance must be maintained; relatively minor changes are needed.

The Wyoming Approved Resource Management Plan Amendments for Sage-grouse (ARMPA[29]), completed as part of the 2015 Sage-grouse Plans, complement the Wyoming Sage Grouse Conservation Strategy as set forth in the Sage Grouse Executive Order (SGEO). The SGEO has been implemented statewide across all land ownerships since 2010 in conjunction with the BLM and USFS permitting processes. This is an important detail the BLM should consider, since no other sage-grouse state has the number of energy development permits administered jointly by state and federal agencies. The goal of this parallel effort is to conserve the greater sage-grouse while reducing administrative redundancy for development proponents. The Density and Disturbance Calculation Tool (DDCT) is used by the Forest Service, the BLM and Wyoming State permitting agencies to determine compliance with sage-grouse protection measures. The nine other states (MT excepted) chose not to create a regulatory mechanism to conserve sage-grouse. Instead the nine other states have opted to provide voluntary efforts by the state which in turn required federal agencies to devise and implement enforceable sage-grouse conservation measures.

The long-term conservation of the greater sage-grouse and continued development of Wyoming's energy-dependent economy are intertwined, and both depend on carefully crafted policies and actions affecting state, private and federal mineral and surface ownership. The existing consensus-based ARMPAs reflect that reality. Without a coordinated effort, involving all land and mineral owners and the land and wildlife management agencies, both conservation and economic interests would suffer. Changing the ARMPA will provide inconsistencies with state regulatory efforts and potentially upset the delicate balance that has been achieved between conservation and development interests. There should be no reduction in or weakening of the consensus-based conservation measures currently in place on federal land, as this would result in an imbalance in management for Federal, State and private lands.

The Wyoming ARMPA mirrors the SGEO closely and few modifications are needed. We believe that the vast majority of issues can be clarified with one or more maintenance actions, policy guidance or a narrowly focused supplemental EIS. Changes to the Wyoming ARMPA would require a full RMP amendment process.

The following highlights key elements of the ARMPA to retain and areas where clarifications can be made. Any Wyoming Cooperator meetings should be open for the public to attend.

(a) Minor map adjustments should not require plan amendments.

There have been 4 versions of PHMAs and connectivity areas mapped in Wyoming. With each version the maps have been refined to provide better information to land managers about the presence of sage-grouse habitat and sage-grouse. Just prior to the ARMPA ROD, Wyoming updated the PHMA/Core Areas to Version 4. This resulted in 282,000 of BLM - managed surface acres statewide (387,000 acres of BLM-managed oil and gas estate) added to PHMA. Version 4 increased designated core area/PHMA by 5%. The BLM readily accepts updated data

[29] https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=18704

and maps of crucial habitats from the State Wildlife Agencies without amending an RMP. The change in designation of PHMA from Version 3 to Version 4 would fall as an updated crucial habitat map under the category of a maintenance action.

The ARMPA allows such adjustment for Winter Concentration Areas in the following management direction:

> MD SSS10: Protection of additional mapped winter concentration areas in GHMAs would be implemented where winter concentration areas are identified as supporting populations of sage-grouse that attend leks within PHMAs (core only). Appropriate seasonal timing restrictions and habitat protection measures would be considered and evaluated in consultation with the WGFD in all identified winter concentration areas.

Map adjustments for sage-grouse PHMA should be allowed as adjustments are made for other species.

(b) SFAs should remain in the ARMPA.

As discussed above, SFAs represent the best sage-grouse habitat within a field office.

The WY BLM direction for SFAs includes:

> **MD SSS 14:** Designate SFAs as shown on Map 1-2 (should be Map 2-1)(1,915,990 acres - *38% of BLM PHMA acres*). SFAs will be managed as PHMAs, with the following additional management:
> 1) Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights, the lands shown in Map 2-3 (252,160 acres), and
> 2) Prioritized for vegetation management and conservation actions in these areas, including, but not limited to land health assessments, wild horse and burro management actions, review of livestock grazing permits/leases, and habitat restoration (see specific management sections).

In Wyoming only 13% of the core areas would see federal mineral withdrawal and because of previous planning the withdrawals occur in low mineral recovery potential areas. The withdrawal would represent 1% of the 21,251,690 available mineral acres. We request that the direction for SFAs in Wyoming continue to be processed for withdrawal and the prioritization for vegetation management also remain within the ARMPA.

We also believe that Item #2 is not an extra burden for grazing permittees. The language only prioritorizes reviews in SFAs. There are no other limitations or closures within SFAs in Wyoming.

(c) Clarify application of livestock grazing management.

We believe concerns raised by certain parts of the livestock industry regarding threats to future of grazing permits are based on a misunderstanding of the actual provisions of the ARMPA. Specifically the Conservation Objectives Team and the SGEO refer to issues with **improper** grazing and not proper grazing (Page 19).

The ARMPA states*:*

> The NEPA analysis for renewals and modifications of grazing permits/leases will include specific management thresholds, based on the GRSG Habitat Objectives Table (Table 2-2), Land Health Standards and ecological site potential, to allow adjustments to grazing that have already been subjected to NEPA analysis).

However, Table 2-2 contains footnote 6, which states**:** "All Desired Conditions will be dependent upon site capability and local variation (e.g., weather patterns, localized drought, Ecological Site Description (ESD) state, etc.)." This footnote should be expanded upon by the BLM to provide better clarification to Wyoming BLM Field Offices.

Aside from these clarifications, the current direction in the ARMPA should be retained. The management directions are part of healthy rangeland efforts for proper grazing; and improper grazing practices should be corrected – and should have been even without the amendments.

(d) Required Design Features (RDF) should not be removed.

Industry has suggested that the RDFs in the WY ARMPA are onerous. This section of the ARMPA requires the BLM to review the design features that are outlined for consideration and applicability to the specific site and document why they are not being used. Almost all of these design features are already found in the BLM's Gold Book, previous RMPs, current management direction or other agency instructional memorandum. Very few of the design features labeled as RDFs are new. It appears that the BLM is mainly stating an expectation that project proponents will reduce their footprint on the landscape and protect important resources; and consider this goal in designing proposed projects. The ARMPA explains this flexibility. Appendix C states (emphasis added):

> RDFs are required for **certain** activities in GRSG habitat. RDFs establish the minimum specifications for **certain** activities to help mitigate adverse impacts. **However, the applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known.**

(e) Density and Disturbance Limits must be maintained.

The BLM Review of the ARMPAs indicates that there are variations among states in how no surface occupancy (NSO), density and disturbance calculations are completed, but there is not a resulting discrepancy in the protection of the sage-grouse. The differences are due to the fact that several of the states chose not to pursue a state and private land/minerals regulatory mechanism, while others, such as Wyoming, take into account all land ownership.

The density and disturbance calculations in Wyoming have been in place since 2012. Wyoming's landscape approach allows for flexibility in determining development activities while protecting sage-grouse. They should be maintained in its present form.

(f) Protection for Winter Concentration Areas must be strengthened.

It has never been the intent of the wildlife and land management agencies to limit protection for winter concentration areas to timing stipulations. This was an oversight in the editing of the ARMPA. The ARMPA and MD SSS10 should contain additional language to protect wintering sage-grouse and the habitat on which they depend. The stipulation for MD SSS10 contains the need for protective measures. Wyoming is working to define the conservation measures necessary to protect wintering sage-grouse.

> ***MD SSS 10 Stipulation: Sage-grouse winter concentration areas:***
> Surface disturbing and/or disruptive activities in sage-grouse winter concentration areas would be prohibited from December 1–March 14.
>
> Activities in unsuitable habitats within PHMAs would be evaluated under the exception and modification criteria and could be allowed on a case-by-case basis.
>
> Protection of additional mapped winter concentration areas in GHMAs would be implemented where winter concentration areas are identified as supporting populations of sage-grouse. Appropriate seasonal timing restrictions and habitat protection measures would be considered and evaluated in consultation with the WGFD in all identified winter concentration areas.

(g) Mitigation (avoidance, minimization, net conservation gain and no net loss) must be retained in the BLM's sage-grouse conservation plans.

Unfortunately, for the past several decades, the BLM has demonstrated a narrow view of its mitigation responsibilities, focusing mostly on minimizing impacts when permitting activities in sage-grouse habitat, with little attention paid to avoidance, nor to offsetting, or compensating for, the continued loss of habitat. However, with the approval of the ARMPA in 2015, the BLM finally acknowledged its responsibility to manage its activities with the intent of full habitat restoration. Because the BLM failed to properly mitigate the impacts from, previous permitted activities, past reclamation delays and failures have resulted in significant cumulative loss of habitat. Not only did past policy negatively affect the directly impacted habitat, delays and failures have led to the creation of additional threats in non-developed areas, for example, through the spread of invasive plant species such as cheat grass.

The Wyoming ARMPA directs the BLM in PHMA to: *Require and ensure mitigation that provides a net conservation gain to GRSG for actions that result in habitat loss and degradation.* We applaud the BLM's effort to continue to restore the habitat that previous administrations impacted through improper compliance and a lack of mitigation actions.

We agree that avoidance and minimization should continue to be the first steps the BLM and the proponent should take. It is easier and more effective to avoid and minimize habitat loss. It is very difficult to apply compensatory mitigation for the loss of effective sage-grouse habitat unless the habitat is already in place and is functioning as at least one of the sage-grouse's key life cycle habitats. Keeping important sage-grouse habitat intact is the most effective conservation measure for the sage-grouse. However, economic and political interests rarely allow the BLM to pursue avoidance due to valid existing rights, and with the BLM proposing to remove required design features, BLM could also be limiting its tools to apply minimization.

The ARMPA directs mitigation to be coordinated with proponents in a collaborative manner:

> **MD GMD 2:** Field offices will work with project proponents, partners, and stakeholders to avoid or minimize impacts and/or implement direct mitigation (e.g., relocating disturbance, timing restrictions, etc.), and utilize best management practices (BMP). When necessary, offsite compensatory mitigation will be applied consistent with Wyoming's Core Area Strategy.

Concerns about mitigation unduly and unnecessarily burdening energy development are unfounded. The BLM has the authority and responsibility to require all forms of mitigation and should retain these requirements in the plans.

(h) Effective adaptive management and monitoring measures must be maintained.

Although much is known about sage-grouse behavior in relationship to anthropogenic activities and disturbances, it remains difficult –due to the range of activities permitted in sage-grouse habitat - to establish precisely which activity creates the habitat degradation that may lead to population loss from which recovery is not possible. Because of the delay in population response to disturbances, it could be three or more years before a downward population trend is noted. It is important, therefore, to look at all activities that have taken place during the previous three to five years to determine if the cause or causes of population loss can be identified. Accordingly, monitoring of both habitat and population is necessary. In Wyoming, the strategy involves a collaborative approach to monitoring that tracks habitat loss from permitted activities, habitat gain through restoration, and population cycles. It is necessary to monitor both in order to determine long term non-cyclical trends. The State of Wyoming and the Wyoming BLM have been working together since 2010 creating, modifying and testing the strategy, and have an established track record with respect to carrying out adaptive management. The BLM's Washington, DC office should refrain from taking any action that would interfere with or disrupt these important and ongoing collaborative monitoring efforts.

3. <u>Protections for general habitat in Utah should not be eliminated; they should be strengthened.</u>

The Review Team Report includes evaluation of removing GHMA as a classification in the Utah plan amendment. The COT Report states that conservation of sage-grouse habitats outside of priority areas for conservation may be essential, since these areas also have the potential to provide important habitat. This is to ensure that seasonal habitats not included in priority areas receive some protection, and to allow for expansion of recovering populations into newly restored areas. In addition, general habitat can serve as a location for mitigation and restoring degraded habitat. The 2015 plan for Utah does not include any special stipulations for oil and gas leasing. The GHMA classification should be retained in the Utah RMP Amendments and should be strengthened to include protective stipulations.

4. Colorado stakeholder outreach effort should be evaluated.

The State of Colorado is seeking consensus around a narrow set of changes to the Northwest Colorado RMP Amendments. We generally support these efforts and hope to be part of reaching consensus. Specifically, we support:

- Providing a mechanism to update habitat maps on a regular basis working collaboratively with the Colorado Division of Parks and Wildlife and local governments and ensuring accuracy.
- Clarifying the manner in which lek buffer distances will be applied as a management prescription or an element of analysis.
- Applying a no surface occupancy stipulation within one mile of an active lek (instead of a closure to leasing), provided such stipulation is not subject to waiver, exception or modification.
- Clarifying the role of FWS in approving waivers, exception or modification to no surface occupancy stipulations in PHMA.
- Endorsement and use of suitable state compensatory mitigation efforts in the BLM plan.

Thank you for considering our comments. We hope to see these recommendations reflected in the next steps that the BLM takes in regard to the 2015 Sage-grouse Plans. Please provide all future information regarding this process to the undersigned.

Very truly yours,

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Attachments:
1. The Wilderness Society and Audubon Society Analysis of August 4, 2017, Report.
2. Letter from The Wilderness Society to Acting Director, Bureau of Land Management, August 15, 2017.
3. Sage-Grouse Task Force Compensatory Mitigation Report, December 2016.
4. Letter to Secretary Ryan Zinke from Dr. Matt Holloran, et al., October 13, 2017.

Analysis of Secretary Zinke's August 4, 2017 Memorandum and Report in Response to Secretarial Order 3353

This document provides an overview of key implications of concern and areas for pushback in response to the Secretary's August 4th Memo and the Report issued in Response to Secretarial Order 3353 , which called for this review of the 2015 Sage-Grouse Plans.

The sage-grouse plans were premised on a few key principles: identify the habitat areas that are the most important to protect and implement science-based measures to protect those places.

Our concerns with the Secretary's Memo and Report fall into two major categories – (1) removing key elements of the plans - both by shrinking what areas are protected and by weakening how they are protected and (2) the process through which the next steps will go forward.

1. **Key elements of the plans are targeted for removal or modification, putting the structure, function and reliability of the plans at risk.**

As the Western Governors Association's Sage-Grouse Task Force has stated, including in the context of the review being conducted by the Department of the Interior, while there may be opportunities to improve the 2015 Sage-Grouse Plans, wholesale changes are not likely needed.

There are a number of elements of the plans that must be maintained in order to support U.S. Fish and Wildlife Service's continued confidence that listing isn't needed and to ensure the greater sage-grouse and the more than 350 species that depend on these lands are not put at risk.

The structure of the plans was developed to provide the greatest protection to the highest value habitat while providing more flexibility for other uses and activities to occur in lower value habitat or outside habitat altogether. In addition, the plans ensure ongoing monitoring and adjustment to ensure they are succeeding as we move toward interim reviews by the USFWS that confirm whether or not the 2015 listing decisions as "not warranted" will remain justified.".

a. The Memorandum and Report focus on accommodating oil and gas development

Promoting oil and gas development as a guiding priority is fundamentally at odds with the purpose of the plans, which was to identify the habitat areas for which conservation is the priority, and is not a robust commitment to conserving greater sage-grouse. Yet the report states: 'There are multiple opportunities to be responsive to the Executive Order on "Promoting Energy Independence and Economic Growth" and the Secretarial Order on "American Energy Independence," while continuing a robust commitment to the conservation of GRSG.' Report, p. 5. This approach is also in keeping with Secretarial Order 3353, which stated: "The review will include identification of . . . provisions that may require modification or rescission, as appropriate, in order to give appropriate weight to the value of energy and other development of public lands..." S.O. 3353, p. 3.

The intent here is further highlighted in the Secretary's Memo that identifies actions to be priorities: "Modify or issue new policy on fluid mineral leasing and development, including the prioritization policy." Memo, p. 1.

b. Removing Sagebrush Focal Areas

Sagebrush Focal Areas, are a subset of priority greater sage-grouse habitat defined as "strongholds" for the bird in the 2015 Sage-Grouse Plans. SFAs receive the highest protective measures and also serve as the basis for recommendations for mineral withdrawal. The SFAs were temporarily protected from new mining claims in September 2015 and a Draft Environmental Impact Statement was released this year to evaluate alternatives for moving forward with mineral withdrawal.

Nonetheless, the report includes consideration of a "[p]otential plan amendment to consider removing SFA designation…" Report, Appendix A, p. 17.

c. Revising habitat boundaries

In addition to removing the SFAs, the report also contemplates plan amendments to change all other habitat designations, including both Priority Habitat Management Areas and General Habitat Management Areas. This would affect the conservation measures required for activities such as oil and gas development, but also other types of energy development and other surface-disturbing activities. Report, Appendix A, p. 17. The Report also contemplates eliminating the classification of GHMA altogether in Utah, which would reduce the lands subject to conservation measures in the state. Report, Appendix A, p. 18.

d. Removing and undermining enforceability of oil and gas lease stipulations

The report contemplates removing protective stipulations (such as "conditional surface use") in General Habitat Management Areas. Report, Appendix A, p. 1. The Report also contemplates eliminating the classification of GHMA altogether in Utah, which would reduce the lands subject to conservation measures. Report, Appendix A, p. 18.

The report contemplates removing the currently required approval from the U.S. Fish and Wildlife Service before BLM can approve waivers, exceptions and modifications of lease stipulations (i.e. habitat protection requirements), in particular the "no surface occupancy" stipulations that protect priority habitat from destruction, as well as broadening the set of circumstances that can justify waivers, exceptions and modifications. Report, p. 5; Report, Appendix A, p. 1. USFWS was focused on ensuring certainty for conservation measures, so meaningful sideboards on waiver, exception or modification of these stipulations is a foundation for the USFWS finding that the plans will succeed and listing was no longer needed. The BLM does not currently track how stipulations are waived, excepted, or modified and may be undermined through these processes (http://www.gao.gov/assets/690/684254.pdf). To ensure the exceptions do not swallow the rules, more concrete procedures are needed.

The report also looks to rescind agency guidance on prioritizing leasing outside of important habitat areas and contemplates plan amendments to change this policy. Report, Appendix A, p. 2. Notably, the commitment to prioritize leasing and development outside of habitat is set out in all of the individual plan revisions and amendments, as well as the records of decision for the 2015 Sage-Grouse Plans, and is also a factor cited in USFWS's 2015 decision to find listing of the sage-grouse was no longer warranted (*see*, https://www.fws.gov/greatersagegrouse/findings.php). Given that only a very small amount of land acreage was actually closed to leasing and drilling (less than 225,000 acres in Colorado, the rest of the plans in other states did not close lands as part of protecting sage-grouse habitat), this commitment is a vital part of showing that oil and gas development, a key threat identified by USFWS (https://www.fws.gov/greatersagegrouse/findings.php), is being managed effectively.

e. Lek buffers and surface disturbance caps

Lek buffers provide important protections around grouse breeding areas, but do necessarily limit activities like oil and gas development. Nonetheless, the report commits to "revisit the scientific literature pertaining to lek buffers ahead of initiating new science for buffers…evaluate a potential plan amendment to consider adjusting lek buffers…." Report, Appendix A, p. 16.

Surface disturbance caps are also vital to ensure that viable habitat remains intact. The report, looking to perceived inconsistences between states, includes a recommendation to consider plan amendments to change disturbance caps, stating (Appendix A, p. 2):

> If inconsistencies, then resolve using best available science and/or initiate new research to further clarify disturbance and density requirements for different types of uses, which may require future consideration of a plan amendment process.

While some states allow a higher percentage for disturbance, those states also count more activities as disturbance – thus, consistent results are currently being achieved and should not be risked.

f. Habitat Objectives Table

The habitat objectives were set out based on site-specific information and scientifically-based conditions that were and will be monitored, in order to set clear management goals for achieving functioning and identify when management changes may be necessary. The report commits to "[e]xplore the possibility to remove habitat objectives from the plans" and an "amendment to consider updating habitat objectives may be necessary." Report, Appendix A, p. 7.

g. Adaptive Management

The plans also contain "triggers" to ensure immediate actions are taken when monitoring shows habitat is at risk. The report will consider potential plan amendments for "allowing reversion to less restrictive decisions when habitat/population recovers to above original trigger" and "options for alternative approaches to hitting a hard trigger, such as a temporary suspension…" Report, Appendix A, p. 8.

Without the monitoring and resulting adaptive management, it will be difficult to both show the plans are succeeding and adjust the plans to ensure problems are addressed and remedied quickly.

h. Mitigation and net conservation gain

By designing appropriate mitigation measures, the plans provide a path forward for permitting more activities on the public lands that may harm greater sage-grouse habitat (such as activities that would otherwise exceed the scientifically-set surface disturbance caps) while ensuring those harms will be remedied to compensate for lost habitat (such as restoring habitat or protection for new intact habitat). Mitigation is a necessary part of the plans' structure to allow for development without compromising conservation and is also a key part of the management approaches taken by the western states, including those states that have formal sage-grouse conservation plans.

The Report looks to undermine this part of the structure, stating (Appendix A, p. 3):

> BLM plans have a net conservation gain standard while the State mechanisms have adopted differing standards…Consider the policy on options to use the State's mitigation standard if it meets the intent of the mitigation standard in the GRSG plans. If policy does not address the

concern, then consider a potential plan amendment to change the net conservation gain standard.

Mitigation measures have been developed based on years of experience with various industries that now rely on compensatory mitigation to provide certainty on requirements associated with development and assurances that the mitigation will be successful to actually compensate for the harm that has occurred. While these provisions in the plans can certainly be clarified, they must be maintained.

i. Additional measures that are not supported by accepted science.

Some of the actions focused on in S.O. 3353 and mirrored in the Memo and Report are not accepted by current science and will also undermine the function of the plans.

For instance, as detailed by the Western Association of Fish and Wildlife Agencies, focusing on population objectives or using captive breeding, are unlikely to be successful as tools to measure the status of the species or support its health. (*See* WAFWA Sage-grouse White Papers, available at: http://www.wafwa.org/initiatives/sagebrush_ecosystem_initiative/).

Nonetheless, and even acknowledging these concerns, the Report commits to fully consider use of these methods.

- "*B*ecause captive breeding of GRSG has not yet proven effective, requires expenditures that would limit funding availability for other priority efforts and may require the removal of potentially viable eggs from the wild, further work is needed to fairly evaluate captive breeding. **The DOI Team recommends that new captive breeding efforts continue to be investigated to improve effectiveness**." Report. p. 10 (emphasis added).

- "While States support efforts to estimate and explain populations, fluctuations, and trends, any such effort must recognize and account for the relationship between the species and its habitat...Ultimately, the best method for determining GRSG viability will be to assess a combination of habitat availability and populations, which are inseparable. **The DOI Team recommends that establishing Statewide or range-wide GRSG population objective or target should be pursued**." Report, pp. 10-11 (emphasis added).

Notably, USFWS's 2015 finding that BLM's sage-grouse plans provided the necessary measures to avoid an ESA listing was based "on the best available scientific and commercial information." DOI must continue to use the best available science and information going forward, or it will run the risk of undermining the sage-grouse plans and USFWS's 2015 finding.

2. <u>Process contemplated for moving forward could shut out the public and proceed without meaningful contemplation of impacts to the plans, the species and the ecosystem</u>.

The 2015 Sage-Grouse Plans were prepared over many years with millions of comments from the public and robust opportunities for stakeholder engagement. The radical recommendations in the Report were developed from a 60-day review period with no formal input from stakeholders, although the WGA Sage-Grouse Task Force was permitted an opportunity to participate after multiple requests. The next

steps for evaluating and ultimately implementing changes to the plans should include proactive and meaningful opportunities for involvement of all stakeholders.

Concerns from the Memo and Report include:

a. Directing agencies to act with all due speed

The Report (at p. 1) explicitly directs action to be taken as soon possible, including those with no requirement for public involvement and no such commitment is being made.

> Whenever possible, the options identified by the DOI Team provide near-term opportunities to resolve concerns and issues and achieve the purpose of the Order, including development of policies, clarification, memoranda of understanding (MOUs), and training, many of which can be completed within 6 months (see Section IV and Appendix A). The DOI Team also identified longer term options, including potential plan amendments, which would be completed in accordance with applicable laws and policies (see Section IV and Appendix A).

b. No DOI/BLM commitments to lead outreach or engage the public

Although DOI and BLM have mandates related to managing public lands for the American people and are acting with the backdrop of the collaborative effort that created the 2015 Sage-Grouse Plans, the only references to outreach defer to action from the WGA Sage-Grouse Task Force. While we appreciate the Task Force's engagement in the plans and its steadfast commitment to the overall structure, the federal agencies have a different mandate and much broader obligations to the public. The below statements are absolutely insufficient commitments to public outreach – they have no commitments by DOI or BLM to take any action.

- "As part of this effort, the BLM should collaborate with the Sage-Grouse Task Force to engage with stakeholders..." Memo, p. 1.
- "In coordination with the SGTF, initiate additional discussions with Congressional delegations, counties, local governments, and tribes, as well as ranchers, landowners, industries, conservation organizations, and other interested parties, to review the issues and recommendations included in this report, and identify any additional issues or recommendations for consideration. The DOI Team recommends that this outreach begin as soon as practicable after the report is submitted, continuing for approximately 2 months." Report, p. 13.

While we agree that there may be helpful improvements to the plans and that training of staff implementing the plans will be beneficial, decisions to make alterations should be made in the same collaborative spirit that brought so many stakeholders to the table originally and made them willing to accept balanced measures for the good of the grouse and the ecosystem in plans that recognize the multiple uses and users of America's public lands.

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August 15, 2017

Via electronic mail

Mike Nedd
Acting Director
Bureau of Land Management
1849 C Street NW, Rm. 5665
Washington DC 20240

Re: Review of 2015 Sage-Grouse Plans

Dear Acting Director Nedd:

We are writing to emphasize our interest and concerns in the review of the greater sage-grouse plans conducted pursuant to Secretarial Order (S.O.) 3353. The Wilderness Society has been engaging in efforts to conserve the greater sage-grouse for more than a decade, including in the plans developed by the Bureau of Land Management and U.S. Forest Service. We take pride in the collaborative efforts that resulted in the management plans signed in September 2015 and the finding by the U.S. Fish and Wildlife Service (FWS) that listing of the greater sage-grouse under the Endangered Species Act was no longer warranted. As part of implementing the recommendations of the August 4 Memorandum from Secretary Zinke and the Report from the Sage-Grouse Review Team, we urge you to take the following into consideration.

Maintain the critical elements of the 2015 Sage-Grouse Plans.

As the Western Governors Association's Sage-Grouse Task Force has stated, including in the context of the review being conducted by the Department of the Interior, wholesale changes are not likely needed although there may be opportunities to improve the 2015 Sage-Grouse Plans. There are a number of critical elements of the plans that must be maintained in order to support the finding of the FWS and to ensure the greater sage-grouse and the more than 350 species that depend on these lands are not put at risk.

1. Protect the highest value habitat.

The structure of the plans was developed to provide the most protections to the highest value habitat (thus ensuring it is sufficiently protected) while providing more flexibility for other activities to occur outside habitat and in other habitat areas. For example, while most plans did not close any lands to oil and gas development, no surface occupancy is permitted in priority

habitat management areas; development outside priority habitat is permitted subject to less restrictive conditions. Further, the vast majority of high and moderate oil and gas potential is outside of priority habitat.[1] Consequently, maintaining the overall structure of the plans to focus on protecting the highest value habitat is not only the most likely to succeed in conserving the species, it is also having limited impacts on activities like oil and gas development. It is essential for the functioning of the plans that Priority Habitat Management Areas (and/or Core Habitat), including Sagebrush Focal Areas, are maintained and provided with the most protections.

2. Maintain provisions to address the key threats to the greater sage-grouse.

In addition to invasive grasses and wildland fire, which are highlighted in S.O. 3353, FWS has identified other "leading threats" to the greater sage-grouse and its habitat. While these threats are particularly important in the Great Basin region, oil and gas development is identified as a primary threat in most of the Rocky Mountain region, except for Montana, where the principal threat is agricultural conversion. Further, development and habitat fragmentation are identified as priority threats by both the FWS and the states.[2]

Consequently, in order for the plans to be effective, provisions addressing energy development and other causes of habitat fragmentation must be incorporated. These provisions include:

- No surface occupancy provisions for oil and gas development;
- Similar direction on appropriate locations for development of wind, solar and transmission lines; and
- Limitations on the amount and timing of surface-disturbing activities, such as surface disturbance caps and buffers around leks.

Notably, these types of provisions are also integral parts of the approaches that western states utilize in managing and conserving greater sage-grouse, including in those states that have formal sage-grouse conservation plans.

3. Ensure unavoidable impacts to greater sage-grouse habitat are mitigated.

The 2015 Sage-Grouse Plans comply with the mitigation hierarchy (i.e., avoid impacts where possible; minimize impacts where avoidance is not practicable; and mitigate or offset unavoidable impacts) and this compliance is necessary for their success. By providing the greatest protection for the highest value habitat and setting out specific management provisions for different activities, the 2015 Sage-Grouse Plans seek to avoid or minimize impacts to sage-grouse habitat. Nonetheless, the plans also recognize that some harm to habitat cannot be sufficiently avoided or minimized, and therefore mitigation through compensatory actions is required to restore or replace the damaged habitat. Evaluation of mitigation is required by the

[1] *See* https://d3n8a8pro7vhmx.cloudfront.net/backcountryhunters/pages/3172/attachments/original/1497040181/Sage-Grouse_Energy_Overlap_Report_060917_(1).pdf?1497040181

[2] *See* https://www.fws.gov/greatersagegrouse/findings.php

National Environmental Policy Act[3] and management for multiple use and sustained yield and avoidance of unnecessary or undue degradation to these uses and values of the public lands (including wildlife) is required the Federal Land Policy and Management Act.[4] The BLM's current manual and handbook on mitigation (Manual 1794, Handbook H-1794-1) acknowledge the BLM's authority to condition land uses on mitigation and to deny approval of uses when impacts cannot be sufficiently mitigated.[5] Similarly, the Department of Interior's Manual on Mitigation "affirms its authority to identify and plan for the extent, nature, and location of mitigation, including compensatory mitigation, and to require the implementation of effective mitigation."[6]

By designing appropriate mitigation measures, the plans provide a path forward for permitting more activities on the public lands that may harm greater sage-grouse habitat (such as activities that would otherwise exceed the scientifically-set surface disturbance caps) while ensuring those harms will be sufficiently addressed to offset unavoidable harms (such as restoring habitat or providing intact habitat). Mitigation is a necessary part of the plans' structure and is also a key part of the management approaches taken by the western states, including those states that have formal sage-grouse conservation plans. Mitigation measures have been developed based on years of experience with various industries. These industries now rely on compensatory mitigation to provide certainty regarding requirements associated with development and assurances that the mitigation will be successful to actually offset the harm that has occurred. While these provisions in the plans can certainly be elaborated upon, they need to be maintained.

4. Provide for ongoing monitoring and adjustment of the plans.

In order to ensure that key goals of the plans are met, the plans must also be nimble - showing that any major problems (such as precipitous drops in population or habitat condition) will be identified and can be addressed quickly. The plans include a Habitat Objectives Table, Habitat Assessment Framework, and Assessment, Inventory and Monitoring procedures that provide for data collection and measurement of conditions and analysis. These elements of the plans yield detailed information to show that the plans are working. They can also feed into the plans' adaptive management framework, which leads to immediate action when certain triggers are met.

This constellation of tools is needed to demonstrate to FWS that its finding that listing is not warranted continues to be justified, including during the review expected no later than five years from the date the applicable records of decision were signed. While aspects of the adaptive management framework could be clarified going forward, its elements must be maintained.

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[3] *See* 40 C.F.R. §§ 1508.8, 1502.14, 1502.16.
[4] *See* 43 C.F.R. §§ 1701, 1732(b).
[5] *See, e.g.,* BLM Handbook, H-1794-1 Mitigation (P) (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM%20H-1794-1%20Mitigation%20FINAL.docx, and BLM Manual, MS-1794 Mitigation § 1.6.E.2 (Dec. 22, 2016), https://www.blm.gov/sites/blm.gov/files/uploads/BLM_MS-1794%20Mitigation%20FINAL.docx
[6] See U.S. Dep't of Interior Manual, 600 DM § 6.5, Landscape-Scale Mitigation Policy (Oct. 23, 2015) https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf

Any changes to the 2015 Sage-Grouse Plans must be scientifically-supported.

We understand and support the need for additional clarifications regarding implementation of the 2015 Sage-Grouse Plans, including, for instance, updating habitat maps, elaborating on standards for mitigation and detailing various aspects of the monitoring and adaptive management process. Nonetheless, alterations to the plans, including both clarifications and more substantive changes, must be consistent with scientific standards.

For instance, as detailed by the Western Association of Fish and Wildlife Agencies, focusing on population objectives or using captive breeding, are unlikely to be successful as tools to measure the status of the species or support its health.[7]

In addition, current aspects of the plans, such as surface disturbance caps and lek buffers, are based on scientific consensus and cannot simply be ignored or reduced without accounting for the likely impacts from activities that would then harm grouse habitat, such as energy development. The scientific basis for the key provisions of the 2015 Sage-Grouse Plans, including the certainty in how they are applied, is the reason that FWS could rely on the plans to find that listing under the Endangered Species Act was no longer warranted. Any changes to the plans must meet this high standard.

Provide for public participation in implementation of the report.

Both the Secretary's Memorandum and the Report provide that BLM should work with the Sage-Grouse Task Force to engage with stakeholders, but does not commit the agency to public outreach or engagement. The Sage-Grouse Task Force is a key part of implementing the 2015 Sage-Grouse Plans and, as a vital partner in developing the plans, will also play a similar role in any changes. However, the Task Force is part of the Western Governors Association and does not owe the same obligation to the public as the BLM, which is obligated under its statutory mandate to manage the public lands for all Americans according to principles of multiple use and sustained yield.

BLM is subject to a multiple-use mandate, which prohibits the Department of the Interior from managing public lands primarily for energy development or in a manner that unduly or unnecessarily degrades other uses. *See* 43 U.S.C. § 1732(a).[8] Instead, the multiple-use mandate directs the agency to achieve "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations." 43 U.S.C. § 1702(c). Further, as co-equal, principal uses of public lands, outdoor recreation, fish and wildlife, grazing, and rights-of-way must receive the same consideration as energy development. 43 U.S.C. § 1702(l). The context of BLM's decisions requires the proactive engagement of the public.

[7] *See* WAFWA Sage-grouse White Papers, available at: http://www.wafwa.org/initiatives/sagebrush_ecosystem_initiative/

[8] *See also New Mexico ex rel. Richardson v. BLM,* 565 F.3d 683, 710 (10th Cir. 2009) ("It is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses.").

Where actions trigger the application of the National Environmental Policy Act (NEPA), BLM must make all diligent efforts to engage the public. NEPA requires BLM to meaningfully engage the public in analyzing the environmental effects of proposed federal actions, including soliciting and considering public comments, making "diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a). However, in this situation, BLM should not seek to avoid or delay public engagement unless or until there is a formal NEPA process.

The 2015 Sage-Grouse Plans were created with the input of millions of comments and extended efforts from a host of interested members of the public. Although the public was not provided an opportunity to provide input into the 60-day review that led to this report, numerous members of the public still echoed the input of the Western Governors Association's Sage-Grouse Task Force in urging that the fundamental structure of the plans be preserved. The BLM should not exclude the public from the evaluations that are being conducted pursuant to the recommendations in the report. Rather, the agency should provide opportunities for meaningful public participation as it considers and implements the report.

We appreciate the BLM's efforts to both implement and improve the 2015 Sage-Grouse Plans and hope these recommendations will be helpful. We would welcome the opportunity to discuss this letter and the ongoing process further at your convenience.

Sincerely,

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Report to the Sage-Grouse Task Force

Greater Sage-Grouse
Compensatory Mitigation

December 2016

I. Introduction

In December 2015, the Bureau of Land Management (BLM) provided a presentation to the Sage-Grouse Task Force (SGTF) addressing BLM's commitments made in its Greater Sage-Grouse (GRSG) Records of Decision (RODs), including the development of mitigation strategies. Following the presentation, the SGTF called for the formation of a group to discuss the implementation of mitigation requirements, including compensatory mitigation, across the range of the GRSG. The objective was to provide consistency and greater certainty for implementing mitigation across the range to better meet plan objectives and encourage private investment in mitigation.

This Report identifies the key principles for successful compensatory mitigation efforts for impacts to Greater Sage-Grouse (*Centrocercus urophasianus*) habitat, as identified by federal and state agency representatives through the discussions of the Greater Sage-Grouse Mitigation Workgroup (Workgroup). The Workgroup comprises representatives of the Department of the Interior (DOI), including the BLM and the U.S. Fish & Wildlife Service (FWS), the Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and U.S. Forest Service (USFS), and the States of Colorado, Idaho, Montana, Nevada, Oregon, Utah, and Wyoming (GRSG States).

The Workgroup met five times in 2016 to identify the key elements of compensatory mitigation programs and activities. The Workgroup discussed the varying approaches employed by DOI and USDA agencies and the GRSG States to mitigate impacts of land use activities on the species and its habitat. In addition to being responsive to the SGTF, BLM intends to use the final Report as technical guidance in evaluating state and other GRSG mitigation programs and to guide mitigation decision-making for residual impacts to GRSG habitat resulting from actions authorized or performed by the BLM.

The Report explains and builds upon BLM support for state GRSG mitigation programs to avoid, minimize, and compensate for unavoidable or residual impacts to GRSG and their habitat consistent with BLM's respective statutory and regulatory authorities, policies, and guidance. Appendix B of the Report provides a brief overview of the GRSG compensatory mitigation programs and efforts in the states of Colorado, Idaho, Montana, Nevada, Oregon, Utah and Wyoming.

This Report reviews the development of BLM's GRSG conservation strategies and BLM's adoption of a net conservation gain standard for GRSG mitigation actions, and sets forth BLM's proposed approach to implementing GRSG compensatory mitigation efforts in partnership with State mitigation efforts for the GRSG. It will be used by BLM to support and guide federal and state collaborative conservation efforts, in consultation with affected Indian tribes, where appropriate. It is also intended to clarify the need, opportunity, and approaches to compensatory mitigation for public land users, conservation interests, and other stakeholders.

II. Background

The GRSG has repeatedly been considered for listing as a threatened or endangered species under the federal Endangered Species Act (ESA). In 2010, the FWS determined that the listing of the GRSG was "warranted, but precluded" by other listing priorities. Subsequently, the FWS issued several documents that highlighted the conservation needs of the species. In February 2013, the FWS issued its Greater Sage-grouse Conservation Objectives: Final Report (COT Report), which identified threats to GRSG and its habitat and the degree to which those threats need to be reduced or ameliorated to provide for the conservation of the species (**USFWS 2013**). In 2014, the FWS issued the Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0 (GRSG Mitigation Framework) (**USFWS 2014**). The GRSG Mitigation Framework recommended the development of flexible and innovative mitigation approaches across the range of the GRSG, and the use of avoidance, minimization, and compensatory mitigation measures *to achieve a net conservation gain to the species* [emphasis added].

The 2010 FWS determination prompted substantial efforts by federal land managers and the GRSG States to develop conservation strategies and programs intended to address the conservation needs of GRSG and to avoid the need to list the species under the ESA. The BLM and the USFS, in collaboration with the GRSG States, developed a landscape-level management strategy to provide for the conservation of GRSG habitat and reduce impacts to GRSG from land use actions under their jurisdiction. That effort culminated in the execution by the BLM and the USFS of GRSG RODs in September 2015 which amended or revised 98 land or resource management plans to conserve, enhance, and restore habitat for the GRSG and other wildlife species dependent on healthy sagebrush-steppe landscapes (**BLM 2015a, 2015b and USFS 2015a, 2015b**). In June 2014 the BLM executed a ROD for the Resource Management Plan for the Lander Office Planning Area in Wyoming (**BLM 2014**) that includes a conservation strategy for GRSG. The RODs adopted GRSG conservation measures that generally call for:

- Achieving net conservation gain for GRSG;
- Avoiding and minimizing new and additional surface disturbances in priority and general habitat management areas;
- Compensating for unavoidable impacts to habitat;
- Reducing threat of rangeland fire and juniper encroachment to GRSG and sagebrush habitat;
- Monitoring and evaluating the effectiveness of conservation measures and implementing adaptive management; and
- Habitat assessment.

On October 2, 2015, the FWS published its determination that the GRSG did not warrant listing under the ESA. (**80 Fed. Reg. 59858 (Oct. 2, 2015)**). The FWS determined that based on the best available scientific information, the federal and state GRSG conservation plans and programs had significantly reduced the threats that had led to the 2010 determination, and declined to list the species. The 2015 decision relied significantly on the conservation commitments made by the BLM and the USFS in the RODs for amendments and revisions to

land use plans (LUPs) across the range of GRSG, state GRSG conservation efforts, and the federal agencies' development of new policy guidance and management direction for the management of wildfire and invasive plant species in the sagebrush ecosystems. The FWS also announced that it would review the status of the GRSG five years following its decision not to list the species, to allow the FWS to evaluate the success and effectiveness of the federal and state plans and private conservation efforts and to inform whether a formal revisitation of the 2015 determination was necessary.

III. Framework for Implementing GRSG Mitigation

A. Overview

Mitigation was identified as an essential mechanism in the federal LUPs for achieving the objective of avoiding and minimizing anticipated disturbance in GRSG habitat areas (identified primarily as Priority Habitat Management Areas (PHMAs) and General Habitat Management Areas (GHMAs) in each plan) and for restoring GRSG habitat to offset unavoidable disturbance through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions. The RODs included commitments to develop compensatory mitigation strategies in each WAFWA GRSG management zone to support achieving net conservation gain for the species.

As the GRSG LUPs were completed and implementation efforts began, several states had completed or had begun efforts to develop compensatory mitigation strategies to implement GRSG conservation measures on state and private lands. It became apparent that developing federal mitigation strategies for each WAFWA Zone would be redundant and could, in fact, create conflicts between state and federal mitigation strategies. As the GRSG States' mitigation strategies evolved, it became clear that the state mitigation strategies could contribute to achieving GRSG compensatory mitigation for development on federal lands. This recognition led to the establishment of the Workgroup and its charge to identify key principles for compensatory mitigation strategies, and to identify mechanisms to support and institutionalize collaborative state and federal GRSG mitigation efforts.

B. Collaborative Process

The Workgroup identified the need both for overarching consistency in certain fundamental principles of compensatory mitigation, and for the development of common metrics to be used to measure both mitigation requirements and the success and failure of compensatory mitigation actions. The Workgroup also identified the need to support innovation in compensatory mitigation programs and actions, recognizing that compensatory mitigation (particularly at the scale represented by the GRSG), is very much a developing practice.

While federal and state agencies are required to reserve and make all final decisions with regard to administration of public lands and wildlife under their respective authorities, those agencies recognize each other's regulatory jurisdiction, experience, and expertise regarding

GRSG and GRSG conservation. The Workgroup believes that GRSG mitigation efforts provide an opportunity for collaboration in addressing the potential adverse effects of certain management actions on state and federal lands and resources. In addition to federal land use planning efforts and commitments, the states have provided leadership and have invested significant time and resources in developing GRSG compensatory mitigation programs to conserve GRSG. Working together, federal and state governments will develop, support and implement a coherent and consistent compensatory mitigation practice across the range of the species.

GRSG conservation and the goal of avoiding the need for a future ESA listing for the species is best served by collaborative conservation efforts. The BLM is committed to working with the GRSG States individually and collectively to develop intergovernmental communication and decision-making mechanisms that will support and implement the BLM's commitment to utilize compensatory mitigation products meeting the requirements of the LUPs as well as the respective state's GRSG conservation and mitigation programs. Such mechanisms may be in the form of memoranda of understanding or similar vehicles between BLM and each (or potentially multiple) states. The BLM could utilize such agreements to support and further conservation efforts on a multi-state level. The BLM intends to partner with the GRSG States to the greatest extent possible in identifying and implementing effective mitigation measures, including compensatory mitigation, and achieving the net conservation gain standard for GRSG. Continued support and coordination with FWS in this effort is essential, particularly in light of that agency's anticipated future review of GRSG for potential listing under the ESA.

C. State Coordination

The Workgroup will continue to work to finalize a collective understanding of and commitment to the key principles for compensatory mitigation. The Workgroup members intend to identify the degree and manner in which the state compensatory mitigation programs provide compensatory mitigation that reflects the key principles set out in this document.

The purpose of this effort is to support the use of state GRSG mitigation products by the BLM and the USFS as appropriate and consistent with applicable policy, regulation, and law. The Workgroup anticipates these state program reviews would involve the USFS, the FWS, and the Natural Resource Conservation Service (NRCS), as well as the BLM, so that the GRSG States and mitigation providers and consumers (i.e., project proponents who commit to implementing compensatory mitigation) have greater assurance of consistency in mitigation requirements and greater assurance that their conservation efforts would be appropriately considered in conjunction with status reviews or in the event of a future GRSG listing, as applicable. The Workgroup believes that this process should be embodied in implementing memoranda of understanding or similar vehicles involving the individual states, which memorialize the collaborative process and approach to GRSG mitigation that underlies this Report.

The federal and state GRSG programs will continue to evolve. Accordingly, it is important that the federal and state partners continue to engage with each other in their respective policy

review and development efforts and ensure that their respective efforts remain consistent with and equivalent to the principles set forth in this Report.

IV. Key Principles

The Workgroup identified a set of "key principles" drawn from generally accepted attributes of effective compensatory mitigation efforts. The key principles include: (1) the use of a mitigation standard; (2) the use of best available science in mitigation decision making; (3) the requirement of a reasonable relationship between an impact and compensatory mitigation; (4) timeliness; (5) additionality; (6) duration; (7) durability; (8) risk Identification and management; (9) measurable outcomes and effectiveness monitoring; and (10) adaptive management. These principles are interrelated and cumulative. Each must be read (and implemented) in the context of the whole. The key principles are summarized below.

A. Mitigation Standard – Net Conservation Gain

Implementation of compensatory mitigation programs should be guided by a mitigation standard for the resources in question. The Workgroup identified "net conservation gain" as the appropriate mitigation standard for GRSG and is committed to achieving this standard through compensatory mitigation actions,[1] in combination with avoidance and minimization.

"Net conservation gain" refers to actual benefit or gain above baseline conditions. It means that mitigation actions should result in conditions where the long-term population prospects of the species are improved after mitigation actions are performed for activities impacting GRSG and/ or their habitat. "Net conservation gain" is intended to achieve a benefit or gain above baseline conditions, which includes accounting for uncertainty relating to the effectiveness of mitigation. The accomplishment of net conservation gain can be observed as a detectable improvement or functional increase in population trends, habitat quality, or occupied habitat quantity (as a proxy for populations) above baseline conditions. Actions that remove or ameliorate a potential threat to GRSG or its habitat from human activities (and which are additional to avoidance and minimization measures employed in connection with the action giving rise to compensatory mitigation obligations) are adequate for compensatory mitigation purposes when it can be shown that the actions will be biologically sound and meet the key principles outlined in this Report. Baseline, discussed in detail in Appendix A Section C. of this Report, means the pre-existing condition of a resource or a defined area, at all relevant scales (i.e., information is necessary at the site-, fine-, mid- and broad-scales), which can be quantified by an appropriate metric(s) or attribute(s). Baseline represents the affected environment that exists absent the action's implementation, and is used to compare predictions of the effects of

[1] The States of Idaho and Utah have challenged the BLM's authority for utilizing the "net conservation gain" standard in separate legal proceedings, but have participated throughout the Workgroup process. In a related lawsuit a number of Nevada plaintiffs, including the Nevada Attorney General and several Nevada counties, have also challenged the agency's authority to use a net conservation gain standard.

the proposed action. Compensatory mitigation actions that comply with a net conservation gain standard should have a positive influence on and lead to improvement of the conservation status of the resource.

With respect to GRSG, a detectable population-level change is not likely to result from each compensatory mitigation project implemented, but the resultant mitigation effort should be designed and expected to produce positive changes in GRSG habitat which, over time, are anticipated to result in a positive outcome for sage grouse populations. Determining whether positive changes in GRSG habitat can be anticipated will require the consideration of multiple factors, including but not limited to habitat quality, habitat quantity, seasonality of use of both impacted and mitigation habitats, habitat enhancement actions, and threats or risk to GRSG or GRSG habitat. Which factors are appropriate for consideration will depend on the nature and location of the habitat impact requiring compensatory mitigation, and the proposed compendatory mitigation solution. Where risk reduction or removal is an objective of mitigation efforts, both the magnitude of the threat in terms of the potential reduction in GRSG habitat values from incompatible uses or events (e.g., wildfire), and the likelihood that such uses or events will occur, should be considered. In practice, comparing the magnitude of the mitigation to the magnitude of the impact will assist in determining whether the mitigation measure will contribute toward achieving the net conservation standard.

B. Best Available Science

Mitigation decisions and efforts must be based on best available science.

C. Reasonable Relationship

The objective of compensatory mitigation is to address direct and indirect residual impacts that remain after avoidance and minimization measures have been applied. It is accomplished by replacing or providing substitute resources or environments through the restoration, creation, enhancement, or preservation of resources and their values, services, and functions (**600 DM 6**). To achieve this objective, a mitigation measure should provide habitat values, services and functions that bear a reasonable relationship to the lost values, service and functions for which mitigation is required, determined by reference to the conservation objectives of the mitigation requirement (here net conservation gain of GRSG).

GRSG use different habitat types at differing times, and for different life-history requirements. Application of the reasonable relationship principle does not require that impacted GRSG habitat resources automatically be replaced with in-kind habitat, without regard to whether the mitigation solution provides the greatest benefit to GRSG. Rather, the functions, values and services to be provided as mitigation should be demonstrably and rationally linked (1) to the significance to GRSG of the residual impacts in question, in light of (2) the ecological relationship between impacts and mitigation benefits to accomplishing net conservation gain. In some circumstances, *in kind* mitigation for habitat types (e.g., an impact to nesting habitat offset with restoration of nesting habitat functions and values) may be preferred. In other

circumstances, *out of kind* compensatory mitigation for sage-grouse habitat may be appropriate where priority recovery needs can be addressed (for example, a loss of wintering habitat could be offset with brood rearing habitat in a situation where where the latter is a limiting factor or otherwise of greater ecological significance). The driving consideration is that compensatory mitigation choices must provide the greatest biological benefit to GRSG in order to achieve the net conservation gain standard.

To determine whether a proposed compensatory mitigation measure meets the reasonable relationship principle and will contribute to net conservation gain, the evaluation should recognize that GRSG utilize multiple types of habitat (e.g., wintering habitat, nesting habitat, brood-rearing habitat) that can provide services in relatively discrete locations and during discrete periods of the year. Both the anticipated residual impact and proposed mitigation solutions should be considered at a variety of geographic scales, ranging from landscape level (e.g., WAFWA Zone), to population level, to project and impact site level, in order to identify whether reasonable relationship and net conservation gain principles will be accomplished. Performing such a multi-scalar analysis may be difficult especially where data or spatial information is lacking but is important in determining if, in fact, the reasonable relationship standard is met; in all circumstances, the best available scientific information should be used to make these determinations.

D. Timeliness

Effective compensatory mitigation projects consider the expected duration of unavoidable impacts and the timing necessary to achieve targeted biological conditions in a timeframe that benefits GRSG. In general, compensatory mitigation should avoid lag times between the time unavoidable impacts occur and the time mitigation benefits are provided. Requiring that the benefits of compensatory mitigation be provided in advance of the action that adversely impacts GRSG provides certainty that the desired mitigation result is in place and is benefitting GRSG prior to the occurance of impacts. Accordingly, mitigation that meets these criteria is deemed to be "timely" and is strongly preferred absent demonstration that the conservation benefits to GRSG will be increased through an alternative approach that will achieve the net conservation gain standard through measure(s) that adequately compensate for temporal loss of conservation benefits.

In assessing the timeliness of compensatory mitigation, it is particularly important to distinguish between when mitigation commitments are *made*, and when the mitigation is implemented and verified as successful. The timeliness principle pertains to the latter. In circumstances where compensatory mitigation will not produce the desired mitigation benefits until after impacts occur, the time lag between habitat impact and mitigation benefits can itself be an impact to GRSG that should be recognized and compensated for through some means, such as an increased mitigation requirement that reflects the degree of temporal loss.

There may be circumstances where accomplishing effective conservation (including effective application of mitigation principles) may warrant the selection of compensatory mitigation

measures that do not strictly adhere to the timeliness principle. For example, the eradication of invasive vegetation and restoration of native plant species may be a critical conservation objective for a particular GRSG population. Accomplishing those objectives may require restoration activities that will take years to mature and provide the desired mitigation values. In those circumstances, strict application of the timeliness principle would make it highly unlikely that such mitigation would be deemed appropriate in considering project authorization requiring the use of compensatory mitigation. Rigid adherence to timeliness considerations should not result in giving undue preference to low priority compensatory mitigation measures.

E. Additionality

A key principle of compensatory mitigation is that compensatory mitigation measures must provide conservation benefits that are truly "additional" to what would have occurred in the absence of the compensatory mitigation measure. Mitigation is "additional" when it provides resource benefits that are demonstrably new and that would not have occurred without the compensatory mitigation measure, or where habitat risks or threats are reduced and management plans are in place to ensure habitat values are enhanced or secured. Additionality considerations generally include both resource and financial additionality.

Resource additionality occurs where the value of the resources provided as compensatory mitigation is an effective improvement upon the baseline condition of the resources. What is required to demonstrate "additionality" may vary depending on the nature of the proposed mitigation measure, and whether the measure is to be performed on private or public lands. For example, where a compensatory mitigation measure utilizes a conservation easement on private lands to preserve GRSG habitat that is not adequately protected from the risk of human development, the inclusion of a habitat management plan that will ensure improvement or maintenance of the habitat values provided over the term of the easement may be required to demonstrate desired additionality.

Private land-based compensatory mitigation additionality determinations may involve closely-related questions concerning the financial additionality of a particular compensatory mitigation action. Financial additionality issues may arise because a landowner has participated in one or more government programs that provide incentives for private land wildlife conservation efforts. Ascertaining financial additionality includes ensuring that a landowner is not paid twice for the same conservation action. For example, a landowner enrolled in a federal government conservation incentive program can only receive compensatory mitigation credit for conservation actions that are supplementary to the actions funded by the incentive program (including the required matching funds invested by the landowner). State law requirements applicable to financial additionality may differ.

Public land–based compensatory mitigation raises different additionality issues. For public lands upon which uses such as mineral resource development, grazing, or other activities have been previously authorized, activities that are a permit obligation of the permit holder (such as restoration or reclamation to a specific standard after mineral development or maintenance of

rangeland health) would not be "additional," as such activities are the legal obligation of the permittee, and thus should occur in the absence of the compensatory mitigation program. Conservation actions that exceed existing permit, lease, or other land use authorizations or regulatory obligations are, on the other hand, additional and that portion of the conservation benefit generated above the regulatory obligation could be eligible for mitigation credit.

Where compensatory mitigation actions are proposed for public lands, assessing additionality may require determining whether the mitigation action will provide conservation benefits that are supplemental to conservation actions the public land manager reasonably would be expected to implement as a part of its general management responsibilities. Such an evaluation may be informed by considerations of agency budget, timing, and committed conservation actions.

F. Duration

The purpose of compensatory mitigation is to offset unavoidably lost or degraded resource values. Accordingly, it is important to accurately identify the duration of the resource impact in question. Determining duration requires identifying when the resource impact will occur, and how long it will last. Some impacts may last for a limited period of time until the affected resource regains its baseline values, while other impacts may be perpetual. The duration of an impact includes both the length of the action causing the impact, and the amount of time necessary for the affected resource values to recover following the cessation of the action. If damaged resources will never recover, it is appropriate to provide for and secure compensatory mitigation in perpetuity.

GRSG life cycle behaviors create additional issues in determining both when an impact will be experienced by GRSG, and how long it will last. Because GRSG populations and habitats fluctuate over time in response to environmental factors, ecological durability must be evaluated over the long term. Additionally, because GRSG exhibit fidelity to seasonal ranges, and established individuals generally do not move in response to anthropogenic impact, GRSG "avoidance" of an area occurs as yearlings abandon an area of disturbance and establish fidelity in a new area. Over time, the original lek location may become inactive as the mortality rate for the older birds exceeds the recruitment rate for younger males. This behavioral time lag in the face of disturbance can also be seen once disturbance is eliminated. The birds now established in the new lek location do not move back; it is their chicks that will over time inhabit the restored area. This behavior is important when determining the duration of an impact. After disturbance is removed it may take years for the area to again be used by GRSG, so the mitigation projects meant to offset the effects of that disturbance need to be in place until the impacted area is again providing habitat that is being or is reasonably likely to be used. These and other ecological factors must be considered in determining the period of the impact. (**Holloran et. al, 2010; Holloran et. al, 2015**). Similar considerations go into determining the duration of benefits to be provided by compensatory mitigation actions.

With respect to mitigation mechanisms such as habitat exchanges, a variety of permanent, term, dynamic or static credits may be used to fully offset the duration of anticipated impacts, provided they are responsive to the lifecycle issues and other biological considerations of the GRSG, and meet the other key principles.

G. Durability

"Durability" means the assurance that the conservation benefits provided by a compensatory mitigation measure will be secured and effective over the full timeframe of the impact for which they compensate. Compensatory mitigation should provide benefits and be "durable" for at least the duration of the residual impacts of the associated public land use. Durability considerations include the ecological, administrative, legal and financial assurances that secure the biological benefits of a compensatory mitigation project and protect the conservation status of a compensatory mitigation site.

Ensuring compensatory mitigation measures are durable requires evaluating multiple factors, including the ownership and management status of the lands upon which the mitigation activity is being performed. Public lands–based compensatory mitigation can give rise to different durability issues than would be the case for private land-based actions given the statutory management mandates for uses of public lands. Administrative mitigation tools (including land use planning and land use authorizations) can provide for durability by permitting and maintaining land uses that are supportive of the compensatory mitigation measure, or by limiting or excluding land uses that are incompatible with the mitigation measure. For example, the use of administrative tools such as land use planning, protective leases for public purposes under the Recreation and Public Purposes Act, or the issuance of a lease or easement for conservation purposes under Title III of FLPMA or a right-of-way under Title V can be appropriate. Modification of future or existing land use authorizations could also be an appropriate durability tool.

Different durability tools may be appropriate for compensatory mitigation measures located on private or nonfederal lands. Examples of such tools include habitat management contracts, easements, and deed restrictions. Where mitigation is being provided through lands secured in a conservation bank or through a habitat exchange, the documents governing management of such lands should make clear what measures are necessary to achieve the desired durability. In addition to habitat management tools, financial tools should be used to ensure funding to maintain, monitor, and adaptively manage mitigation for the duration of the residual impacts from the associated land use. Where a conservation bank or an exchange is involved, the banking or exchange documents and financial assurances associated with the bank or exchange, and the employment of credit reserve mechanisms, must address financial durability concerns. Alternatively, bonding, endowments, or other mechanisms should be used to ensure there will be either funding or alternate compensatory mitigation that is sufficient and accessible to ensure durability. Lastly, where mitigation requirements are associated with a land use authorization, BLM's legal authority to require performance by the responsible party

can help assure durability. These tools likewise should be used to ensure that risk of failure of compensatory mitigation actions is adequately addressed, as discussed in the following section.

H. Risk Identification and Management

Compensatory mitigation programs must include strategies to assess and manage a number of risk considerations, including the risk that characterization of residual direct and indirect impacts may underestimate their magnitude, extent and duration, the risk that characterization of the benefits of mitigation solutions similarly may be over-stated, and that mitigation solutions may not be durable. Each of these potential risks must be addressed and compensated for to ensure impacts are appropriately and fully compensated.

With regard to residual impacts, impact assessment must consider and address both the risk that the impact may be understated in magnitude and extent, and the risk that the duration of the impact (i.e., how long it will take for GRSG habitat to recover) may be underestimated. Determining how long the effects of impacts to GRSG habitat will remain (i.e., how long it will take for GRSG habitat to recover from an impact) can be very difficult. To ensure impacts are fully compensated, the risk of understating the magnitude and extent of the impact, and the risk or underestimating how long an impact will be experienced, must both be assessed and factored into determining the nature and duration of compensatory mitigation.

Similar risk considerations exist regarding proposed compensatory mitigation. Substantial levels of uncertainty (and, therefore, risk) exist regarding the relative success in restoring vegetation in some GRSG habitat types as well as the timelines necessary to achieve the level of enhancement or restoration required to meet compensatory mitigation objectives. Likewise, relatively little is known regarding implementation of habitat restoration and enhancement projects and associated GRSG population outcomes. The risk of overstating the anticipated conservation benefits of the measure, and the risk that such benefits may not come to pass due to failure of the mitigation action, must be assessed in quantifying mitigation benefits. Additionally, the risk that a mitigation solution will be disturbed or otherwise fail must likewise be assessed. The goal of each of these risk determinations is to ensure that the actual residual impacts to GRSG are fully compensated.

A central premise identified by the Workgroup for this Report is that the risk that a proposed mitigation action may fail or not achieve its desired objectives should be borne by the entity responsible for the resource impacts requiring mitigation. In the case of third-party activities on public lands causing impacts to GRSG habitat, that responsible party is the permit holder. Project authorizations should clearly identify the potential risk that a compensatory mitigation measure may not accomplish the intended objectives, and should clearly assign to the responsible party the responsibility for addressing the failure of a compensatory mitigation measure. A variety of mechanisms can be used to provide assurances that responsibility and resources to accomplish the resource objectives of the failed conservation measure will be achieved, including performance bonding, other financial mechanisms, and permit conditions.

I. Adaptive Management

The use of compensatory mitigation to accomplish landscape-scale conservation is a relatively new concept. The Workgroup recognized that it is important to encourage new and innovative strategies and to learn from compensatory mitigation actions. Accordingly, adaptive management is a key principle of effective mitigation. Adaptive management is a structured approach to decision making that essentially means learning by doing, and adapting management strategies based on what has been learned. The DOI defines adaptive management as "a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood." (**Williams et al. 2009**). The feedback between learning and decision making is the central feature of adaptive management. (**Williams et al. 2009, Williams and Brown 2012**).

Adaptive management is integral to the effective implementation of a mitigation program, not a component of the program to be initiated upon failure to attain an objective. In contrast to learning by *ad hoc* trial and error, adaptive management involves a system of management practices based on clearly identified outcomes and monitoring to determine (1) whether management actions are meeting required outcomes, (2) if not, determining what factors are the cause of or contributing to this failure, and (3) facilitating management changes that will best ensure that outcomes can be met.

Adaptive management plans require the identification of measurable objectives and adaptive management thresholds that can effectively track movement toward a defined conservation goal. Thresholds (i.e., the limiting value of a resource attribute that triggers a change in management action) should be clearly defined and measurable, and will be unique depending on the objectives, management actions being considered, and the scale of implementation. Adaptive management plans should identify a process to (1) establish clear objectives for alternative management actions, (2) implement one or more of the alternatives as prioritized from predictions (including previously untested options), (3) monitor to learn about the impacts of the implemented management actions, (4) use results from the assessments of monitoring data to update knowledge and inform future management actions, and (5) reinitiate the process. (**Williams et al. 2009, Williams and Brown 2012**).

Adaptive management principles should be implemented at each scale: project-level, regionally and range-wide. The specifics (e.g., goals, objectives, thresholds) associated with each project and scale of inference likely will be unique, requiring discrete adaptive management approaches. Successful implementation of the adaptive management process will require commitment of staff and resources to monitor performance and evaluate success in achieving desired outcomes, and is essential to ensuring the success of compensatory mitigation for GRSG habitat.

J. Measurable Outcomes and Effectiveness Monitoring

Identifying and monitoring success or failure in achieving the desired resource outcomes for proposed compensatory mitigation actions (generally the habitat attributes sought to be obtained or secured) is essential to demonstrating that the mitigation will contribute to net conservation gain and to ensuring the proposed compensatory mitigation bears a reasonable relationship to the nature of the residual impacts for which mitigation is being required. Desired outcomes (performance measures) should be clearly articulated and analyzed in conjunction with project planning. Potential compensatory mitigation sites and measures should be identified in advance of project initiation to allow analysis during environmental review and to ensure that proposed compensatory mitigation can be addressed in a manner that is consistent with the principles of effective compensatory mitigation (e.g., is measurable, can be monitored during the duration of the impact for which the compensatory mitigation measure is in effect, incorporates measures to address risk, etc. and can be altered, if necessary, through adaptive management).

Identification and establishment of clear and measurable monitoring and reporting requirements is essential to support assessment of the effectiveness of the compensatory mitigation measure and to ensure that compensatory mitigation is accomplishing its intended objectives. Monitoring and reporting also allows tracking of the degree to which mitigation is contributing to net conservation gain. Monitoring and reporting requirements, discussed in Appendix A, also inform the use of adaptive management of compensatory mitigation. The Workgroup believes it is essential to apply outcome measurement and effectiveness monitoring to mitigation programs, as a whole, as well.

An effectiveness monitoring strategy should be based on and employ the factors and metrics used to inform determination of baseline, the level of residual impacts, and off-setting compensatory mitigation. Potentially applicable factors and metrics are discussed in detail in Appendix A Section C.

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VI. Appendices

APPENDIX I. -- DETERMINING COMPENSATORY MITIGATION REQUIREMENTS FOR GREATER SAGE-GROUSE

This Appendix is intended to guide BLM decision-making for mitigation of residual impacts to GRSG habitat from actions authorized or performed by the BLM, consistent with the Key Principles identified in this Report and BLM's adoption of the "net conservation gain" standard. Subject to valid existing rights and where consistent with applicable law and agency land use plans, the BLM will implement the mitigation hierarchy (as described in 600 DM 6) when considering proposed actions (federal agency actions and third party actions under federal authorization) with reasonably foreseeable effects on GRSG and its habitat. After applying appropriate avoidance and minimization measures, the BLM will identify residual impacts to GRSG habitat and employ appropriate compensatory mitigation requirements consistent with BLM's adoption of "net conservation gain" of GRSG (the actual benefit or gain above baseline) as a conservation standard.

Determining compensatory mitigation requirements will require an understanding of the relevant baseline of the species and the area impacted, and a system to determine the lost or degraded habitat values requiring compensation. Choices among available compensatory mitigation options similarly will require a means of quantifying the habitat values associated with available compensatory mitigation options, and criteria for selection of appropriate mitigation actions. These and related implementation issues are discussed below.

A. When Compensatory Mitigation is Required

In considering its own actions, and subject to valid existing rights and consistent with applicable law when authorizing third-party activities on public lands that result in residual impacts to GRSG after the application of avoidance and minimization measures, the BLM will require compensatory mitigation that provides a net conservation gain to the species.

1. Renewal or reauthorization actions

Public land use activities frequently require renewal or reauthorization actions by land management agencies. For the purposes of this Strategy, the unchanged, continued use or operation of a previously-authorized activity is assumed not to cause loss or degradation of GRSG habitat. However, where monitoring data indicates a decline in condition or where a permit renewal or other land use reauthorization action would lead to new, expanded, or different impacts to GRSG habitat, review of potential residual impacts and application of mitigation requirements (including compensatory mitigation requirements) is necessary.

2. Relationship between compensatory mitigation requirements and disturbance and density caps

As part of their avoidance and minimization strategies, the federal GRSG LUPs limit surface disturbance and infrastructure in priority areas (e.g., PHMAs, sagebrush focal areas, core areas) using disturbance limits and infrastructure density caps. These limits or caps are based on the premise that GRSG populations will tolerate a certain level of anthropogenic disturbance on the landscape. Under the disturbance and density cap paradigm and consistent with applicable law, additional actions or projects are not approved if a surface disturbance cap (e.g., 3 or 5% surface disturbance; 1 infrastructure/640 acres) for a particular area has been reached.

The RODs commit to mitigate residual impacts to GRSG habitat to achieve net conservation gain for activities in PHMA and GHMA (limited to PHMAs in Wyoming). In considering whether a surface use activity will give rise to residual effects, it is important to document that adverse impacts were actually avoided through avoidance and minimization measures and to quantify, to the extent practicable, the avoidance and minimization achieved. Where it cannot be demonstrated that avoidance and minimization efforts totally eliminate adverse impacts to GRSG habitat, compensatory mitigation will be required for residual impacts, consistent with applicable law, to ensure net conservation gain.

B. Determining Residual Impacts

Residual impacts requiring compensation may be either direct or indirect. Direct impacts associated with habitat loss (e.g., infrastructure development) are caused by the action and occur at the same time and place; they are generally discrete and have a distinct measurable impact in space and time. Most anthropogenic disturbances that contain a definitive footprint (e.g., roads, gas or oil wells), cause direct, physical impacts to GRSG habitat such as surface disturbance due to road construction. Indirect impacts are likewise caused by the action but may be later in time or farther removed in distance; they occur as a result of a project's influence on lands or resources (including wildlife populations) proximate to the project area. (**BLM National Environmental Policy Act Handbook H-1790-1 at 56**). As an example, increased predation rates due to the existence of power lines, or behavioral avoidance of lines by GRSG, would be indirect impacts.

Indirect impacts can be further described as disruptive or diffuse. Disruptive disturbances include any human activity occurring within the project area that disrupts GRSG habitat use, behavior, or reproduction.

Diffuse disturbances generally impact GRSG via degradation of the processes and functioning of sagebrush habitat (Knick and Connelly 2011). As an example,the potential effects of such activities as improper grazing and dispersed recreation,including the spread of invasive weeds, represent diffuse disturbance. The impacts of diffuse disturbances on GRSG are difficult to measure and address in compensatory mitigation programs. Where they cannot be estimated or measured practicably, mitigation of the impacts of diffuse disturbances should be

accomplished by avoidance and minimization through the requirement of the use of best management practices rather than the use of compensatory mitigation.

Once residual impacts to GRSG habitat have been identified, they should be quantified. Quantification of residual impacts may be accomplished by measuring the change in habitat condition from the baseline condition to the anticipated condition after avoidance and minimization measures.

C. Baseline

Sage-grouse biology is complex and multi-scale. Johnson (1980) described this complexity using four orders of habitat selection in which each higher order is dependent on the previous order. These orders are rooted in habitat characteristics and linked to different spatial scales. Baseline will need to identify habitat characteristics at multiple scales. Monitoring will need to validate the status and trend of those characteristics. Impacts will be determined by one or more habitat characteristics that are adversely modified by an authorized land use action. Uplift will be determined by one or more habitat characteristics that are modified by a mitigation action. Habitat characteristics used to determine baseline may also be dependent upon the season of use by GRSG.

Baseline is an important concept and is critical to understanding the impact of a debit, the benefit of a credit, GRSG population trends, and whether mitigation actions are contributing to achieving the net conservation gain standard. Baseline is defined as the pre-existing condition of a resource at all relevant scales which can be quantified by appropriate metrics. During environmental reviews, the baseline is considered the affected environment that exists absent the project's implementation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives. A single year of data does not represent baseline conditions. Due to variation from year to year and the possibility of large ecological events, such as wildfire, baseline conditions must be documented based on a multi-year monitoring approach. Ideally, baseline assessment of an area would be determined using, at a minimum, three years of data collected within a five year time frame. Remote imagery and other existing data, such as legacy data, may also be important to consider when estimating baseline conditions. It is also important that baseline data be collected during the same phenological stages over consecutive years.

Even if all the habitat characteristics at a site are in excellent condition, if there are threats that prevent birds from using the habitat, it is of little habitat value. Conversely, birds may occupy sites that are not typically considered GRSG habitat. Thus, when capturing the baseline conditions at the site scale, it is important to document how the site is used, or not used, by the birds. Specific indicators for measuring habitat characteristics are listed in the Habitat Assessment Framework (Stiver et al. 2015). These and other indicators may be beneficial when estimating baseline, habitat quality and quantity, effectiveness of mitigation actions, and extent by habitat type. Potential indicators include:

- GRSG occupancy
- Sagebrush Cover
- Sagebrush Height
- Predominant Sagebrush Shape
- Perennial Grass and Forb Heights
- Perennial Grass Cover
- Perennial Forb Cover
- Preferred Forb Availability
- Riparian Stability
- Availability of Sagebrush Cover
- Proximity of Detrimental Land Uses
- Proximity of Trees or Other Tall Structures
- Seasonal Habitat Availability
- Seasonal Use Area Connectivity
- Anthropogenic Disturbances
- Habitat Availability
- Patch Size and Number
- Patch Connectivity
- Linkage Area Characteristics
- Landscape Matrix and Edge Effect

Many states are developing habitat quantification tools (HQTs) that use baseline data, models, and other data to determine the functional equivalency of the habit that will be compromised through development and the uplift that will be provided through a corresponding mitigation action. The baseline provides the consistency across the range of GRSG and the HQTs provide the flexibility to accommodate local and state habitat characteristics. This approach will increase industry confidence and incentivize engagement in the development and use of state-based HQTs for compensatory mitigation projects to offset project-impacts on public lands. The use of common indicators will provide the BLM with data adequate to report on the status and trend of GRSG habitat and use in NEPA analyses, yet provide flexibility for the States to administer their mitigation programs.

Measurements of the various indicators must be repeatable and the BLM must have confidence in the precision of the data collected in order to report valid conclusions regarding the status and trends of GRSG populations. Therefore, calibration is critical and results must be recorded and available to properly account for observe bias. For example, if the objective is to detect a 2 percent change in an indicator and the observer bias is 2 percent, change cannot be detected with confidence. Not all of the listed indicators will be required for mitigation considerations. Indicators are relevant to the site potential and the habitat objectives in the context of the proposed action and proposed compensation for any residual effects resulting from the action. Proximity to occupied habitat and linking populations to habitat will also be important. BLM State Offices will work with the States to develop specific step-down protocols that provide for sufficient data collection.

D. Determining and Quantifying Debits and Credits

This Report utilizes the terms "debit" and "credit" to refer to impacts requiring compensatory mitigation, and offsetting changes in habitat condition to be provided by compensatory mitigation. In this context, impacts decreasing the value of GRSG habitat (from baseline condition) will be referred to as "debits." Compensatory mitigation actions that offset impacts to baseline habitat values will be referred to as "credits."

Debits can be defined as a quantification of the loss of ecological functions and/or services for GRSG. For most purposes, debits are likely to be habitat-based. Debits should be quantified using the same methodology used to determine baseline. Both direct and indirect impacts remaining after application of avoidance and minimization measures should be considered in quantifying debits.

Credits represent changes in habitat conditions that increase the value of GRSG habitat relative to baseline. Credits can be defined as a quantification representing the accrual or attainment of ecological functions and/or services for GRSG. Credits should likewise be quantified using the same methodology employed to determine baseline and debits, and in light of both direct and indirect impacts from existing disturbances, if any.

Although credits are quantified as increases in habitat condition from baseline, not all habitat improvement actions will generate "credits" for compensatory mitigation purposes. Compensatory mitigation measures must provide resource additionality; accordingly, to qualify as compensatory mitigation credits, the conservation practice must generate habitat benefits above those otherwise expected to occur [based on objectives established in land use or similar plans or as indicated by baseline conditions and otherwise expected habitat trends].

E. Types of Compensatory Mitigation

Compensatory mitigation may occur by replacing or providing similar or substitute resources or values through restoration, establishment, enhancement, or preservation. This Report uses these terms to mean:

- Restoration is the process of assisting the recovery of a resource (including its values, services, and/or functions) that has been degraded, damaged, or destroyed, to its pre-existing condition. In other words, it is the process of making non-habitat (that was habitat previously) or unsuitable habitat suitable again—e.g. well pad restoration.
- Establishment is the introduction of a resource at a site. It is distinct from restoration in that a resource or value is developed through manipulations of the physical, chemical, and/or biological characteristics of the site where the resource or value did not previously exist.

- Enhancement is the heightening, intensifying, or improving of one or more resources of value. In other words, making suitable habitat better (e.g. enhancing the herbaceous understory in a sagebrush stand to increase habitat quality for GRSG).
- Finally, preservation is the permanent or long-term protection of important resources or values through the implementation of appropriate legal and physical mechanisms (e.g. conservation easements, title transfers, or land use plan decisions). This includes the reduction or exclusion of incompatible uses, maintaining high quality habitat in high quality conditions.

A wide variety of activities can be used as compensatory mitigation actions. Mitigation actions should be selected that are appropriate for the resources in the project area for the landscape(s) involved and that are consistent with the key principles identified in this Report.

Net conservation gain, as measured through the increase in habitat functions and values, can be realized directly from restoration, establishment, and enhancement actions. Preservation actions (e.g., conservation easements, title transfers, or other methods) do not directly increase habitat functions and values but can be an important tool in generating net conservation gain. For example, preservation as a tool for achieving the reduction of threats to important resources from incompatible future development actions can be an important contributor to GRSG viability and can contribute significantly to ecological sustainability. Preservation actions likewise can (and should) support high standards for monitoring, management, and maintenance of good habitat.

Because preservation actions do not generate or increase habitat functions or values, measuring their contribution to net conservation gain presents unique issues. Where preservation is used to protect high value habitats, its contribution to net conservation gain can be measured in terms of the threat avoided (e.g., the decrease or loss of habitat functions or values avoided). Where preservation actions are accompanied by commitments to enhance and/or manage habitat to benefit GRSG, the management action would provide additional habitat benefits to GRSG.

Other types of actions that reduce risk can likewise contribute to net conservation gain. For example, the provision of funding or other resources for wildfire protection, e.g. funding to Rangeland Fire Protection Associations, can be a valuable mitigation action as it can contribute to risk reduction and securing and maintaining important habitat values. Determining the benefit to GRSG of such actions will require identifying and assessing the ecological benefits to GRSG in terms of risk or threat avoidance or reduction.

F. Risk and Uncertainty

The concept of risk is an important element in identifying the duration of anticipated residual impacts, and in evaluating the risk of failure of a proposed compensatory mitigation measure. In particular, when identifying the anticipated duration of residual impacts, the length of time

necessary for the resource to recover as a result of "natural" restoration and resiliency should not be underestimated.

The risk of underestimating residual impacts to GRSG habitat, and the risk of underperformance or failure associated with a proposed compensatory mitigation action (both described above in the Key Principles section of this Report) should be identified and accounted for explicitly and transparently during project development. Evaluation and selection of compensatory mitigation measures should balance risk associated with the mitigation project and the predicted effects. Risk assessments will be context specific and could take many forms depending on the compensatory mitigation project. Land managers can account for risk of failure or reversals using a variety of mechanisms, such as adaptive management, phased credit release and mitigation ratios.

This Report should not be interpreted as discouraging high-risk projects where substantial conservation gain is possible (e.g., experimental approaches to decrease invasive annual grasses). Innovation in new strategies and practices should be considered and explored to advance our understanding and ability to achieve landscape scale conservation (and conservation of GRSG); a failure in outcomes does not mean that the project itself was ill-considered. However, the interest in seeking new and effective mitigation strategies must be balanced against the risk of failure when assessing compensatory mitigation measures and, in particular, whether the net conservation gain standard has been met. Net conservation gain should not be determined to have been accomplished when considering the projected or anticipated outcomes of compensatory mitigation measures prior to evidence and quantification of their actual results; failed projects will not contribute to net conservation gain. Risk of failure may not need to be considered as strongly in situations where compensatory mitigation projects are timely and the achievement of net conservation gain can be directly assessed.

G. Evaluating Compensatory Mitigation Effectiveness

Monitoring and reporting of the results of compensatory mitigation projects is essential to determining their contribution to the GRSG net conservation goal. Monitoring and reporting is likewise essential to adaptive management.

H. Monitoring

Monitoring for mitigation actions should include methodologies and metrics consistent with those used to determine baseline conditions at both debit and credit sites. These methodologies should employ reliable, repeatable, and quantitative scientific methods using common metrics for both credits and debits. Data collection and monitoring efforts should be sufficient to assess trends in GRSG habitats across all relevant scales while accounting for region-specific GRSG-habitat relationships.

I. Reporting

The frequency of reporting will depend on the scale in question and the sensitivity of the indicator(s) to change. Reports should verify credits and debits, provide transparent assurance that compensatory mitigation projects meet program standards, and allow BLM to ensure net conservation gain has been achieved. Project-specific reporting should be conducted on an annual basis to monitor progress toward the project's intended mitigation objectives.

J. Other Considerations

Accomplishing net conservation gain for GRSG will require making wise decisions regarding the use of compensatory mitigation to meet the conservation needs for the species. Landscape-scale conservation practices provide the foundational flexibility to identify and consider conservation opportunities (including compensatory mitigation) wherever they may provide the greatest benefit to the species or resource values of concern. (**600 DM 6**). Achieving net conservation gain will require pursuit of those conservation opportunities that provide the greatest benefit to GRSG.

This Report anticipates and supports the development of WAFWA Zone-specific information to guide the collaborative effort detailed in in this Report, consistent with the ROD commitment to develop WAFWA Zone mitigation strategies. The WAFWA Zones represent an appropriate ecological and geographic construct to focus federal, state and tribal efforts on GRSG conservation. Building from the key principles identified in this Report, the Workgroup anticipates conservation goals, objectives and opportunities will be developed based on recognized threats and best available science and addressing the principles of "risk, resilience, and resources" for each WAFWA Zone. These zone-based strategies will identify and prioritize the conservation needs of GRSG within each zone and compensatory mitigation opportunities, as available, for use by the federal agencies and the GRSG States in the collaborative conservation decision-making described in the Report. It is anticipated that BLM's ongoing Rangeland Conservation and Restoration program will provide input into these zone-based strategies, as will the FWS GRSG Mitigation Framework.

The zone-based strategies will be incorporated as appendices to this Report as they become available.

APPENDIX II. STATE COMPENSATORY MITIGATION APPROACHES

A number of commonly recognized mitigation mechanisms or systems exist, including proponent-sponsored compensatory mitigation, conservation banking, habitat exchanges, and in-lieu fee systems. Each of those approaches may be appropriate to provide compensatory mitigation for GRSG provided they adhere to the mitigation principles discussed above. Differences between the mechanisms are principally based on the responsibility for implementation and when mitigation actions occur relative to impacts. For instance, a conservation bank is managed by a bank sponsor (can be a private or public entity) while an in-lieu fee program is sponsored by government agencies or not-for profit environmental organizations. A habitat exchange is a market-based system that facilitates the exchange of credits (i.e., compensatory mitigation actions) to offset debits (i.e., unavoidable impacts) between interested parties, such as industry and landowners.

Compensatory mitigation mechanisms vary by state, and the GRSG States are evaluating which mitigation mechanisms work best for their GRSG programs. States such as Wyoming (and, eventually Montana) use a "core area" approach to manage the kind of disturbance and mitigation allowed in priority conservation areas (defined as "core habitat"). Colorado, Oregon, and Nevada have or are developing habitat exchanges. Wyoming has an established conservation bank, and bank enabling and mitigation agreements intended to proactively conserve and restore GRSG populations are likewise in place in Nevada. Oregon is developing a conservation banking and in-lieu fee program. Idaho is developing a mitigation program centered on an in-lieu fee framework. Montana uses competitive funding to facilitate free-market mechanisms for voluntary, incentive-based conservation efforts. Other mechanisms may emerge as increasing experience with compensatory mitigation for GRSG develops.

The GRSG states have provided the following information regarding their respective mitigation programs.

A. State of Colorado

Colorado Parks and Wildlife (CPW) consults in local, state, and federal permitting processes involving GRSG. Fluid and solid mineral development is a primary impact to GRSG, so the majority of CPW's consultation efforts relate to state and federal leasing actions, and state and federal permitting of oil and gas facilities through the Colorado Oil and Gas Conservation Commission (COGCC) and the BLM. CPW also consults with local, state, and federal regulatory agencies on a variety of other types of development and approvals for land use activities that may impact GRSG, including other types of mining activities, transmission lines, gas lines, roads, hydro projects, residential developments, grazing permit renewals, etc.

During consultation, CPW makes recommendations regarding measures that may be implemented to avoid and minimize impacts. CPW may also request that energy companies offset their unavoidable adverse impacts with compensatory mitigation.

One option for developers who need to offset unavoidable adverse impacts is to use the Colorado Habitat Exchange (CHE) to calculate the impact and credit obligation (debits) and to purchase the corresponding amount of credits. The CHE is a private, non-profit 501(c)3 organization with an independent board of directors. The State holds two seats on the board, which plans to have a functional exchange with the ability to sell credits in Spring 2017.

Using the CHE for compensatory mitigation provides developers the benefits of streamlined permitting by foregoing lengthy offset mitigation negotiations with CPW through the use of the pre-approved standardized credit and debit calculations provided by the CHE. Credits acquired by developers through the CHE to offset unavoidable adverse impacts provide durability and increased value to GRSG because credits meet the *pre-listing mitigation* guidance of the FWS, as described in the FWS Greater Sage Grouse Range-Wide Mitigation Framework. The CHE incorporates all of the key mitigation principles described in this Report.

COGCC rules also give energy companies the option to enter into a Wildlife Mitigation Plan (WMP) in order to streamline consultations with CPW. A WMP is a landscape-scale mitigation plan created in consultation with CPW to address the development of multiple facilities over several years. In a WMP, energy companies commit to implementing specific Best Management Practices (BMPs) designed to avoid and minimize impacts, as well as off-site mitigation to compensate for unavoidable adverse impacts to wildlife. CPW also consults on proponent-sponsored mitigation proposals.

B. State of Idaho

The Idaho Sage-Steppe Mitigation Program (Mitigation Program), currently under development, will provide a mechanism to achieve sage-grouse conservation goals (as well as goals for other sage-steppe species) while also preserving the culture and economy of the State of Idaho. This program will employ an "in-lieu fee" approach to compensatory mitigation through which a project developer pays funds into an account managed by the mitigation program for performance of mitigation actions that provide measureable benefits for sage-grouse and their habitats within Idaho. The Sage-Grouse Mitigation Framework, developed by members of the Idaho Sage-Grouse Advisory Committee in 2010, serves as the foundation for the Mitigation Program. This framework was referenced in Governor Otter's 2012 Sage Grouse Conservation Strategy and was included within the BLM's Land Use Plan Amendments for Idaho and SW Montana.

The Mitigation Program will include the following attributes:

- Employment of the mitigation hierarchy;
- A Program Administrator (state agency) to direct the Mitigation Program and ensure strong oversight;
- Technically sound and transparent guidelines for estimating compensatory mitigation costs with the goal of using advanced mitigation to inform mitigation costs and/ or require mitigation projects to be selected before determining mitigation costs;

- A science-based statewide strategy to guide the selection of mitigation actions for funding;
- Costs of operating the Mitigation Program will be borne by infrastructure developers that use the Mitigation Program to deliver compensatory mitigation;
- Monitoring the implementation and effectiveness of mitigation actions funded by the Mitigation Program;
- Systematic tracking of benefits provided by the Mitigation Program to GRSG habitat in Idaho; and
- Periodic evaluation and adaptation of the Mitigation Program.

The State of Idaho has contracted with a team of mitigation consultants to assist in the design and development of the program. Products under development include: a science plan, a habitat quantification tool, and a mitigation manual which will include a governance structure. It is the intent of the State of Idaho to address the elements of the BLM mitigation strategy (additionality, durability, etc.) within the mitigation program. A series of stakeholder workshops (currently underway) is designed to help inform the development of the program. Multiple state and federal agencies, along with NGO and industry reps have been participating and will continue to participate in the workshops.

C. State of Montana

Montana's Sage Grouse Conservation Strategy is based on a "core-areas" approach and is implemented through Executive Order 12-2015 and the Greater Sage Grouse Stewardship Act (Act). Both require observance of the mitigation hierarchy (avoidance, minimization, reclamation / restoration, and compensation) for development activities in core areas and general habitat areas as mapped and designated in Executive Order 21-2015. Compensatory mitigation is required for remaining direct, indirect, and temporary impacts after avoidance, minimization, and reclamation. Mitigation must be implemented within GRSG habitat areas designated as a core area, general habitat, or a connectivity area. A variety of mitigation tools can be used, including: conservation banks, habitat exchanges, making a contribution to the Sage Grouse Stewardship Fund, funding stand-alone mitigation actions, and approved conservation plans. At the present time, there are no established GRSG exchanges or banks in Montana. The Montana Sage Grouse Oversight Team reviews and approves all compensatory mitigation plans developed by the Sage Grouse Habitat Conservation Program in collaboration with project proponents.

In 2016-17, Montana will promulgate administrative rules to administer methods of compensatory mitigation available to project developers and for the designation of a habitat quantification tool. The FWS must approve Montana's habitat quantification tool and any habitat exchanges operating in Montana. Although not statutorily required by the Act, presumably any potential conservation bank administrator would also seek approval from the FWS. All mitigation must be consistent with the *Greater Sage-Grouse Range-wide Mitigation Framework* (FWS, 2014).

Montana also established the Sage Grouse Stewardship Fund in 2015 to provide competitive grant funding and establish ongoing free-market mechanisms for voluntary, incentive-based conservation measures that emphasize maintaining, enhancing, restoring, expanding, and benefitting GRSG habitat and populations on private land and public lands as needed within core areas, general habitat, or connectivity areas. The majority of grant funds must be awarded to projects that generate credits that are made available for compensatory mitigation. Eligible projects include: conifer reduction, incentives to reduce conversion, cropland restoration, fence marking, reduction of predator subsidies, term leases or easements, permanent easements, and other endeavors that benefit GRSG and sagebrush habitats. Credits generated through Stewardship Fund dollars will be calculated using the FWS-approved habitat quantification tool and made available. The Stewardship Fund is reimbursed, and funds can be reallocated towards future grants.

D. State of Nevada

Nevada has adopted a Conservation Credit System (CCS) that enables the stewardship and restoration of a resilient and resistant sagebrush ecosystem. The CCS works within the regulatory mitigation hierarchy, where anthropogenic disturbance impacts are first avoided, then minimized. Residual unavoidable impacts are then mitigated using the CCS.
The CCS uses a state clearinghouse to calculate, track, and monitor debit and credit projects. Quantification of credits and debits uses ecological and other criteria developed with input from a variety of stakeholders. Final approval of the system comes from a multi-stakeholder council appointed by the Governor that holds regular public meetings.

The CCS program is managed by a state technical team made up of a program manager and one staff member each from the Department of Wildlife, Department of Agriculture, Division of State Lands, and Division of Forestry.

The CCS is designed to incentivize avoidance, minimization and conservation of quality habitat, and ensure durable and additional mitigation. To do so, the CCS:

- Quantifies habitat in functional acres (credits) or functional acres lost (debits) (each based on quality and quantity);
- Analyzes habitat on three levels – Landscape, Local, and Site (each based on best available science and vetted processes);
- Requires site level verification prior to any disturbance (debit);
- Ensures credit verification prior to credit release, additional credit releases, and every 5th year, periodic spot checks;
- Is designed to achieve net-gains from unavoidable disturbances by (a) using same metric for credits and debits, (b) using mitigation ratios to ensure more credits are generated than debits incurred, (c) requiring advanced mitigation, using a reserve account and applying regular verification of performance standards for all credit projects through the term of the projects to ensure there are always more credits than debits in the State even in the case of project failure, and (d) requiring credit terms to be at least 10 years

longer than debit term;
- Addresses both intentional and unintentional reversal of credits using both a reserve account and financial assurances;
- Discourages development in high quality habitats, and incentivizes conservation in high quality habitat;
- Ensures durability through a variety of tools (reserve account, participant contract, management plan, financial assurances, pre-project recovery of debit sites, etc.); and
- Allows for continual improvements through an adaptive management protocol implemented annually starting in 2015.

E. State of Oregon

The Governor's office convened the SageCon Partnership in 2012 which takes a collaborative, "all lands, all threats" approach through coordination of federal, state and local efforts to address the multiple threats to sage-grouse. ODFW hired a Greater Sage-grouse Mitigation Coordinator in April of 2015 to develop and implement its mitigation program.

In July 2015, the Oregon Department of Fish and Wildlife (ODFW) Commission adopted a Greater Sage-grouse Conservation Strategy for Oregon (OAR 635-140). The goals of the Conservation Strategy are to maintain and enhance sagebrush habitats within the GRSG range, to manage those habitats in a variety of structural stages while minimizing threats and promoting resilience, to avoid development actions in GRSG core, general and low density habitat which adversely affect GRSG habitat, to limit the extent, location and negative impacts of development actions over time, and to require compensatory mitigation for development actions.

ODFW uses avoidance, minimization and compensatory mitigation for direct and indirect habitats. Mitigation must be in-kind and create a net benefit. ODFW is currently developing a conservation banking and in-lieu fee program, and will allow project specific mitigation where that will create a net conservation benefit.

The Department of Land Conservation and Development (DLCD) requires counties to limit development in GRSG core areas to 3% and 1% per decade. As described above. ODFW's mitigation policy requires an in-kind net conservation gain. While preservation is identified as needed, preservation is not allowed as mitigation measure under ODFW mitigation policy as it does not create a net benefit.

Mitigation must be concurrent and completed by the end of construction (until the mitigation banking system is established and implemented, this may not be feasible given the duration for restoration uplift measures to develop in sagebrush steppe environments) and must persist for the life of the impact (in many cases, this will be in perpetuity). ODFW also requires additionality and credits are developed based off of the uplift mitigation measures create. ODFW requires monitoring, adaptive management and continued maintenance for mitigation

sites. ODFW is currently testing a Habitat Quantification Tool to determine impact debits and mitigation measure credits.

F. State of Utah

The State of Utah will utilize three basic approaches to provide compensatory mitigation to offset direct and indirect impacts from disturbance to GRSG habitat.

1. For any disturbance on private or state school trust lands where compensatory mitigation is not mandated by a regulatory agency, the State of Utah will develop habitat counted as credits to offset the development. Those credits will not be sold or transferred. Instead, those credits will be held in a reserve account by the State to assist in providing additionality and realize a net conservation gain for GRSG. Also, any federal agency may allow a federal land developer to pay an in-lieu fee to the state to create credits to be held, monitored, and maintained by the state.
2. The State will regulate the creation of habitat exchange agreements and conservation banks. Under banks, and term agreements a credit generator may create or restore habitat to be transferred as a credit to any person who is directly and/or indirectly impacting GRSG habitat.
3. The State of Utah will regulate the person or entities creating and maintaining credits within the State. The State will also regulate and monitor the transfer of credits between a person who generates credits and a developer who is required to acquire credits to offset impacts from development.

   a. **Additionality and Mitigation Standard**: Utah is recommending an acre for acre approach because the best available science for GRSG in Utah shows that the main limiting factor for GRSG in Utah is space (available habitat). Thus, for every acre of disturbed habitat, the State will work with credit generators (i.e. DNR, Conservation Banks, exchange agreements) to create, restore, or enhance 4 acres of additional functional GRSG habitat adjacent to occupied habitat.
   b. **Duration**: All credits develop in Utah must persist for at least the estimated timeframe of any estimated direct and indirect impacts for GRSG.
   c. **Durability**: Utah will assure that any credits developed by the Department of Natural Resources will be maintained for the life of any disturbance. The State will not sell any credits developed by the DNR. The credits developed under exchange agreements or conservation banks will remain durable through the use of legal and financial assurances, as outlined in the individual exchange agreement or conservation bank agreement.
   d. **Timeliness**: In most cases, credits need to be available prior to any disturbances. However, a federal regulatory agency may allow federal land developers to pay an in-lieu fee to Utah for restoring or creating new GRSG habitat.
   e. **Monitoring**: Any credits generated will be monitored through the life of the credit. The person who generates the credits will conduct maintenance activities to ensure that the habitat remains functional for the duration of the Credit.

G. State of Wyoming

Wyoming's Sage Grouse Conservation Strategy is based on a "core-areas" approach and is implemented through Executive Order 2015-4 (EO) and the House Bill 102, Sage Grouse Implementation Team. The EO requires the observance of the mitigation hierarchy (avoidance, minimization, reclamation / restoration, and compensation) for development activities in core areas and general habitat areas as mapped and designated in the EO.

The State of Wyoming has worked closely with federal land management agencies in creating an all-lands approach to implementing conservation actions reducing the threats and restoring habitat. In addition to an all-lands approach Wyoming has also adopted an all-disturbance approach to limiting disturbance levels. Wyoming considers this "all-disturbance" approach to be stricter than the federal agency direction.

When appropriate thresholds cannot be met through avoidance and minimization actions, a project may be denied. There are circumstances when a project has valid existing rights and the project has the legal protection to proceed. When projects proceed and exceed the recommended thresholds, Wyoming has developed a Greater Sage-Grouse Compensatory Mitigation Framework (WY Framework) to cover the impacts related to the project.

The WY Framework establishes the condition of credits that can be considered to offset the debits associated with a project. The WY Framework establishes criteria to meet characteristics including timeliness, additionality, occupancy, durability, financial assurance, habitat suitability, landscape context.

The WY Framework has been built on Wyoming's EO implementation experience and GRSG research. The debit calculation is not based on any point in time condition of the debit or credit habitat, but rather on the known science related to GRSG persistence. Debits are created as a result of direct and indirect impact, special landscape vulnerability, and the need to show net conservation gain.

The WY Framework allows for the use of all mitigation tools provided the credit can meet the WY Framework requirements.

October 13, 2017

The Honorable Ryan K. Zinke
Secretary of the Interior
United States Department of the Interior
1849 C Street, NW
Room 6612
Washington, DC 20240

Dear Interior Secretary Mr. Zinke,

The purpose of this letter is to express our concerns regarding the *Report in Response to Secretarial Order 3353* (Report) and the October 11 Notice of Intent to reopen to amendment the Bureau and Land Management (BLM) and U.S. Forest Service's (USFS) Land Use Plans (LUPs). As scientists who have spent decades studying greater sage-grouse (sage-grouse) and sagebrush habitats, we assisted in the BLM and USFS efforts to revise and amend applicable LUPs to effectively conserve this important species. We are concerned that many of the specifics outlined in the Report as well as the decision to take public comment on possible amendments to the plans may weaken approaches in place to conserve sage-grouse populations before the measures established have been fully implemented or assessed. We want to emphasize that the science community continues to be available to provide ongoing consultation about how science can help inform strategies to sustain the conservation of sage-grouse on our federal public lands.

Our concerns stem from three basic observations about the Report:

1) Many recommendations have the potential to result in fewer acres of priority and general sage-grouse habitat limiting management options for the species;
2) Many recommendations have the potential to limit the ability of managers to effectively manage anthropogenic aspects of the sagebrush biome; and
3) Many recommendations have the potential to limit the ability of managers to effectively manage vegetative aspects of the sagebrush biome.

We recognize that the Report does not change policy, and we applaud several of the recommendations made in the Report. We fully support the collaborative approach being pursued, especially the full engagement of the States from the initiation of the LUP review and engagement with the Western Association of Fish and Wildlife Agencies (WAFWA). We also support the focus placed on improving coordination, increasing data sharing, initiating monitoring and research, and prioritizing staff and funding to implement on-the-ground conservation and restoration actions (Report pp. 1-4). We recognize that not everything is known, especially in regards to managing sagebrush ecosystems to improve the quality of those habitats for sage-grouse. Thus, a consistently applied and rigorous approach to plan implementation, management direction, evaluation and adaptation is critical moving forward. The LUPs were developed considering the best available science with the short-term goal of stabilizing populations by conserving key habitats throughout the sage-grouse range. The habitat preservation framework provided by the LUPs is critical as a foundation for realizing the long-term goal of increasing sage-grouse populations by restoring and enhancing sagebrush habitats. Given the uncertainty surrounding proactive management of sagebrush habitats coupled with the need to pursue innovative management approaches to achieve landscape-scale conservation of sage-grouse, the process of how the LUPs are implemented and evolve is as important as the actual management actions outlined in the plans. We are concerned that the current focus on amending the LUPs will detract from the critical task of building from those plans to realize enhanced conditions in currently designated priority and general habitats and stabilized or increasing sage-grouse populations.

An unprecedented level of collaboration among States, Federal agencies, and other stakeholders was required to amend and revise BLM and USFS LUPs to address sage-grouse populations and habitats. Those revising the LUPs considered the consistency, adequacy and durability of conservation measures relative to recommendations provided through the National Technical Team (BLM) and Conservation Objectives Team (USFWS) sage-grouse reports, ensuring that recommendations from the foremost sage-grouse experts were taken into account through the revision process. Further, decades of extensive published literature on sage-grouse and sagebrush habitats helped frame the BLM and USFS's management strategies. This literature is summarized in volume 38 of Studies in Avian Biology (*Greater sage-grouse: ecology and conservation of a landscape species and its habitats* edited by Dr. S. T. Knick and Dr. J. W. Connelly) as well as the USGS's Summary of Science report: *Summary of science, activities, programs, and policies that influence the rangewide conservation of Greater sage-grouse* (Manier et al. 2013).

It is worth noting that the Policy to Evaluate Conservation Efforts (PECE) (68 FR 15100) was used heavily as part of the September 2015 decision when considering the overall efforts of the States, private landowners, and the Federal LUPs. The PECE policy provides regulatory flexibility and is used by the USFWS to ensure regulatory certainty of conservation measures that have yet to be fully manifested. But the requirements of certainty of implementation and effectiveness of the plans must be met for those assurances to develop and support the USFWS' not warranted decision for sage-grouse in the future. Thus, the successful implementation of the LUPs is necessary to maintain the not warranted listing decision through interim reviews by the USFWS.

The sage-grouse is an indicator species for the health of the interior West's sagebrush steppe ecosystem, and healthy sagebrush habitats not only support over 350 plant and animal species including some of America's most iconic species of wildlife, but are essential for the economic sustainability of human communities in the western U.S. Today, sage-grouse are present in just over half their historical range, and the number of males counted each spring for the majority of populations across the range of the species has declined since the 1960s. A recent analysis by WAFWA suggested a long-term decline of approximately 1% annually from 1965 to 2015 (http://www.wafwa.org/). Declining populations and reduced distribution led the USFWS to conclude that the sage-grouse warranted protection under the Endangered Species Act, but this decision was overturned largely because of the regulatory certainty established by the amended and revised LUPs in combination with State conservation plans and efforts on private lands across the West.

In the following sections we elaborate on our three primary concerns and address some miscellaneous issues we identified in the Report.

1) Priority and General Habitat Management Areas

The Report makes several recommendations that could influence the amount of habitat being managed for sage-grouse. The DOI Sage-grouse Review Team (DOI Team) identified the need for flexibility to modify priority (PPH) and general (PGH) habitat management areas, including a potential plan amendment to "develop criteria for making future adjustments to habitat management area boundaries" (Report Appendix A, p. 17). Further, the DOI Team recommended potential plan amendments to consider eliminating general habitat management areas in Utah (Report Appendix A, p. 18) and removing Sagebrush Focal Area (SFA) designation (Report Appendix A, p. 17). Priority and general habitat designations were based on distributional patterns of nesting females from breeding areas (leks) in combination with the number of sage-grouse breeding on those leks and, in most instances, include the diversity of habitats required to sustain populations from lek complexes through their annual life-cycle. Sage-grouse are considered a landscape-scale species as populations generally inhabit large, interconnected expanses of sagebrush. Within this landscape, sage-grouse rely on habitats with a diversity of species and subspecies of sagebrush interspersed with a variety of other habitats (e.g., riparian

meadows, agricultural lands, grasslands). Habitats not dominated by sagebrush are usually intermixed with stands of sagebrush and are used by sage-grouse during certain times of the year (e.g., summer) or during certain years (e.g., severe drought). The research is unequivocal that those developing management approaches should view the landscape holistically from the need to provide large, functional, connected habitat patches that include the diversity of resources sage-grouse require seasonally and annually.

Approximately 30% of the area identified as the sage-grouse conservation area delineated in the Conservation Assessment of Greater Sage-grouse (2004) is designated habitat (i.e., PPH plus PGH), with approximately 14% of this area being designated as priority habitat. Further, approximately 42% of the current distribution of the species is designated as priority habitat. It is worth noting that because development is still allowed in PPH and, to a greater extent, PGH, degradation of designated habitats will continue to occur over time. Therefore, it is vital that we at least maintain the amount of habitat under greater protection established in the plans while also moving to increase habitat quality in these areas by improving sagebrush range health through enhancement and restoration.

We recommend that any modifications to sage-grouse habitat management boundaries consider the extent and diversity of habitats required by the species. The total amount of land currently identified as priority and general habitat should, at a minimum, not be reduced as a result of boundary modifications, and any areas meant to replace PPH or PGH lost as a result of boundary modifications should provide the species with high quality, diverse sagebrush habitats. SFAs should not be necessary if the quantity (at a minimum) and quality of priority habitats are maintained and managed appropriately.

2) Anthropogenic Considerations

The Report makes several recommendations meant to facilitate and promote the development of oil and gas reserves in sage-grouse habitats. The DOI Team recommends considering a potential plan amendment to rescind agency guidance on prioritizing leasing outside of important habitats, emphasizing to staff that all habitats are open for leasing (Report Appendix A, p. 2), and investigating "opportunities to provide additional waivers, modifications, and exceptions through policy or potential plan amendments" for leasing (Report p. 5) and "accommodating the need for mineral material sales" (sand and gravel) in priority habitat management areas (Report Appendix A, p. 13). The DOI Team further recommends evaluating potential plan amendments "to consider adjusting lek buffers" (Report Appendix A, p. 16), to "clarify disturbance and density requirements" (Report Appendix A, p. 2), and to "determine if a controlled surface use (CSU) stipulation could be changed" (Report Appendix A, p. 1). Although the DOI Team did not elaborate, no surface occupancy (NSO) stipulations in priority habitat management areas were also identified as an issue (Report Appendix A, p. 1). Surface disturbance thresholds and avoidance measures established in the LUPs are based on a substantial amount of data resulting from more than 25 investigations of the response of sage-grouse to energy development. All of the studies investigating the response of sage-grouse to oil and gas development report negative impacts of development on sage-grouse and no studies identify a positive influence of development on individuals, populations or habitats. Sage-grouse population-level declines in response to energy development result from avoidance of infrastructure during one or more seasons and reduced recruitment, productivity, and/or survival. Population declines have consistently been reported when well pad densities exceed 1 pad/square mile. Impacts to sage-grouse are most severe if the infrastructure associated with energy development occurs near sagebrush habitats, but population-level effects remain consistently discernible out to a distance of approximately 4 miles and impacts to 11 miles on trends in the number of males counted on leks range-wide have been reported.

We recommend maintaining current oil and gas infrastructure density and avoidance stipulations in priority habitats as the objective in priority habitats range-wide, and only considering changing these objectives in defined areas where site-specific sage-grouse data empirically and rigorously suggest these

stipulations can be modified without negatively impacting habitat use, fecundity or population growth-rate of the local sage-grouse population. It is important to note that changes to these objectives should be considered in both directions—e.g., increases to NSO distances and decreases to density thresholds should also be considered on a site-by-site basis based on local data.

With the intention of increasing flexibility to develop in priority habitats, the DOI Team recommends considering "changes to the Federal compensatory mitigation standard" (Report pp. 6-7) and a "potential plan amendment to change the net conservation gain standard" (Report Appendix A, p. 3). Compensatory mitigation is used to compensate for unavoidable impacts that remain after all appropriate avoidance and minimization measures have been applied, and is accomplished by replacing or providing substitute resources or environments through the restoration, creation, or enhancement of resources and their values, services, and functions. However, the literature suggests that a tremendous amount of uncertainty exists as to the vegetative and sage-grouse population outcomes of manipulations intended to restore, create or enhance sagebrush habitats. As such, compensatory mitigation measures should balance the spatial and temporal risk associated with mitigation projects and the predicted long-term effects. This should not be interpreted as discouraging high risk projects where substantial conservation gain is possible; in many respects, innovation in new mitigation strategies and practices need to be considered and explored to advance our understanding and ability to achieve landscape-scale conservation of sagebrush habitats. A net conservation gain standard is necessary to allay the inherent spatial and temporal risk associated with compensatory mitigation projects meant to create, enhance or restore sagebrush habitats.

We recommend strictly adhering to the mitigation hierarchy of avoidance, minimization, and compensation for unavoidable impacts. We additionally recommend maintaining a net conservation gain standard to balance the spatial and temporal risk associated with sagebrush habitat management. To achieve long-term success, it will also be necessary to strictly adhere to adaptive management principles when managing sagebrush habitats for sage-grouse. Following these principles will inherently facilitate the application and advancement of the LUPs and the conservation principles described therein and increase the likelihood of attaining net conservation gain long-term across the sage-grouse range. Further, it is important to ensure any measure of mitigation success be evaluated in biological and functional terms for sage-grouse.

3) Vegetation Management

The Report makes several recommendations that could limit the effectiveness of vegetation management, including livestock grazing, in sage-grouse habitats. The DOI Team recommends "a potential plan amendment to revise the habitat objectives tables" included in the LUPs (Report p. 7). The DOI Team further recommends clarifying "existing policy and regulations that allow animal unit months (AUMs) to increase based on forage availability" (Report Appendix A, p. 10). As with the scientific evidence supporting the energy development stipulations, the habitat objectives established in the LUPs are based on extensive published literature. These habitat objectives were established to provide sage-grouse with quality habitat conditions across seasons, and represent one of the few places in the LUPs where the underlying issue with sage-grouse of prevalent vegetative degradation across the sagebrush biome is directly addressed. Livestock grazing is the most widespread land use across the sagebrush biome. The long-term effects of grazing the sagebrush system are primarily seen as shifts in the state of the vegetation from native understory grasses and forbs to plant species more tolerant of grazing; this shift occurred in much of the West over a relatively short time-period of extensive overgrazing during drought conditions in the early 1900s. Because of historic impacts of livestock on plant species composition combined with successional change in sagebrush ecosystems, reduced numbers of livestock in the modern era has not reduced effects of grazing, but rather slowed the rate of vegetative degradation.

We recommend that vegetation goals are established relative to the ecological site paradigm and management strives towards restoring and maintaining vegetative conditions in the reference state. In

situations where results from the rigorous evaluation of site-specific data are not available, we recommend that the guidelines established for vegetation structure, cover, and composition in the LUPs be maintained as the objective in priority habitats. Because the values included in the habitat objectives tables were based on vegetative conditions measured at sage-grouse seasonal use locations throughout the species' range that were, in virtually all cases, grazed by livestock, we emphasize that areas where it is empirically demonstrated that site potential does not allow for the vegetative guidelines to be met will be infrequent and small (e.g., soil inclusions).

Miscellaneous Issues

1. The DOI Team recommended that "new captive breeding [of sage-grouse] efforts continue to be investigated" (Report p. 10). The scientific literature is conclusive in establishing that the captive-rearing of wildlife in general should be used sparingly and as a last resort when other conservation alternatives are unavailable or have been exhausted. The most extensive research on raising sage-grouse in captivity is from Colorado, where the brood augmentation approach pursued was met with limited success recruiting individuals into wild populations. The Attwater's Prairie-Chicken, a species similar to sage-grouse, has been bred in captivity since 1992, yet this program has yet to result in a self-sustaining wild population. Therefore, we recommend that the current focus remain on conserving and restoring the habitats sage-grouse depend on, and that resources that could help habitat efforts not be diverted to investigate a management alternative that is currently unnecessary.

2. The DOI Team recommended investigating "options for corvid control, including streamlining approval and reporting requirements" (Report p. 11). Limited information suggests predator control may benefit some game bird populations short-term in small areas with degraded and fragmented habitat. However, there is no evidence supporting the implementation of predator control programs long-term over large areas as an effective sage-grouse conservation tool. We recommend that the focus of sage-grouse management remain on habitat quantity and quality except in isolated cases where the empirical and rigorous assessment of site-specific data establishes that predation is limiting a population. In these isolated cases, the cause of the problem (e.g., habitat fragmentation) needs to be addressed concomitantly with the implementation of predator control.

3. The DOI Team recommends pursuing "statewide or range-wide population objectives or targets" (Report p. 11). Although we do not disagree with setting population objectives, we want to emphasize that a focus on populations cannot come at the expense of a focus on habitats. We agree with the DOI Team in that "the best method for determining sage-grouse viability is to assess a combination of habitat availability [and quality] and populations [assuming reliable population data], which are inseparable" (Report p. 11).

LUP Implementation

Ultimately, all conservation and management must occur at the local level. To be accomplished effectively and sustainably, conservation needs to be an integral facet of a community's identity—it needs to reflect the values of the community and meet the needs of its individuals. Given the commitment established in the Report of continuing "to work with partners to prioritize staff and funding to implement on-the-ground actions to conserve and restore sage-grouse habitats" (Report p. 1), partnership building and coordination needs to occur at all management and conservation levels (i.e., Federal, State, regional and local). Science-based, community-level programs built on a regional framework and conducted across the sagebrush ecosystem are the most efficient way we can successfully and sustainably engage in proactive conservation of this system. We recommend putting more thought into the bullet list included in Section IV d of the Report (p. 12), and developing the cross-scale coordination suggested by the narrative in this Section into a holistic science-based conservation program that benefits the wildlife and people reliant on sagebrush ecosystems across the West.

We are concerned that following many of the Reports' recommendations will lead to an overall loss of sage-grouse habitat quantity and quality which in turn may result in additional population declines. We are further concerned that the Federal focus on altering the current status could derail developing efforts that will progress our ability to effectively manage the sagebrush ecosystem—for example: WAFWA's Sagebrush Conservation Strategy; NRCS' Sage-Grouse Initiative; the Southern Rockies and Great Northern LCC Green River Basin LCD project; multiple local-scale collaborations between conservation, industry and agricultural interests; etc. It is our opinion that now is not the time to look backwards and challenge the work done by countless stakeholders in support of sage-grouse conservation. Now is the time to build on the momentum and allow the process to mature and evolve from the foundation provided by the LUPs to realize the sustained conservation of sagebrush landscapes and the wildlife and people dependent thereon.

To reiterate, the science community is available to meet with you and your staff and provide ongoing consultation about the available science as well as how we can collectively move forward with a science-based approach to managing and conserving sage-grouse and sagebrush habitats on our federal public lands. We thank you for your consideration of our points and recommendations.

Respectfully,

Matt J. Holloran, PhD
William L. Baker, PhD
Joseph R. Bohne
Clait E. Braun, PhD
John W. Connelly, PhD
Edward O. Garton, PhD
Angela L. Hild, PhD
Alison G. Lyon-Holloran
Kerry P. Reese, PhD
Terry Z. Riley, PhD
E. Thomas Rinkes
Alan R. Sands PhD
James S. Sedinger, PhD
Steven J. Slater, PhD
Rollin D. Sparrowe, PhD
Carl L. Wambolt, PhD
Gary C. White, PhD

Cc: BLM Staff – J. Ruhs; K. Benedetto; C. Younger; L Thurn; I Yates; J. Munson; J. Karuzas; J. Perez; B. Clayton; G. Shoop; A Wilhelm; T. Murphy; M. Magaletti; M. Todd; J. Carlson; J. Raby; M. Anthony; J. Connell; Q. Bahr; E. Roberson; E. Husse; M. Rugwell.

From: Boyd, David
To: David Boyd
Subject: News Release: BLM evaluating oil and gas leasing proposal in northwestern Colorado
Date: Thursday, December 7, 2017 3:51:04 PM
Attachments: June 18 lease DNA nr 12-7-17.pdf

News Release
Northwest District Office, Colorado

Dec. 7, 2017

Contact: David Boyd, Public Affairs Specialist, (970) 876-9008

BLM evaluating oil and gas leasing proposal in northwestern Colorado

MEEKER, Colo. – As part of the Administration's priority to make America safe through energy independence, the Bureau of Land Management is seeking public comments as it considers offering 64 parcels totaling 58,694 acres of federal minerals in northwestern Colorado in the June 2018 competitive oil and gas lease sale.

"The BLM supports working landscapes across the West through its various multiple-use programs like oil and gas. We manage public lands for the benefit of current and future generations, and we welcome diverse views," said BLM Colorado Northwest District Manager Andrew Archuleta. "The most effective comments will address issues and concerns specific to these parcels being considered."

The proposal includes 8,480 acres in Jackson County, 23,192 acres in Moffat County, 25,582 acres in Rio Blanco County, and 1,440 acres in Routt County.

Maps and lease stipulations are available for review at https://go.usa.gov/xnXwr.

Comments need to be received by Jan. 8, 2018. They should be e-mailed to blm_co_june_2018_lease_sale@blm.gov <mailto:blm_co_june_2018_lease_sale@blm.gov> , or mailed to the White River Field Office, Attn: June 2018 Lease Sale, 220 E. Market St., Meeker, CO 81641.

The State of Colorado receives 49 percent of the proceeds from each mineral lease sale and from mineral royalties, with the remainder going to the U.S. government. In Fiscal Year 2016, oil and gas activity on BLM Colorado-managed lands and minerals generated $2.9 billion in economic output and generated 13,620 jobs.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

# # #

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David Boyd

Bureau of Land Management

Public Affairs Specialist

NW Colorado District

2300 River Frontage Road
Silt, CO 81652

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(970) 319-4130 (cell)

U.S. Department of the Interior
Bureau of Land Management

News Release

Northwest District Office, Colorado

Dec. 7, 2017

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# # #

From:	Younger, Cally
To:	arampton@utah.gov; kathydavis@utah.gov; kathleenclarke@utah.gov
Subject:	Fwd: Lands with Wilderness Characteristics - Documents Requested
Date:	Wednesday, December 20, 2017 2:50:24 PM
Attachments:	image001.png Manual 6310--Conducting Wilderness Characteristics Inventory on BLM Lands.pdf Manual 6320—Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process.pdf 2239-IM No UT-2016-027 - Attachme nt 1 - BLM-Utah Additional Guidance for Manual 6310 – Conducting Wilderness Inventory on BLM Lands.pdf 2239-IM No UT-2016-027 - Attachment 2 - BLM-Utah Additional Guidance for Manual 6320 – Considering Lands with wilderness characteristics.pdf 2239-IM No UT-2016-027 - Bureau of Land Management (BLM)-Utah Lands with Wilderness Characteristics Guidance.pdf ID IM2017-015.pdf Media_PublicRoom_Utah_RichfieldSettlement_QsAndAs.pdf Microsoft Word - APPELLATE-#349176-v1-SUWA_-_Final_Settlement_Agreement_January_13_2017.pdf

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FYI the list of documents I mentioned.

---------- Forwarded message ----------
From: Moore, Nikki <nmoore@blm.gov>
Date: Thu, Oct 19, 2017 at 5:54 PM
Subject: Lands with Wilderness Characteristics - Documents Requested
To: John Ruhs <jruhs@blm.gov>, Brian Steed <bsteed@blm.gov>, Cally Younger <cyounger@blm.gov>
Cc: Peter Mali <pmali@blm.gov>, Aaron Moody <aaron.moody@sol.doi.gov>, "Tryon, Steve" <stryon@blm.gov>, "McAlear, Christopher" <cmcalear@blm.gov>, "Smith, Michael" <michael.smith@sol.doi.gov>, Kathleen Benedetto <kbenedetto@blm.gov>

Hi,

Attached are the documents requested at the wilderness characteristics policy discussion today:

* SUWA settlement agreement
* BLM 6310 Manual "Conducting Wilderness Characteristics Inventory on BLM Lands"
* BLM 6320 Manual - "Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process"
* Instruction Memorandum No. UT 2016-027 and 2 Attachments - "Utah Guidance for the Lands with Wilderness Characteristics Resource"
    * Attachment 1 - BLM - Utah Additional Guidance for Manual 6310 (including the frequency of updates to a wilderness characteristics inventory)
    * Attachment 2 - BLM - Utah Additional Guidance for Manual 6320

It looks like Idaho also issued supplemental guidance and is attached:

* IM No. ID-2017-015 "Additional Guidance Regarding Lands with Wilderness Characteristics"

Colorado IM is no longer online, so I have a follow up in to see if they have rescinded already.

Nikki Moore
Acting Deputy Assistant Director, National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington D.C.

202.219.3180 (office)
202.740.0835 (cell)

--

Cally Younger | Counsel
Office of the Director
Bureau of Land Management
U.S. Department of the Interior
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NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Form 1221-2
(June 1969)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANUAL TRANSMITTAL SHEET

Release
6-129

Date
03/15/2012

Subject

6310—Conducting Wilderness Characteristics Inventory on BLM Lands (Public)

1. **Explanation of Materials Transmitted:** This manual contains the Bureau of Land Management's (BLM) policy and guidance for conducting wilderness characteristics inventories under Section 201 of the Federal Land Policy and Management Act of 1976 (FLPMA). This policy does not address Wilderness areas designated by Congress or Wilderness Study Areas (WSAs) pending before Congress.

2. **Reports Required: None**

3. **Materials Superseded: This manual supersedes BLM Manual Section 6301**

4. **Filing Instructions: File as directed below**

REMOVE	INSERT
All 6301 (Rel. 6-126 (Total 29 Sheets)	**6310 (Total: 31 Sheets)**

/s/
Robert V. Abbey
Director

6310-CONDUCTING WILDERNESS CHARACTERISTICS INVENTORY ON BLM LANDS

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B. Inventory Area Evaluation
C. Route Analysis
D. Photo Log

6310-CONDUCTING WILDERNESS CHARACTERISTICS INVENTORY ON BLM LANDS

.01 Purpose. This policy contains the Bureau of Land Management's (BLM) guidance and general procedures for conducting wilderness characteristics inventories under Section 201 of the Federal Land Policy and Management Act of 1976 (FLPMA) and supersedes all previous guidance on this topic. Managing the wilderness resource is part of the BLM's multiple use mission. Lands with wilderness characteristics provide a range of uses and benefits in addition to their value as settings for solitude or primitive and unconfined recreation. This policy does not address Wilderness areas designated by Congress or Wilderness Study Areas (WSAs) pending before Congress.

.02 Objective. This Manual establishes BLM policy for identifying lands with wilderness characteristics.

.03 Authority. Principal authorities affecting the inventory of public lands for wilderness characteristics are:

A. FLPMA, 43 U.S.C. 1701 *et seq*., exclusive of 43 U.S.C. 1782.

B. Wilderness Act of 1964, 16 U.S.C. 1131, *et seq.*

.04 Responsibilities.

A. The Director shall:

1. Coordinate with State Directors in conducting wilderness characteristics inventories.

B. State Directors shall:

1. Implement policy and provide statewide program coordination and guidance for conducting wilderness characteristics inventories.

2. Provide program development, technical management assistance, and support to District and Field Offices as required for conducting lands with wilderness characteristics inventory.

C. District Managers and Field Managers shall:

1. Review and document relevant data, including citizen-submitted information, for conducting and maintaining the wilderness characteristics inventory on a continuing basis.

2. Determine and document which inventory areas or portions of inventory areas possess or lack wilderness characteristics.

3. Maintain a permanent documentation file for inventoried areas.

4. Coordinate with other Federal agencies in conducting wilderness characteristics inventories.

.05 References. Principal references for this Manual are:

A. FLPMA, 43 U.S.C. 1701, *et seq.*

B. Wilderness Act, 16 U.S.C. 1131 *et seq.*

C. BLM Regulations, 43 CFR Part 1600.

.06 Policy.

A. **Maintaining the Inventory.** Section 201 of FLPMA requires the BLM to maintain on a continuing basis an inventory of all public lands and their resources and other values, which includes wilderness characteristics. It also provides that the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of public lands. Regardless of past inventory, the BLM must maintain and update as necessary, its inventory of wilderness resources on public lands. In some circumstances conditions relating to wilderness characteristics may have changed over time, and an area that was once determined to lack wilderness characteristics may now possess them. The BLM will determine when it is necessary to update its wilderness characteristics inventory. Under the following circumstances, the BLM will consider whether to update a wilderness characteristics inventory or conduct a wilderness characteristics inventory for the first time:

1. The public or the BLM identifies wilderness characteristics as an issue during the National Environmental Policy Act (NEPA) process.

2. The BLM is undertaking a land use planning process.

3. The BLM has new information concerning resource conditions, including wilderness characteristics information submitted by the public that meets the BLM's minimum standard described in the Wilderness Characteristics Inventory Process section of this policy.

4. A project that may impact wilderness characteristics is undergoing NEPA analysis.

5. The BLM acquires additional lands.

There also may be other circumstances in which BLM will find it appropriate to update its wilderness characteristics inventory.

The primary function of an inventory is to determine the presence or absence of wilderness characteristics. Keeping an inventory current requires gathering information and ensuring that all inventories have permanent files. It is essential that an adequate record of the inventory and subsequent updates be maintained to ensure proper documentation of inventory findings, including relevant narratives, maps, photographs, new information, and any other relevant information.

B. **Wilderness Characteristics Inventory Process.** A wilderness characteristics inventory is the process of determining the presence or absence of wilderness characteristics. The BLM must document existing conditions as opposed to potential future conditions. The BLM may conduct the inventory using available information (e.g., existing maps, photos, records related to range projects, monitoring data) and will field check the information as necessary. This wilderness characteristics inventory process directive does not mean that the BLM must conduct a completely new inventory and disregard the inventory information that it already has for a particular area. Rather, the BLM must ensure that its inventory is maintained.

1. Documentation and Minimum Standards for Review of New Information.

   a. When new information regarding wilderness characteristics is received, the BLM will document the submitted materials including:

      i. date of submission;

      ii. name of proponent;

      iii. name of proposal and/or area identified by the proponent;

      iv. BLM District(s) and Field Office(s) affected;

      v. type of material submitted (e.g., narrative, map, photo); and

      vi. whether or not the public information meets the minimum standard for further review by the BLM.

   b. The minimum standard that new information must meet in order for the BLM to consider the information during a wilderness characteristics inventory process requires a submission of the following information to the BLM:

      i. a map of sufficient detail to determine specific boundaries of the area in question;

      ii. a detailed narrative that describes the wilderness characteristics of the area and documents how that information substantially differs from the information in the BLM inventory of the area's wilderness characteristics; and

      iii. photographic documentation.

2. Evaluation of New Information.

   When new information regarding wilderness characteristics meets the minimum standard for further review, as soon as practicable, the BLM shall evaluate the information regarding the validity of proposed boundaries of the area(s), the existence of wilderness inventory roads and other boundary features, the size of the

area(s), and the presence or absence of wilderness characteristics. This evaluation may be based on relevant information available in the office (prior BLM inventories, interdisciplinary team knowledge, aerial photographs, field observations, maps, etc.). Field checking may also be needed. The BLM will compare existing data with the submitted information, determine if the conclusion reached in previous BLM inventories remains valid, determine whether the area qualifies as lands with wilderness characteristics, and document its findings. The BLM will document the rationale for the findings, make the findings available to the public, and retain a record of the evaluation and the findings as evidence of the BLM's consideration.

3. Identification of Lands Requiring Inventory.

   a. Identification of a specific area where inventory is needed requires a combined review of existing land status and available route inventory data. Where acquired lands are inventoried, the area inventoried may be larger than the acquired lands because of the need to look at contiguous roadless Federal lands.

   b. Each area will be assigned a unique identifier using a two-letter state code, office code, and an inventory area number, e.g. NV-030-051. Where possible, numbers assigned should build on the original inventory.

   c. The Permanent Documentation File for each area will be updated or developed as appropriate (Appendix A).

   d. Split estate lands are excluded from the requirements for wilderness characteristics inventory.

4. Completing the Inventory.

   a. Necessary forms for each area will be completed (see Appendix B: Inventory Area Evaluation, Appendix C: Route Analysis, and Appendix D: Photo Log). The forms in Appendices B, C, and D should be adequate for most wilderness characteristics inventories, but minor modifications may be made to meet Field Office needs as long as primary criteria and definitions remain unchanged. In order to complete the inventory, District or Field Managers must document wilderness characteristics inventories according to attached Appendices A-D as applicable.

C. **Wilderness Characteristics.**

1. Wilderness Characteristics Inventory Unit Boundary Delineation. The boundary of the wilderness characteristics inventory unit must be established. Where possible, BLM offices should use existing wilderness characteristics inventory units for maintaining the inventory. The boundary is generally based on the presence of wilderness inventory roads (see Appendix C to determine if a route meets the

wilderness inventory road definition), and can also be based on property lines between lands in Federal ownership and other ownerships or developed rights of way. Other inventory unit boundaries may occasionally be identified.

2. Analysis of Wilderness Characteristics. The inventory will evaluate wilderness characteristics as defined in Section 2(c) of the Wilderness Act and incorporated in FLPMA. In order for an area to qualify as lands with wilderness characteristics, it must possess sufficient size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation. In addition, it may also possess supplemental values. There may be some circumstances under which an inventory of the entire area is not required. For example, if a proposed project would only cross a small corner of an inventory unit and would be confined to previously disturbed land that is an unnatural condition, a full inventory may not be necessary.

   a. Size.

      i. Determine if the size criteria will be satisfied for areas by meeting one of the following situations and circumstances:

         1) Roadless areas with over 5,000 acres of contiguous BLM lands. State or private lands are not included in making this acreage determination.

         2) Roadless areas of less than 5,000 acres of contiguous BLM lands where any one of the following apply:

            a) They are contiguous with lands which have been formally determined to have wilderness or potential wilderness values, or any Federal lands managed for the protection of wilderness characteristics. Such lands include:

               (1) designated Wilderness,

               (2) BLM Wilderness Study Areas,

               (3) U.S. Fish and Wildlife Service areas Proposed for Wilderness Designation,

               (4) U.S. Forest Service (FS) Wilderness Study Areas or areas of Recommended Wilderness, and

               (5) National Park Service (NPS) areas Recommended or Proposed for Designation.

            They do not include NPS areas merely considered “Eligible for Wilderness Study,” nor do they include FS Roadless Areas unless they

are also designated as "Recommended Wilderness" through a Forest Plan Revision.

b) It is demonstrated that the area is of sufficient size as to make practicable its preservation and use in an unimpaired condition.

c) Any roadless island of the public lands.

ii. Determine whether or not at least one of the size criteria are met by lands within the inventory unit and document in writing the rationale for arriving at this determination.

Note: If an inventory area does not meet at least one of the size criteria, it does not contain wilderness characteristics. Further inventory activity to document naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and supplemental values is unnecessary. The findings must be documented.

b. Naturalness.

i. Affected Primarily by the Forces of Nature. Determine if the area appears to be in a natural condition.

1) The area must appear to have been affected primarily by the forces of nature, and any work of human beings must be substantially unnoticeable. Examples of human-made features that may be considered substantially unnoticeable in certain cases are: trails, trail signs, bridges, fire breaks, pit toilets, fisheries enhancement facilities, fire rings, historic properties, archaeological resources, hitching posts, snow gauges, water quantity and quality measuring devices, research monitoring markers and devices, minor radio repeater sites, air quality monitoring devices, fencing, spring developments, barely visible linear disturbances, and stock ponds.

ii. Describing Human Impacts. Document noticeable human impacts within the area. If several minor impacts exist, summarize their cumulative effect on the area's degree of apparent naturalness.

1) The review of human impacts will assess the presence or absence of apparent naturalness (i.e., do the works of humans appear to be substantially unnoticeable to the average visitor?). There is an important difference between an area's natural integrity and its apparent naturalness as explained below.

a) Natural integrity refers to the presence or absence of ecosystems that are relatively unaffected by modern human activities.

b) Apparent naturalness refers to whether or not an area looks natural to the average visitor who is not familiar with the biological composition of natural ecosystems versus human-affected ecosystems.

2) Caution should be used in assessing the effect of relatively minor human impacts on naturalness. Some human works are acceptable so long as they are substantially unnoticeable. Avoid an overly strict approach to assessing naturalness. For example, the presence of a water trough is a relatively minor human impact on naturalness, and may be considered substantially unnoticeable.

iii. Outside Human Impacts. Human impacts outside the area will not normally be considered in assessing naturalness of an area. If, however, a major outside impact exists, it should be noted in the overall inventory area description and evaluated for its direct effects on the area.

iv. Determination and Documentation. Determine whether or not the naturalness criterion is met and document in writing the rationale for arriving at the determination.

Note: If an inventory area does not meet the naturalness criterion, it does not contain wilderness characteristics. Further inventory activity to document outstanding opportunities for solitude or a primitive and unconfined type of recreation or supplemental values is unnecessary. Document the findings.

c. Outstanding Opportunities for Solitude or a Primitive and Unconfined Type of Recreation. Determine if the area has outstanding opportunities for solitude or a primitive and unconfined type of recreation. The word "or" in this sentence means that an area only has to possess one or the other. The area does not have to possess outstanding opportunities for both elements, nor does it need to have outstanding opportunities on every acre, even when an area is contiguous to lands with identified wilderness characteristics. In most cases, the two opportunities can be expected to go hand-in-hand. An outstanding opportunity for solitude, however, may be present in an area offering only limited primitive recreation potential. Also, an area may be so attractive for primitive recreation that it would be difficult to maintain an opportunity for solitude.

Each area must be assessed on its own merits or in combination with any contiguous lands described in the Analysis of Wilderness Characteristics section of this policy as to whether an outstanding opportunity exists. Do not disqualify an area based on a finding that outstanding opportunities exist in only a portion of the area. Do not compare the lands in question with other parcels. Do not use any type of rating system or scale—whether numerical, alphabetical, or qualitative—in making the assessment. Use professional judgment in determining whether

outstanding opportunities exist in each area and document in writing the rationale for arriving at the determination.

i. Solitude. Determine whether or not the area has outstanding opportunities for solitude.

1) In making this determination, consider factors that influence solitude only as they affect a visitor's opportunity to avoid the sights, sounds, and evidence of other people in the area. Only consider the impacts of sights and sounds from outside the inventory area on the opportunity for solitude if these impacts are pervasive and omnipresent.

2) Factors or elements influencing solitude may include size, configuration, topographic and vegetative screening, and ability of the visitor to find seclusion. It is the combination of these and similar elements upon which an overall solitude determination will be made. It may be difficult, for example, to avoid the sights and sounds of people in some areas unless the area is relatively large. Outstanding opportunities for solitude can be found in areas lacking vegetation or topographic screening. A small area could also provide opportunities for solitude if, due to topography or vegetation, visitors can screen themselves from one another.

ii. Primitive and Unconfined Recreation.

1) Determine whether or not the area offers an outstanding opportunity for a primitive and unconfined type of recreation. In making this determination, consider those activities that provide dispersed, undeveloped recreation which do not require facilities, motor vehicles, motorized equipment, or mechanized transport.

2) Some examples of primitive and unconfined types of recreation include hiking; backpacking; fishing; hunting; spelunking; horseback riding; climbing; river running; cross-country skiing; snowshoeing; dog sledding; photography; bird watching; canoeing; kayaking; sailing; and sightseeing for botanical, zoological, or geological features.

3) An area may possess outstanding opportunities for a primitive and unconfined type of recreation through either the diversity in primitive and unconfined recreational activities possible in the area or the outstanding quality of one opportunity. Other factors to consider include:

a) Present visitor use of an area is not necessary in evaluating this criterion. Determine whether an outstanding opportunity is present, regardless of the amount of use.

b) A trail system or convenient access is not essential for an outstanding opportunity for primitive and unconfined recreation. The absence of these facilities may increase opportunities for primitive and unconfined recreation.

c) The presence of water is not essential for an outstanding primitive recreation opportunity.

d) The presence of "challenge" and "risk" are appropriate considerations, but not essential for an outstanding primitive recreation opportunity to exist in an area.

Note: If an inventory area does not meet the solitude criterion and does not meet the primitive and unconfined recreation criterion, it does not contain wilderness characteristics. Further inventory activities to document supplemental values are unnecessary. If the area meets the primitive recreation and/or solitude criteria as well as the size and naturalness criteria, it does contain wilderness characteristics. Document in writing the rationale for arriving at the determination.

d. Supplemental Values. If size, naturalness, and outstanding opportunities criteria are met, then determine if the area contains ecological, geological, or other features of scientific, educational, scenic, or historical value. Supplemental values are not required to be present in order for an area to be identified as lands with wilderness characteristics, but their presence should be documented where they exist.

3. Boundary Delineation. Define the area with wilderness characteristics to exclude wilderness inventory roads and other substantially noticeable human-caused impacts (Appendix C provides a framework for determining whether a route is a road for the purposes of wilderness characteristics inventory). Minor impacts rarely require an adjustment. Where there are several minor impacts, they should be evaluated for their cumulative effect on an area's apparent naturalness. The defined area of lands with wilderness characteristics must meet the previously described criteria for size, naturalness, and outstanding opportunities for solitude or primitive and unconfined recreation.

a. Lands located between individual human impacts should not be automatically excluded from the area.

b. When establishing the boundary, do not create a setback or buffer from the physical edge of the imprint of man.

c. Developed rights-of-way (ROW) are treated like other impacts, and the boundary should be drawn to exclude those ROWs.

d. Undeveloped ROWs and similar undeveloped possessory interests (e.g., mineral leases) are not treated as impacts to wilderness characteristics because these rights may never be developed.

e. An area can have wilderness characteristics even though every acre within the area may not meet all the criteria. The boundary should be determined largely on the basis of wilderness inventory roads and naturalness rather than being constricted on the basis of opportunity for solitude or primitive and unconfined recreation. The location of boundaries should primarily be set to exclude the unnatural portions of the area.

Note: Inventory areas that meet the size, naturalness, and the outstanding solitude and/or the outstanding primitive and unconfined recreation criteria are lands with wilderness characteristics.

.07 **Glossary**.

Following are definitions for terms used in this policy. Also see definitions for terms used in Section 103 of FLPMA, BLM planning regulations at 43 CFR 1601.0-5, the wilderness regulations at 43 CFR 6301.5, and the Wilderness Act. This glossary does not supersede those definitions or those in other laws or regulations.

Apparent Naturalness: See naturalness.

Boundaries: Inventory unit boundaries are normally formed by wilderness inventory roads, property lines, developed rights-of-way, or other substantially noticeable imprints of human activity. Dead-end roads (i.e., "cherry stem roads") may extend into the unit and are excluded from the unit, which will modify the unit boundary.

Contiguous: Lands or legal subdivisions having a common boundary. Lands either bisected by wilderness inventory roads or having only a common corner are not contiguous. A checkerboard land pattern does not contain contiguous lands.

Island: An area of land surrounded by water.

Land Use Plan: A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of the FLPMA; an assimilation of land-use-plan-level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed. As used in this policy, Land Use Plan also includes Integrated Activity Plans used in the National Petroleum Reserve – Alaska.

Naturalness: The degree to which an area generally appears to have been affected primarily by the forces of nature with the imprint of people's work substantially unnoticeable. It is not synonymous with "natural integrity."

Natural Integrity: The presence of ecosystems that are relatively unaffected by modern human activities.

Opportunity: A situation or condition favorable for attainment of a goal.

Outstanding: 1. Standing out among others of its kind; conspicuous; prominent; 2. Superior to others of its kind; distinguished; excellent.

Primitive and Unconfined Recreation: Non-motorized, non-mechanized (except as provided by law), and undeveloped types of recreational activities.

Primitive Route: Any transportation linear feature located within areas that have been identified as having wilderness characteristics and not meeting the wilderness inventory road definition.

Road: For the purpose of inventorying wilderness characteristics only, the BLM will continue to base the "road" definition on FLPMA's legislative history. The language below is from the House of Representatives Committee Report 94-1163, page 17, dated May 15, 1976, on what became FLPMA.

"The word 'roadless' refers to the absence of roads that have been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road."

The BLM will refer to routes that meet the above definition as wilderness inventory roads. The BLM previously adopted and will continue to use sub-definitions of certain words and phrases in the BLM wilderness inventory road definition stated above. Routes that have been improved and maintained by mechanical means to insure relatively regular and continuous use are wilderness inventory roads.

a. Improved and maintained – Actions taken physically by people to keep the road open to vehicle traffic. "Improved" does not necessarily mean formal construction. "Maintained" does not necessarily mean annual maintenance.

b. Mechanical means – Use of hand or power machinery or tools.

c. Relatively regular and continuous use – Vehicular use that has occurred and will continue to occur on a relatively regular basis. Examples are: access roads for equipment to maintain a stock water tank or other established water sources; access roads to maintained recreation sites or facilities; or access roads to mining claims.

A route that was established or has been maintained solely by the passage of vehicles would not be considered a road for the purposes of wilderness inventory, even if it is used on a relatively regular and continuous basis. Vehicle routes constructed by mechanical means but that are no longer being maintained by mechanical methods are not wilderness inventory roads. Sole use of hands and feet to move rocks or dirt without the use of tools or machinery does not meet the definition of "mechanical means." Wilderness inventory roads need not be "maintained" on a

regular basis but rather "maintained" when road conditions warrant actions to keep it in a usable condition. A dead-end (cherry-stem) road can form the boundary of an inventory area and does not by itself disqualify an area from being considered "roadless."

A route, or a segment of a route, which was mechanically improved to permit the passage of vehicles, but which to date has not needed any further mechanical improvement or maintenance to facilitate the relatively regular and continuous passage of vehicles, can be a road in those circumstances where the road would be maintained if the need were to arise.

While the purpose of a route is not a deciding factor to consider in determining whether a route is a road for wilderness inventory purposes, it does provide context in which to consider the criteria for a road determination. For example, the purpose of the route provides context when the BLM considers whether maintenance of the route insures relatively regular and continuous use and whether maintenance, that may so far have been unnecessary to insure the use, would occur when the need arises.

Route: Roads, primitive roads, and trails that are part of the transportation system.

Setback: A buffer or border, including "zone of influence."

Solitude: The state of being alone or remote from others; isolation. A lonely or secluded place.

Supplemental Values: Ecological, geological, or other features of scientific, educational, scenic, or historical value. These values may be present in an area with wilderness characteristics, but they are not required.

Transportation System: The transportation systems represent the sum of the BLM's recognized inventory of linear features (roads, primitive roads, and trails) formally recognized and approved as part of the BLM's transportation network.

Untrammeled: Unhindered and free from modern human control or manipulation.

Wilderness: An area defined in Section 2(c) of the Wilderness Act, and included in the National Wilderness Preservation System.

Wilderness Characteristics: These attributes include the area's size, its apparent naturalness, and outstanding opportunities for solitude or a primitive and unconfined type of recreation. They may also include supplemental values. Lands with wilderness characteristics are those lands that have been inventoried and determined by the BLM to contain wilderness characteristics as defined in section 2(c) of the Wilderness Act.

Wilderness Inventory Road: See road.

Wilderness Study Area: Areas with wilderness characteristics identified and designated through the inventory and study processes authorized by Section 603 of FLPMA, and, prior to 2003, through the planning process authorized by Section 202 of FLPMA.

.08 **Acronyms.**

BLM – Bureau of Land Management
CFR – Code of Federal Regulations
FLPMA – Federal Land Policy and Management Act of 1976
FS – U.S. Forest Service
NEPA – National Environmental Policy Act of 1969
NPS – National Park Service
ROW – Right-of-way
U.S.C. – United States Code
WSA – Wilderness Study Area

WILDERNESS CHARACTERISTICS INVENTORY

APPENDIX A – PERMANENT DOCUMENTATION FILE

The permanent documentation file should include the following:

1. **Inventory Area Evaluation**: Appendix B.

2. **Route Analysis:** Appendix C.

3. **Inventory Maps:** Inventory maps used in conducting and documenting findings of wilderness characteristics inventories must be retained. Maps should depict the area's unique identifier, boundary, and any photo points.

4. **Photo Documentation:** Documentation could include a descriptive log and photographs (Appendix D).

5. **Supporting Documentation:** Include additional notes, forms, and documents.

WILDERNESS CHARACTERISTICS INVENTORY
APPENDIX B – INVENTORY AREA EVALUATION

Evaluation of Current Conditions:

1) Document and review any existing BLM wilderness characteristics inventory findings on file regarding the presence or absence of individual wilderness characteristics, using Form 1, below.

2) Consider relevant information regarding current conditions available in the office. Identify and describe any changes to the existing inventory information. Use interdisciplinary team knowledge, aerial photographs, field observations, maps, etc. and document the findings on Form 2, below. Document current conditions regarding wilderness characteristics, as opposed to potential future conditions.

Conduct field reviews as necessary to verify information and to ascertain current conditions. Reach conclusions on current conditions including boundaries, size of areas and presence or absence of wilderness characteristics. Fully explain the basis for each conclusion on Form 2, including any critical differences between BLM and citizen information.

Document the findings regarding current conditions for each inventoried area. Describe how the present conditions are similar to, or have changed from, the conditions documented in the original wilderness characteristics inventory. Document the findings on Form 2 for each inventory area. Cite to or attach data considered, including photographs, maps, GIS layers, field trip notes, project files, etc.

FORM 1

Documentation of BLM Wilderness Characteristics Inventory Findings from Previous Inventory on Record

1. Is there existing BLM wilderness characteristics inventory information on all or part of this area?

No _____(Go to Form 2)**Yes _____** (If yes, and if more than one area is within the area, list the unique identifiers for those areas.):

a) Inventory Source: _____

b) Inventory Area Unique Identifier(s):_____

c) Map Name(s)/Number(s):_____

d) BLM District(s)/Field Office(s):_____

2. BLM Inventory Findings on Record:

Existing inventory information regarding wilderness characteristics (if more than one BLM inventory area is associated with the area, list each area and answer each question individually for each inventory area):
Inventory Source: **_____**

Area Unique Identifier	**Sufficient Size? Yes/No (acres)**	**Naturalness? Yes/No**	**Outstanding Solitude? Yes/No**	**Outstanding Primitive & Unconfined Recreation? Yes/No**	**Supplemental Values? Yes/No**

FORM 2

Current Conditions: Presence or Absence of Wilderness Characteristics

Area Unique Identifier_____ Acreage_____
(If the inventory area consists of subunits, list the acreage of each and evaluate each separately).

In completing steps (1)-(5), use additional space as necessary.

(1) Is the area of sufficient size? (If the area meets one of the exceptions to the size criterion, check "Yes" and describe the exception in the space provided below),

Yes _____ No _____
Note: If "No" is checked the area does not have wilderness characteristics; check "NA" for the remaining questions below.

Description (describe the boundaries of the area--wilderness inventory roads, property lines, etc.):_____

_____

_____

_____

_____

(2) Does the area appear to be natural?
Yes _____ No_____ N/A_____
Note: If "No" is checked the area does not have wilderness characteristics; check "NA" for the remaining questions below.

Description (include land ownership, location, topography, vegetation, and summary of major human uses/activities):_____

_____

_____

_____

_____

(3) Does the area (or the remainder of the area if a portion has been excluded due to unnaturalness and the remainder is of sufficient size) have outstanding opportunities for solitude?

Yes _____ No _____ N/A_____

Description (describe the area's outstanding opportunities for solitude):

_____

_____

_____

_____

_____

(4) Does the area (or the remainder of the area if a portion has been excluded due to unnaturalness and the remainder is of sufficient size) have outstanding opportunities for primitive and unconfined recreation?

Yes _____ No _____ N/A_____

Note: If "No" is checked for both 3 and 4 the area does not have wilderness characteristics; check "NA" for question 5.

Description (describe the area's outstanding opportunities for primitive and unconfined recreation): _____

_____

_____

_____

_____

(5) Does the area have supplemental values (ecological, geological, or other features of scientific, educational, scenic or historical value)?

Yes _____ No _____ N/A_____

Description: _____

_____

_____

_____

_____

Summary of Analysis*

Area Unique Identifier: _____

Summary
Results of analysis:
(Note: explain the inventory findings for the entirety of the inventory unit. When wilderness characteristics have been identified in an area that is smaller than the size of the total inventory unit, explain why certain portions of the inventory unit are not included within the lands with wilderness characteristics (e.g. the inventory found that certain parts lacked naturalness).

1. Does the area meet any of the size requirements? ___ Yes ___ No

2. Does the area appear to be natural? ___ Yes ___ No ___ N/A

3. Does the area offer outstanding opportunities for solitude or a primitive and unconfined type of recreation? ___ Yes ___ No ___ N/A

4. Does the area have supplemental values? ___ Yes ___ No ___ N/A

Check one:

___ The area, or a portion of the area, has wilderness characteristics and is identified as lands with wilderness characteristics.

___ The area does not have wilderness characteristics.

Prepared by (team members):

_____

_____

_____

_____

_____

(Name, Title, Date)

Reviewed by (District or Field Manager):

_____

* This form documents information that constitutes an inventory finding on wilderness characteristics. It does not represent a formal land use allocation or a final agency decision subject to administrative remedies under either 43 CFR parts 4 or 1610.5-3.

Name: _____ **Title: _____**

Date: _____

WILDERNESS CHARACTERISTICS INVENTORY

APPENDIX C – ROUTE ANALYSIS[1]

(Factors to consider when determining whether a route is a road[2] for wilderness characteristics inventory purposes.)

Wilderness Characteristics Inventory Area Unique Identifier: _____

Route or Route Segment[3] Name and/or Identifier: _____
(Include Transportation Plan Identifier, if known, and include route number supplied by citizen information, when available.)

I. LOCATION: Refer to attached map _____ and BLM corporate data (GIS). List photo point references (where applicable) or reference attached photo log:

Describe: _____

_____

_____

_____

_____

II. ROUTE CONTEXT

A. Current Purpose[4] (if any) of Route: (Examples: Rangeland/Livestock Improvements (stock tank, developed spring, reservoir, fence, corral), Inholdings (ranch, farmhouse), Mine

[1] This form documents information that constitutes an inventory finding on wilderness characteristics. It does not represent a formal land use allocation or a final agency decision subject to administrative remedies under either 43 CFR parts 4 or 1610.5-3.

[2] Road: An access route which has been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.

a. Improved and maintained – Actions taken physically by people to keep the road open to vehicle traffic. "Improved" does not necessarily mean formal construction. "Maintained" does not necessarily mean annual maintenance.

b. Mechanical means – Use of hand or power machinery or tools.

c. Relatively regular and continuous use – Vehicular use that has occurred and will continue to occur on a relatively regular basis. Examples are: access roads for equipment to maintain a stock water tank or other established water sources, access roads to maintained recreation sites or facilities, or access roads to mining claims.

[3] If a portion of a route is found to meet the wilderness inventory road criteria (see Part III) and the remainder does not meet these criteria (e.g., a cherrystem road with a primitive route continuing beyond a certain point), identify each segment and explain the rationale for the separate findings under pertinent criteria.

Site, Concentrated Use Site (camp site), Recreation, Utilities (transmission line, telephone, pipeline), Administrative (project maintenance, communication site, vegetation treatment)).

Describe: _____

_____

_____

_____

_____

B. Right-of-Way (ROW):

1. Is there a ROW associated with this route?
Yes ____ No ____ Unknown ____

2. If yes, what is the stated purpose of the ROW? _____

_____

3. Is the ROW still being used for this purpose?
Yes ____ No ____ Unknown or N/A ____

Explain:_____

_____

III. WILDERNESS INVENTORY ROAD CRITERIA

A. Evidence of construction or improvement using mechanical means:
Yes _____ (if either A.1 *or* A.2 is checked "yes" below) No _____ (if both A.1 *and* A.2 are checked "no" below)

1. Construction: (Is there evidence that the route or route segment was originally constructed using mechanical means?) Yes _____ No _____

Examples: Paved___ Bladed___ Graveled___ Roadside Berms___ Cut/Fill___ Other___

Describe: _____

_____

[4] The purpose of a route is not a deciding factor in determining whether a route is a road for wilderness characteristics inventory purposes. The purpose of a route does provide context for factors on which such a determination may be based, particularly the question of whether maintenance of the route ensures relatively regular and continuous use. The purpose also helps to determine whether maintenance that may so far have been unnecessary to ensure such use would be approved by BLM when the need arises.

_____

_____

2. Improvements: (Is there evidence of improvements using mechanical means to facilitate access?) Yes ____ No ____ If "yes": by Hand Tools ____ by Machine ____

Examples: Culverts___ Hardened Stream Crossings___ Bridges___ Drainage___ Barriers___ Other___

Describe: _____

_____

_____

_____

_____

B. Maintenance: (Is there evidence of maintenance that would ensure *relatively* regular and continuous use?): Yes ___ (if either B.1 *or* B.2 is checked "yes" below) No ___ (if both B.1 *and* B.2 are checked "no" below)

1. Is there Evidence or Documentation of Maintenance using hand tools or machinery? Yes ____ No ____ If "yes": by Hand Tools ____ by Machine ____

Explain: _____

_____

_____

_____

_____

2. If the route or route segment is in good[5] condition, but there is no evidence of maintenance, would mechanical maintenance with hand tools or machines be approved by BLM to meet the purpose(s) of the route in the event this route became impassable? Yes ____ No ____

Explain: _____

_____

[5] Good condition would be a condition that ensures regular and continuous use relative to the purposes of the route. Consider whether the route can be clearly followed in the field over its entire course and whether all or any portion of the route contains any impediments to travel.

C. Relatively regular and continuous use: (Does the route or route segment ensure relatively regular and continuous use?) Yes ____ No ____

Describe evidence (e.g., direct, vehicles or vehicle tracks observed, or indirect, evidence of use associated with purpose of the route such as maintenance of facility that route accesses) and other rationale for whether use has occurred and will continue to occur on a *relatively* regular basis (i.e., regular and continuous use relative to the purpose(s) of the route).[6]

IV. CONCLUSION:

Does the route or route segment[7] meet the definition of a wilderness inventory road (i.e., are items III.A *and* III.B *and* III.C all checked yes)?

Yes ____ = Wilderness Inventory Road No ____ = Not a road for wilderness inventory purposes

Explanation[8]: _____

Evaluator(s): _____ Date: _____

[6] Include estimate of travel rates for the stated purposes, e.g., trips/day or week or month or season or year or even multiple years in some facility maintenance cases.

[7] If part of the route meets the wilderness inventory road definition and the remainder does not, describe the segment meeting the definition and any remaining portion not meeting the definition and why.

[8] Describe and explain rationale for any discrepancies with citizen proposals.

WILDERNESS CHARACTERISTICS INVENTORY

APPENDIX D – PHOTO LOG

Photographer(s): _____

Inventory Area Unique Identifier _____

Date	Frame #	Camera Direction	Description	GPS/UTM Location	Town-ship	Range	Sec.	Photo Point #

Form 1221-2
(June 1969)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANUAL TRANSMITTAL SHEET

Release
6-130

Date
03/15/2012

Subject
6320—Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process (Public)

Explanation of Materials Transmitted: This manual contains the Bureau of Land Management's (BLM) policy and guidance for considering lands with wilderness characteristics in the Bureau of Land Management's (BLM) land use planning process under the Federal Land Policy and Management Act of 1976 (FLPMA) and other applicable law and supersedes all previous guidance on this topic. It does not address or affect policy related to Congressionally-designated Wilderness or existing Wilderness Study Areas (WSAs) pending before Congress.

1. **Reports Required: None**

2. **Materials Superseded: This manual supersedes BLM Manual Sections 6302 and 6303**

4. **Filing Instructions: File as directed below**

REMOVE	INSERT
All 6302 (Rel. 6-127) (Total 14 Sheets)	**6320**
All 6303 (Rel. 6-128) (Total 8 Sheets)	**(Total 8 Sheets)**

/s/
Robert V. Abbey
Director

6320 MANUAL-CONSIDERING LANDS WITH WILDERNESS CHARACTERISTICS IN THE BLM LAND USE PLANNING PROCESS

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.01 Purpose

.02 Objective

.03 Authority

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6320 MANUAL-CONSIDERING LANDS WITH WILDERNESS CHARACTERISTICS IN THE BLM LAND USE PLANNING PROCESS

.01 Purpose. This policy outlines general procedures for considering lands with wilderness characteristics in the Bureau of Land Management's (BLM) land use planning process under the Federal Land Policy and Management Act of 1976 (FLPMA) and other applicable law and supersedes all previous guidance on this topic. It does not address or affect policy related to Congressionally-designated Wilderness or existing Wilderness Study Areas (WSAs) pending before Congress.

.02 Objective. This Manual establishes BLM policy on considering lands with wilderness characteristics in land use plans and land use plan amendments or revisions.

.03 Authority. Principal authorities affecting the consideration of lands with wilderness characteristics in the planning process are:

A. FLPMA, 43 U.S.C. 1701 *et seq*., exclusive of 43 U.S.C. 1782.

B. Wilderness Act of 1964, 16 U.S.C. 1131 *et seq*.

C. National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq*. (NEPA).

D. Naval Petroleum Reserves Production Act of 1976, 42 U.S.C. 6501 *et seq.* (NPRPA).

E. Alaska National Interest Lands Conservation Act (ANILCA), Section 1320, 43 U.S.C. 1784.

F. Oregon and California Lands Act of 1937, 43 U.S.C. 1181a-1181j.

G. Council on Environmental Quality (CEQ) Regulations, 40 CFR 1500-1508.

H. BLM Regulations, 43 CFR Part 1600, 43 CFR Part 2360.

I. Department of the Interior (DOI) NEPA Regulations, 43 CFR Part 46.

.04 Responsibilities.

A. The BLM Director shall:

1. Coordinate with State Directors on considering and, as warranted, protecting lands with wilderness characteristics in land use plans.

B. State Directors shall:

1. Implement policy and provide statewide program coordination and guidance for the consideration of lands with wilderness characteristics inventories and, as warranted, the protection of lands with wilderness characteristics in land use plans.

2. Provide program development, technical management assistance, and support to District and Field Offices to ensure lands with wilderness characteristics and potential resource conflicts are adequately analyzed.

C. District Managers and Field Managers shall:

1. Update and maintain the wilderness inventory for lands within the planning area consistent with BLM wilderness characteristics inventory guidance.

2. Ensure that wilderness characteristics inventories are considered and that, as warranted, lands with wilderness characteristics are protected in a manner consistent with this manual in BLM planning processes.

.05 References. Principal references for these instructions are:

A. FLPMA, 43 U.S.C. 1701 *et seq.*

B. Wilderness Act, 16 U.S.C. 1131 *et seq.*

C. NEPA, 42 U.S.C. 4321 *et seq.*

D. NPRPA, 42 U.S.C. 6501 *et seq.*

E. Oregon and California Lands Act of 1937 (O&C Lands Act), 43 U.S.C. 1181a.

F. ANILCA Section 1320, 43 U.S.C. 1784.

G. CEQ Regulations, 40 CFR 1500-1508.

H. BLM Regulations, 43 CFR Part 1600.

I. BLM Handbook H-1601-1, Land Use Planning.

J. DOI NEPA Regulations, 43 CFR Part 46.

.06 Policy. Managing the wilderness resource is part of the BLM's multiple use mission. Consistent with FLPMA and other applicable authorities, the BLM will consider the wilderness characteristics of public lands when undertaking land use planning. The BLM will use the land use planning process to determine how to manage lands with wilderness characteristics as part of the BLM's multiple-use mandate. The BLM will consider a full range of alternatives for such lands when conducting land use planning. The BLM will analyze the effects of (1) plan alternatives on lands with wilderness characteristics and (2) management of lands with wilderness characteristics on other resources and resource uses.

In some circumstances, consideration of management alternatives for lands with wilderness characteristics may be outside the scope of a particular planning process (as dictated by the statement of purpose and need for the planning effort). For example, a targeted amendment to address a specific project or proposal may not in all circumstances require consideration of an alternative that would protect wilderness characteristics. In these situations, the NEPA document

associated with the plan amendment must still analyze effects of the alternatives on lands with wilderness characteristics.

The process described in this policy shall be integrated into land use plans in order to ensure that lands with wilderness characteristics and their management are adequately evaluated in an environmental analysis.

A. **Procedures for Considering Lands with Wilderness Characteristics in Land Use Planning.** The BLM will evaluate lands with wilderness characteristics through the land use planning process. When such lands are present, the BLM will examine options for managing these lands and determine the most appropriate land use allocations for them. Considering wilderness characteristics in the land use planning process may result in several outcomes, including, but not limited to: (1) emphasizing other multiple uses as a priority over protecting wilderness characteristics; (2) emphasizing other multiple uses while applying management restrictions (conditions of use, mitigation measures) to reduce impacts to wilderness characteristics; (3) the protection of wilderness characteristics as a priority over other multiple uses. The BLM will continue to engage cooperating agencies, the public, and other interested parties in the land use planning process as it relates to the management of lands with wilderness characteristics.

1. Factors for Consideration of Lands with Wilderness Characteristics. Consider and document the wilderness characteristics for each area identified as possessing wilderness characteristics through the inventory described in Manual 6310.

    a. Manageability. Consider and document whether the lands can be effectively managed to protect their wilderness characteristics. Consider whether boundary modification of the area would improve manageability. Manageability may vary depending on the planning alternative.

        i. General. The BLM must determine how lands with wilderness characteristics will be managed over the life of the plan, based on present knowledge of the resources, ongoing uses, and valid existing rights in the area.

        ii. Documenting Land Status. Document the land status and mineral ownership of lands with wilderness characteristics. Subsurface rights in an area owned by a party other than the Federal government may limit the BLM's ability to protect wilderness characteristics on the surface.

        iii. Access to State or Private Inholdings. In addressing manageability, assess the potential impact of providing access to non-Federal inholdings.

        iv. External Impacts. The fact that incompatible activities or uses can be seen or heard from areas possessing wilderness characteristics should not be a determining factor when analyzing the manageability of such areas unless these impacts are pervasive and omnipresent.

        v. Other Statutory Requirements. Some lands managed by the BLM are subject to specific additional statutory requirements (e.g., the National Petroleum Reserve Production Act (NPRPA) and the Oregon and California (O&C)

Lands Act). Consider those requirements where appropriate in determining manageability of lands with wilderness characteristics.

b. Resource Values and Uses. Consider and document the extent to which other resource values and uses of lands with wilderness characteristics would be forgone or adversely affected if the wilderness characteristics are protected. Consider the benefits that may accrue to other resource values and uses as a result of protecting wilderness characteristics. Consider the following:

   i. Presence of Other Resources. The degree to which other resources or uses are present in the area with wilderness characteristics;

   ii. Development Potential. The potential for further development or use of the other resources on the lands with wilderness characteristics;

   iii. Resource Availability. The degree to which other resources or uses are present on other public and private lands outside the area containing wilderness characteristics;

   iv. Economic Importance. Local, regional, or traditional (e.g. Tribal) economic value of various resources on the lands with wilderness characteristics and the potential to enhance the economic importance by protecting the lands with wilderness characteristics; and

   v. Compatibility with Protection. The degree to which use or development of each resource is compatible with or conflicts with management of the area to protect wilderness characteristics.

c. Congressional Release of WSAs. Periodically, Congress considers a WSA for Wilderness designation. When Congress decides not to designate a WSA or a portion of a WSA as Wilderness and releases that WSA from FLPMA Section 603's non-impairment standard, the BLM shall take into serious consideration the Congressional action—as well as any changed circumstances—in the BLM's subsequent land use planning decisions for the released land. Document the basis for the BLM land use planning decisions regarding the management of the released land.

2. Land Use Planning Process. Additional information is included in the Land Use Planning Handbook H-1601-1.

   a. Preparation Plan. The preparation plan provides the foundation for the entire planning process. The preparation plan should also identify the skills, data/meta-data, budget, and interim tasks (such as completing or updating the wilderness characteristics inventory) necessary to address the issues through the planning process.

      i. Issue Identification. Planning issues include disputes or controversies about existing and potential land and resource allocations, levels of resource use, development, and protection opportunities for consideration in the preparation

of the land use plan. Identify whether lands with wilderness characteristics are a planning issue to be addressed and any associated management concerns.

ii. Planning Criteria. Planning criteria guide development of the plan by helping define the decision space. Identify preliminary planning criteria related to wilderness characteristics management, including plan parameters, constraints, or existing planning decisions that will be carried forward.

iii. Data Needs. The preparation plan should identify the information or data needed to resolve issues or to perform the requisite analysis. Identify existing lands with wilderness characteristics-related data sources, such as prior wilderness inventories and new inventory information provided by external sources. Identify data gaps and other information necessary to address lands with wilderness characteristics, such as completion of a new wilderness characteristics inventory pursuant to BLM Manual 6310.

iv. Budget. Identify labor and operation support costs necessary to obtain skilled personnel, inventory information, and other data to address lands with wilderness characteristics through the planning process. Include indirect costs and an allocation of support labor and operations costs. Include the land records and other documentation expenses.

b. Scoping. The Notice of Intent should include lands with wilderness characteristics if they are a planning issue to be addressed. The Notice of Intent should also identify any lands with wilderness characteristics-related preliminary planning criteria. Initiate government-to-government consultation with Tribes potentially affected by planning decisions regarding such lands. In the Scoping Report, summarize comments related to wilderness characteristics received during the formal scoping period and describe any additional wilderness characteristics-related issues from internal or external scoping meetings.

c. Analysis of the Management Situation (AMS). The AMS provides the basis for formulating reasonable alternatives and can begin as soon as the planning project is approved. Where lands with wilderness characteristics have been identified in an inventory, describe current management direction relating to such lands from existing planning documents. Prepare an area profile for lands with wilderness characteristics that describes their locations and current trends and levels of other resource uses and activities in those areas. Incorporate the analysis and documentation performed under the Factors for Consideration of Lands with Wilderness Characteristics section of this policy regarding the quality, manageability, and other resource values and uses of such areas. Identify management opportunities to respond to identified issues.

d. Resource Considerations and Formulation of Alternatives. BLM's multiple-use mission includes, where appropriate, preservation and protection of public lands in their natural condition. The concept of multiple-use management as defined in FLPMA also includes the use of some land for less than all of the resources. Where lands with wilderness characteristics have been identified through the

inventory process, the NEPA document used to support the land use plan (or land use plan amendment or revision) decision shall contain a full range of reasonable alternatives to provide a basis for comparing impacts to wilderness characteristics and to other resource values or uses. Lands with wilderness characteristics must be delineated as discrete units to which management prescriptions may be applied.

Each alternative should include management actions and allowable uses and restrictions designed to achieve the desired outcomes (goals and objectives) of the land use plan. An alternative that protects lands with wilderness characteristics must contain management actions to achieve protection. Examples of land use plan decisions that could protect lands with wilderness characteristics include, but are not limited to, the following:

i. Recommend withdrawal from mineral entry.

ii. Close to leasing or allow leasing only with no surface occupancy with no exceptions, waivers, or modifications.

iii. Designate as right-of-way exclusion areas.

iv. Close to construction of new roads.

v. Designate as closed to motor vehicle use, as limited to motor vehicle use on designated routes, or as limited to mechanized use on designated routes.

vi. Close to mineral material sales.

vii. Exclude or restrict with conditions for certain commercial uses or other activities (e.g., commercial or personal-use wood-cutting permits).

viii. Designate as Visual Resource Management Class I or II.

ix. Restrict construction of new structures and facilities unrelated to the preservation or enhancement of wilderness characteristics or necessary for the management of uses allowed under the land use plan.

x. Retain public lands in Federal ownership.

Note: In developing management actions and allowable uses for land use plans in Alaska, the BLM should take into account the relevant management provisions of the Alaska National Interest Lands Conservation Act (ANILCA).

Management actions pertaining to lands with wilderness characteristics should be placed in a “Lands with Wilderness Characteristics” subheading under the Resources section of planning documents.

In areas where the management decision is not to protect wilderness characteristics, consider measures to minimize impacts on those characteristics.

e. Affected Environment. In the NEPA document used to support the planning decision, describe the inventory process, summarize any information received from the public, and incorporate inventory information by reference. The NEPA document should include a brief description of each land with wilderness characteristics, including a map delineating the boundaries of each such area and the acreage. Also describe the existing administrative designations, land use allocations, uses, management actions, and mitigation measures that are currently in place.

f. Environmental Consequences. In the NEPA document used to reach the planning decision, describe the direct, indirect, and cumulative effects of (1) various alternatives on lands with wilderness characteristics and (2) managing to protect lands with wilderness characteristics on other affected resources.

   The extent to which managing to protect the wilderness characteristics affects a particular resource or use will vary from area to area, depending on a number of factors, including:

   i. The degree to which use or development of the resource is compatible with or conflicts with protection of wilderness characteristics.

   ii. The degree to which protection of wilderness characteristics enhances other multiple use benefits on or near the management area such as recreational opportunities, protection of watersheds, wildlife habitat, natural plant communities, cultural resources, scenic quality, and similar natural values.

g. Final Planning Decision. In making the final planning decision regarding management of lands with wilderness characteristics, consider both the resources that would be forgone or adversely affected, and the resources that would benefit under each alternative. As with any planning decision, document the reasons for its determination regarding management of lands with wilderness characteristics.

BLM-UTAH ADDITIONAL GUIDANCE FOR MANUAL 6310 – CONDUCTING WILDERNESS INVENTORY ON BLM LANDS

Frequency of updates to a wilderness characteristics inventory

The Federal Land Policy and Management Act (FLPMA) Section 201 requires BLM to maintain on a continuing basis an inventory of all public lands and their resources and other values. Manual 6310 Section .06 clearly directs BLM to consider updating a wilderness characteristics inventory under certain circumstances, including:

- Acquisition of lands that either independently or in concert with contiguous lands meet the size criteria or an exception described in the inventory process;
- A land use planning process (*note: the scope of certain targeted land use plan amendments may except making allocation decisions regarding lands with wilderness characteristics resource but must still assess impacts*);
- Development of NEPA analysis for a project that may impact wilderness characteristics;
- External scoping or internal review identifies the wilderness characteristics resource as a potential issue during the NEPA process;
- Receipt of new information concerning the wilderness characteristics resource from the public and the submission meets the BLM's minimum standard (Manual 6310 Section .06.B.); and
- Any other appropriate opportunity to maintain an inventory of the wilderness characteristics resource per FLPMA Section 201.

Key components to consider when assessing the accuracy of previous wilderness characteristics inventories

BLM must maintain and update as necessary an inventory of wilderness resources on public lands. It is not uncommon for conditions relating to wilderness characteristics to change over time. Authorized projects in lands with wilderness characteristics units may have had impacts to the inventoried resource, resulting in a reduction or elimination of the resource. Conversely, an area that was once determined to lack wilderness characteristics may now possess them due to natural or intentional reclamation activities. BLM-Utah must ensure early in the NEPA process that a wilderness characteristics inventory of potentially affected lands (i.e., parcels that may meet the size criteria or exceptions and the naturalness criteria) is completed and documented in accordance with WO IM 2011-154 and Manual 6310.

If a project or planning area includes lands without any prior inventory for the presence or absence of wilderness characteristics on record, the BLM will consider whether the potential for wilderness characteristics exists within the area. Generally, this will require review of the most recent inventory on record to determine if there is reasonable probability that conditions have changed.

Any citizens' proposals submitted within the project or planning area must be addressed in the administrative record. In the absence of a citizens' proposal, the BLM must still consider scenarios that may initiate an update to historic inventory findings or amend historic unit boundaries, including, but not limited to:

- BLM specialists identify the probability or potential for the presence of wilderness characteristics within the planning or project area
- Development has occurred within a previously identified lands with wilderness characteristics unit that affects the unit's size and/or apparent naturalness
- The condition of a road used to define the boundary of a previously inventoried unit or sub-unit has deteriorated to the extent that it no longer meets the wilderness inventory road definition
- A chaining used to define the boundaries of a previously inventoried unit or sub-unit has naturally reclaimed and no longer impacts apparent naturalness
- A fenceline used to define the boundary of a previously inventoried unit or sub-unit is not substantially noticeable
- Recreational use patterns have substantially changed and prior determinations regarding outstanding opportunities for solitude and/or primitive and unconfined recreation require analysis

How does a field office consider and respond to new information from the public?

Initial Response to Submissions

Members of the public may collect and submit inventory information to the BLM for consideration. While the public may not (1) be part of BLM wilderness characteristics inventory teams; (2) conduct an inventory on behalf of the BLM; or (3) make determinations for the BLM about the presence or absence of wilderness characteristics (see WO IM 2013-106), public information is valuable to the BLM's inventory process.

Field offices must consider new wilderness characteristics inventory information from the public that meets the minimum national standards established in Manual 6310, Section .06.B and evaluate new wilderness characteristics inventory information in accordance with the requirements set forth in BLM Manual 6310 and this IM.

BLM-Utah strives to maintain positive working relationships with the public. In the interest of professionalism, as soon as practicable, and usually within 30 days after receiving new inventory information, the authorized officer will respond in writing to the submitting stakeholder to acknowledge receipt and to explicitly document the following aspects of the new information:

- Whether the new information meets the standards set forth in Manual 6310 Section .06.B (*Note: If the submission does not meet the standards, include a description of what additional information is required to meet the minimum standards*); and
- The estimated timeframe for the field office's evaluation of new information. This timeframe should appropriately relate to any proposed projects and NEPA analysis within or near the inventory unit. For example, if the public submits information about the presence or absence of wilderness characteristics during the scoping period for a project, then the authorized officer should indicate that the review and potential update to the wilderness characteristics inventory will be completed during the NEPA analysis and made available prior to the decision.

BLM-Utah field offices will include all written correspondence and telephone conversation records regarding new wilderness characteristics inventory information in each applicable inventory unit's Permanent Documentation File in accordance with Manual 6310, Appendix A.5.

The authorized officer is encouraged to provide submitting parties with timely written updates on substantive subsequent changes to the original estimate of the amount of time needed to evaluate the new information. The preferred mode of transmitting new information is through timely updates of the BLM website. Additionally, WO IM 2013-106 instructs BLM to provide access to all relevant publicly available information to interested parties in a timely manner.

Updating the Inventory

Keep all relevant official records related to a lands with wilderness characteristics inventory in a Permanent Documentation File. Each file must include sufficient detail to ensure that BLM determinations regarding wilderness inventory roads, determination of unit boundaries, and the presence or absence of wilderness characteristics are consistent with agency guidance. This often requires that BLM write detailed narratives regarding inventory determinations in Form 2 that directly correspond to and reference the route analysis, maps and GIS data, relevant publications, photos, and any other supporting documentation.

Occasionally, an update to the inventory may only require a review within the office to determine if conditions have changed depending on the quality of previous inventory information, existing spatial data, and recent photographs or field notes. However, where geo-referenced on-the-ground photos provided by the public reveal inconsistencies with previous BLM findings, a field visit is likely the most appropriate course of action to clearly document current conditions. Field data collection provides the BLM and the public with a clear record detailing BLM's determinations on wilderness characteristics.

Inventory teams may not introduce any criteria or include information in the inventory forms that is not outlined explicitly in Manual 6310. If other information is collected during the inventory (e.g., a unit's ecological integrity), it may be documented in field notes but is not included in the rationale for determination of the presence or absence of wilderness characteristics. Additionally, the inventory must not include any information related to the manageability of the unit for protection of wilderness characteristics (e.g., how much of the unit is leased for mineral development). Only existing developments may be documented.

Inventory Units Involving Multiple Field Offices

When inventory units include BLM-administered lands that are managed by multiple field office jurisdictions, including crossover into adjoining states, specialists should work collaboratively and use the most accurate and current data available. The original case file and supporting data is generally maintained by the lead office (usually determined as the office that administers the most acreage within the unit). Copies of data and forms should be on file at the collaborating office. The forms should be reviewed and signed by a Field or District Manager representing both field offices, even if the Permanent Documentation File is maintained by a single office.

Boundary Delineation

Determination of a unit's boundaries begins with a review of historical documents, including the original wilderness characteristics inventory and any updates (e.g., 1999 Utah Wilderness Inventory, updates for 2008 RMPs, etc.). Refer to Manual 6310 Section .06.C.1 for guidance on inventory unit boundary delineation.

Inventory teams generally adopt historic unit boundaries or consider citizens' proposed boundaries as a starting point for delineating the area to be inventoried. Constructed and maintained roads (Class B roads and Class D roads with documented maintenance) and land tenure generally form initial unit boundaries.

The unit boundaries are usually adjusted after field data collection based on an assessment of impacts to naturalness. Wilderness inventory roads must be excluded from the final inventory unit. Observations in the field may identify a need to exclude other substantially noticeable human-caused impacts to naturalness from the final inventory unit.

BLM's jurisdiction regarding the wilderness characteristics resource is limited to BLM-administered surface. Adjacent private lands or lands managed by the State of Utah or other agencies are not included in the inventory unit boundaries. However, units that are adjacent to designated wilderness or similar areas managed by other federal agencies may meet an exception to the size criteria (see Manual 6310 Section .06.C.2.a for additional information). A unit may also encompass inholdings that are owned or managed by other entities, but the inholdings are excluded from the unit boundaries and the inventory unit acreage must only reflect surface lands administered by the BLM. Outside impacts, including disturbances on adjacent lands, are not normally cited as impacts to naturalness unless a major outside impact has a direct effect on the apparent naturalness of the unit. The analysis should clearly describe the extent of the impact of human modifications to apparent naturalness for the average visitor based on the unit's size, configuration and topographic screening.

Select the most logical and defensible boundary to delineate a unit. Do not use features (e.g., substantially unnoticeable features) that do not comply with Manual 6310. Additionally, although such features may not constitute an appropriate unit boundary, they may still be evaluated as an impact under the naturalness criteria.

Apparent Naturalness

Route analysis forms (Manual 6310 – Appendix C) should be completed for every road used as a unit or sub-unit boundary or that is cherry-stemmed into a wilderness characteristics unit, unless the road so clearly meets the criteria (i.e., a paved highway or crowned and ditched road) that further documentation is unnecessary. If the status of a route is contested (i.e., questions exist regarding mechanical construction or maintenance or use), then a route evaluation form should be completed. Human impacts that are cited as substantially noticeable should be mapped and photographed. Field data should be georeferenced, dated, and include the direction the camera is facing so that the information collected is contextual and repeatable. All photo point locations should be provided on the map of the unit (see Manual 6310 Appendix A.5). Georeferenced aerial photos that were used to make determinations should also be cited as part of the administrative record. Inventory teams should take photographs from representative locations and include landscape level views where possible. The corresponding narrative should include sufficient information to allow readers to assess the impacts to apparent naturalness or outstanding opportunities for solitude or primitive and unconfined recreation and the extent of the impacts in relation to the size of the unit. Ensure that the analysis of naturalness adopts the terminology from Manual 6310 and does not include any extraneous criteria.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Manual 6310 employs the following definitions:

- Outstanding: *1.* Standing out among others of its kind; conspicuous; prominent; *2.* Superior to others of its kind [other BLM-administered lands in the broad geographical area]; distinguished; excellent.
- Opportunity: A situation or condition favorable for attainment of a goal.
- Solitude: The state of being alone or remote from others; isolation. A lonely or secluded place.
- Primitive and Unconfined Recreation: Non-motorized, non-mechanized (except as provided by law [for accessibility]), and undeveloped types of recreational activities.

Solitude can be considered the ability of a visitor to avoid the sights, sounds, and evidence of other people while **inside the unit**. The only time BLM considers impacts of sights and sounds from **outside** the inventory area is if these impacts are pervasive and omnipresent (i.e., inescapable throughout the unit). The outstanding opportunities criterion has been interpreted broadly across the agency and inventory teams should take care to avoid improperly eliminating units due to outside impacts (e.g., a large unit that is adjacent to a highway). Citing outside impacts is intended only for exceptional circumstances and requires clear documentation that the impacts are pervasive throughout the entire unit (e.g., a small unit immediately adjacent to a rock-crushing plant that operates around the clock). The subject matter expert should consider that Congress, for example, has designated wilderness areas that adjoin interstate highways and urban centers, where these outside impacts are considered neither pervasive nor omnipresent.

Documentation of the rationale for determining the presence or absence of outstanding opportunities is not solely based on topography or vegetative screening, though these features should normally be addressed in the analysis. The shape of the inventory unit may also play a role in determining whether outstanding opportunities exist for solitude or primitive and unconfined recreation. Ensure that the analysis of outstanding opportunities adopts the terminology from Manual 6310 and does not include any extraneous criteria.

Outstanding opportunities for primitive and unconfined recreation include those uses that would be appropriate in a wilderness setting (hiking, hunting, equestrian use) and not mechanical or motorized uses (mountain biking, car camping). The presence of motorized/mechanical use should be documented to the extent that it impacts primitive and unconfined recreation and solitude. If this mechanical-motorized use is a component of the rationale for finding the area does not have outstanding opportunities, clearly document its spatial and temporal extent (e. g. heavy ATV use during a two-week per year hunting season with almost no use the rest of the year is not normally a rationale for excluding an area based on motorized use.)

Supplemental Values

While the presence of supplemental values is not required for a unit to contain wilderness characteristics, BLM should document the full suite of resource values known to exist within the unit. This does not mean that the inventory team must conduct extensive research into supplemental values. Simply document the resources that are already on record or reasonably determined. The permanent documentation file should also include information on any

previously identified supplemental values, such as ecological, geological, or other features of scientific, educational, scenic, or historical value.

State Office Review and Updating the Statewide Geodatabase:

In order to maintain consistency across the state and to ensure compliance with Manual 6310, the Utah State Office National Conservation Lands Program Lead will be notified when a field office completes an update prior to making the findings publicly available. The Utah State Office will respond, usually within two weeks, with comments notifying the field office whether or not the inventory meets Manual 6310 standards. The Utah State Office review is intended to ensure consistency and completeness of BLM-Utah inventories, and comments are returned to a manager on an advisory basis. The authorized officer retains the authority for documenting and deciding whether or not the unit, or portions of the unit, possess or lack wilderness characteristics.

In order to accurately respond to public requests for information and data calls, field offices are required to update the statewide GIS geodatabase for lands with wilderness characteristics and provide the UTSO with a signed copy of Form 1, Form 2 and the Summary of Analysis whenever an inventory is updated. Coordinate these efforts with local and state office GIS staff and the National Conservation Lands Program Lead as needed to ensure consistency with NLCS data standards.

Washington Office Instruction Memo 2013-106: Sharing of Wilderness Characteristics Inventory Information with the Public

BLM requires direct sharing of inventory results with citizen groups that have provided inventory information for agency consideration (WO-IM-2013-106). Such information may qualify as "significant new information" under NEPA relative to resources potentially affected by ongoing or proposed actions, and the BLM considers and responds to these submissions.

Below is an example of a response to information submitted by the public for use in an individual letter or in a related NEPA document:

> In *(mo/yr)*, BLM reviewed the information and photos that *(name/organization)* submitted for the *(unit name/number)* on *(mo/yr)*, and determined that this information *(does/does not)* indicate a significant change in actions, circumstances or information relative to the conditions present when BLM conducted the original wilderness inventory or when the agency updated the wilderness inventory for this unit in *(year).*

For information that does not indicate a change in conditions or findings, the example response could continue:

> BLM specialists have verified that no changes are present that affect the size, naturalness, outstanding opportunities for solitude or primitive and unconfined recreation or supplemental values. As such, the submitted information represents a disagreement with BLM's findings rather than new information warranting re-evaluation of our inventory analysis and conclusions.

Preliminary inventory findings may be subject to release under the Freedom of Information Act (FOIA). BLM-Utah field offices should make updated and approved wilderness characteristics

inventory findings (using the forms provided in BLM Manual 6310, Appendix B) available to the public as soon as practicable after their completion and before the inventory data is used to inform decisions. BLM offices should make the findings publicly available by posting updated inventory forms on BLM websites, resulting in improved transparency and a possible decrease in FOIA requests from the public concerning BLM's final wilderness characteristics inventory findings.

As with any public document, the BLM must protect certain types of information consistent with applicable law, including Privacy Act information and sensitive cultural resources information, prior to the release of inventory findings. BLM field offices should consult with their respective FOIA, Privacy Act, and cultural resources specialists, as well as with their local/regional Solicitor's Office if they are concerned about information or data contained in these final inventory findings, as portions of these files may need to be redacted prior to their release.

WO IM 2013-106: The Role of Cooperating Agencies (CAs) in the Wilderness Characteristics Inventory and Land Use Planning Process

The BLM is responsible for compiling and maintaining the wilderness characteristics inventory, making findings regarding the presence or absence of wilderness characteristics, and incorporating the results of the inventory into the NEPA and/or land use planning processes. CAs for the project for which the inventory is being updated may collaborate and coordinate with the BLM in the inventory process (including data collection and analysis), the development of planning criteria, the formulation of alternatives, the estimation of effects of alternatives, and the selection of a preferred alternative under a Memorandum of Understanding (MOU). However, as with any member of the public, the opportunity to provide data and information does not mean that CAs may make decisions on how to manage public lands found to have wilderness characteristics. Any information provided to the BLM by CAs is given the same level of consideration as a submittal from any member of the public.

The BLM, as the agency that manages these lands, is ultimately responsible for making the final decisions in accordance with all legal requirements, and ensuring that the public interest is safeguarded. However, the BLM may, as appropriate, conduct field trips or educational sessions to explain the general inventory process to CAs or the public.

Additional Resources

Determinations on the presence or absence of wilderness characteristics is made by a BLM inventory team and signed by the authorized officer. Team members must be informed in the application of Manual 6310.

While there are currently no courses for lands with wilderness characteristics offered through DOI Learn, additional training is available through the Arthur Carhart National Wilderness Training Center - Agency Resources for BLM and through BLM's National Training Center Knowledge Resource Center. The Washington Office's National Conservation Lands Division periodically offers a webinar on lands with wilderness characteristics. The Utah State Office's Branch of Outdoor and Heritage Resources will schedule specific training modules on request.

BLM-UTAH ADDITIONAL GUIDANCE FOR MANUAL 6310 – CONDUCTING WILDERNESS INVENTORY ON BLM LANDS

Frequency of updates to a wilderness characteristics inventory

The Federal Land Policy and Management Act (FLPMA) Section 201 requires BLM to maintain on a continuing basis an inventory of all public lands and their resources and other values. Manual 6310 Section .06 clearly directs BLM to consider updating a wilderness characteristics inventory under certain circumstances, including:

- Acquisition of lands that either independently or in concert with contiguous lands meet the size criteria or an exception described in the inventory process;
- A land use planning process (*note: the scope of certain targeted land use plan amendments may except making allocation decisions regarding lands with wilderness characteristics resource but must still assess impacts*);
- Development of NEPA analysis for a project that may impact wilderness characteristics;
- External scoping or internal review identifies the wilderness characteristics resource as a potential issue during the NEPA process;
- Receipt of new information concerning the wilderness characteristics resource from the public and the submission meets the BLM's minimum standard (Manual 6310 Section .06.B.); and
- Any other appropriate opportunity to maintain an inventory of the wilderness characteristics resource per FLPMA Section 201.

Key components to consider when assessing the accuracy of previous wilderness characteristics inventories

BLM must maintain and update as necessary an inventory of wilderness resources on public lands. It is not uncommon for conditions relating to wilderness characteristics to change over time. Authorized projects in lands with wilderness characteristics units may have had impacts to the inventoried resource, resulting in a reduction or elimination of the resource. Conversely, an area that was once determined to lack wilderness characteristics may now possess them due to natural or intentional reclamation activities. BLM-Utah must ensure early in the NEPA process that a wilderness characteristics inventory of potentially affected lands (i.e., parcels that may meet the size criteria or exceptions and the naturalness criteria) is completed and documented in accordance with WO IM 2011-154 and Manual 6310.

If a project or planning area includes lands without any prior inventory for the presence or absence of wilderness characteristics on record, the BLM will consider whether the potential for wilderness characteristics exists within the area. Generally, this will require review of the most recent inventory on record to determine if there is reasonable probability that conditions have changed.

Any citizens' proposals submitted within the project or planning area must be addressed in the administrative record. In the absence of a citizens' proposal, the BLM must still consider scenarios that may initiate an update to historic inventory findings or amend historic unit boundaries, including, but not limited to:

- BLM specialists identify the probability or potential for the presence of wilderness characteristics within the planning or project area
- Development has occurred within a previously identified lands with wilderness characteristics unit that affects the unit's size and/or apparent naturalness
- The condition of a road used to define the boundary of a previously inventoried unit or sub-unit has deteriorated to the extent that it no longer meets the wilderness inventory road definition
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- Recreational use patterns have substantially changed and prior determinations regarding outstanding opportunities for solitude and/or primitive and unconfined recreation require analysis

How does a field office consider and respond to new information from the public?

Initial Response to Submissions

Members of the public may collect and submit inventory information to the BLM for consideration. While the public may not (1) be part of BLM wilderness characteristics inventory teams; (2) conduct an inventory on behalf of the BLM; or (3) make determinations for the BLM about the presence or absence of wilderness characteristics (see WO IM 2013-106), public information is valuable to the BLM's inventory process.

Field offices must consider new wilderness characteristics inventory information from the public that meets the minimum national standards established in Manual 6310, Section .06.B and evaluate new wilderness characteristics inventory information in accordance with the requirements set forth in BLM Manual 6310 and this IM.

BLM-Utah strives to maintain positive working relationships with the public. In the interest of professionalism, as soon as practicable, and usually within 30 days after receiving new inventory information, the authorized officer will respond in writing to the submitting stakeholder to acknowledge receipt and to explicitly document the following aspects of the new information:

- Whether the new information meets the standards set forth in Manual 6310 Section .06.B (*Note: If the submission does not meet the standards, include a description of what additional information is required to meet the minimum standards*); and
- The estimated timeframe for the field office's evaluation of new information. This timeframe should appropriately relate to any proposed projects and NEPA analysis within or near the inventory unit. For example, if the public submits information about the presence or absence of wilderness characteristics during the scoping period for a project, then the authorized officer should indicate that the review and potential update to the wilderness characteristics inventory will be completed during the NEPA analysis and made available prior to the decision.

BLM-Utah field offices will include all written correspondence and telephone conversation records regarding new wilderness characteristics inventory information in each applicable inventory unit's Permanent Documentation File in accordance with Manual 6310, Appendix A.5.

The authorized officer is encouraged to provide submitting parties with timely written updates on substantive subsequent changes to the original estimate of the amount of time needed to evaluate the new information. The preferred mode of transmitting new information is through timely updates of the BLM website. Additionally, WO IM 2013-106 instructs BLM to provide access to all relevant publicly available information to interested parties in a timely manner.

Updating the Inventory

Keep all relevant official records related to a lands with wilderness characteristics inventory in a Permanent Documentation File. Each file must include sufficient detail to ensure that BLM determinations regarding wilderness inventory roads, determination of unit boundaries, and the presence or absence of wilderness characteristics are consistent with agency guidance. This often requires that BLM write detailed narratives regarding inventory determinations in Form 2 that directly correspond to and reference the route analysis, maps and GIS data, relevant publications, photos, and any other supporting documentation.

Occasionally, an update to the inventory may only require a review within the office to determine if conditions have changed depending on the quality of previous inventory information, existing spatial data, and recent photographs or field notes. However, where geo-referenced on-the-ground photos provided by the public reveal inconsistencies with previous BLM findings, a field visit is likely the most appropriate course of action to clearly document current conditions. Field data collection provides the BLM and the public with a clear record detailing BLM's determinations on wilderness characteristics.

Inventory teams may not introduce any criteria or include information in the inventory forms that is not outlined explicitly in Manual 6310. If other information is collected during the inventory (e.g., a unit's ecological integrity), it may be documented in field notes but is not included in the rationale for determination of the presence or absence of wilderness characteristics. Additionally, the inventory must not include any information related to the manageability of the unit for protection of wilderness characteristics (e.g., how much of the unit is leased for mineral development). Only existing developments may be documented.

Inventory Units Involving Multiple Field Offices

When inventory units include BLM-administered lands that are managed by multiple field office jurisdictions, including crossover into adjoining states, specialists should work collaboratively and use the most accurate and current data available. The original case file and supporting data is generally maintained by the lead office (usually determined as the office that administers the most acreage within the unit). Copies of data and forms should be on file at the collaborating office. The forms should be reviewed and signed by a Field or District Manager representing both field offices, even if the Permanent Documentation File is maintained by a single office.

Boundary Delineation

Determination of a unit's boundaries begins with a review of historical documents, including the original wilderness characteristics inventory and any updates (e.g., 1999 Utah Wilderness Inventory, updates for 2008 RMPs, etc.). Refer to Manual 6310 Section .06.C.1 for guidance on inventory unit boundary delineation.

Inventory teams generally adopt historic unit boundaries or consider citizens' proposed boundaries as a starting point for delineating the area to be inventoried. Constructed and maintained roads (Class B roads and Class D roads with documented maintenance) and land tenure generally form initial unit boundaries.

The unit boundaries are usually adjusted after field data collection based on an assessment of impacts to naturalness. Wilderness inventory roads must be excluded from the final inventory unit. Observations in the field may identify a need to exclude other substantially noticeable human-caused impacts to naturalness from the final inventory unit.

BLM's jurisdiction regarding the wilderness characteristics resource is limited to BLM-administered surface. Adjacent private lands or lands managed by the State of Utah or other agencies are not included in the inventory unit boundaries. However, units that are adjacent to designated wilderness or similar areas managed by other federal agencies may meet an exception to the size criteria (see Manual 6310 Section .06.C.2.a for additional information). A unit may also encompass inholdings that are owned or managed by other entities, but the inholdings are excluded from the unit boundaries and the inventory unit acreage must only reflect surface lands administered by the BLM. Outside impacts, including disturbances on adjacent lands, are not normally cited as impacts to naturalness unless a major outside impact has a direct effect on the apparent naturalness of the unit. The analysis should clearly describe the extent of the impact of human modifications to apparent naturalness for the average visitor based on the unit's size, configuration and topographic screening.

Select the most logical and defensible boundary to delineate a unit. Do not use features (e.g., substantially unnoticeable features) that do not comply with Manual 6310. Additionally, although such features may not constitute an appropriate unit boundary, they may still be evaluated as an impact under the naturalness criteria.

Apparent Naturalness

Route analysis forms (Manual 6310 – Appendix C) should be completed for every road used as a unit or sub-unit boundary or that is cherry-stemmed into a wilderness characteristics unit, unless the road so clearly meets the criteria (i.e., a paved highway or crowned and ditched road) that further documentation is unnecessary. If the status of a route is contested (i.e., questions exist regarding mechanical construction or maintenance or use), then a route evaluation form should be completed. Human impacts that are cited as substantially noticeable should be mapped and photographed. Field data should be georeferenced, dated, and include the direction the camera is facing so that the information collected is contextual and repeatable. All photo point locations should be provided on the map of the unit (see Manual 6310 Appendix A.5). Georeferenced aerial photos that were used to make determinations should also be cited as part of the administrative record. Inventory teams should take photographs from representative locations and include landscape level views where possible. The corresponding narrative should include sufficient information to allow readers to assess the impacts to apparent naturalness or outstanding opportunities for solitude or primitive and unconfined recreation and the extent of the impacts in relation to the size of the unit. Ensure that the analysis of naturalness adopts the terminology from Manual 6310 and does not include any extraneous criteria.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Manual 6310 employs the following definitions:

- Outstanding: *1.* Standing out among others of its kind; conspicuous; prominent; *2.* Superior to others of its kind [other BLM-administered lands in the broad geographical area]; distinguished; excellent.
- Opportunity: A situation or condition favorable for attainment of a goal.
- Solitude: The state of being alone or remote from others; isolation. A lonely or secluded place.
- Primitive and Unconfined Recreation: Non-motorized, non-mechanized (except as provided by law [for accessibility]), and undeveloped types of recreational activities.

Solitude can be considered the ability of a visitor to avoid the sights, sounds, and evidence of other people while **inside the unit**. The only time BLM considers impacts of sights and sounds from **outside** the inventory area is if these impacts are pervasive and omnipresent (i.e., inescapable throughout the unit). The outstanding opportunities criterion has been interpreted broadly across the agency and inventory teams should take care to avoid improperly eliminating units due to outside impacts (e.g., a large unit that is adjacent to a highway). Citing outside impacts is intended only for exceptional circumstances and requires clear documentation that the impacts are pervasive throughout the entire unit (e.g., a small unit immediately adjacent to a rock-crushing plant that operates around the clock). The subject matter expert should consider that Congress, for example, has designated wilderness areas that adjoin interstate highways and urban centers, where these outside impacts are considered neither pervasive nor omnipresent.

Documentation of the rationale for determining the presence or absence of outstanding opportunities is not solely based on topography or vegetative screening, though these features should normally be addressed in the analysis. The shape of the inventory unit may also play a role in determining whether outstanding opportunities exist for solitude or primitive and unconfined recreation. Ensure that the analysis of outstanding opportunities adopts the terminology from Manual 6310 and does not include any extraneous criteria.

Outstanding opportunities for primitive and unconfined recreation include those uses that would be appropriate in a wilderness setting (hiking, hunting, equestrian use) and not mechanical or motorized uses (mountain biking, car camping). The presence of motorized/mechanical use should be documented to the extent that it impacts primitive and unconfined recreation and solitude. If this mechanical-motorized use is a component of the rationale for finding the area does not have outstanding opportunities, clearly document its spatial and temporal extent (e. g. heavy ATV use during a two-week per year hunting season with almost no use the rest of the year is not normally a rationale for excluding an area based on motorized use.)

Supplemental Values

While the presence of supplemental values is not required for a unit to contain wilderness characteristics, BLM should document the full suite of resource values known to exist within the unit. This does not mean that the inventory team must conduct extensive research into supplemental values. Simply document the resources that are already on record or reasonably determined. The permanent documentation file should also include information on any

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In order to accurately respond to public requests for information and data calls, field offices are required to update the statewide GIS geodatabase for lands with wilderness characteristics and provide the UTSO with a signed copy of Form 1, Form 2 and the Summary of Analysis whenever an inventory is updated. Coordinate these efforts with local and state office GIS staff and the National Conservation Lands Program Lead as needed to ensure consistency with NLCS data standards.

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> In *(mo/yr)*, BLM reviewed the information and photos that *(name/organization)* submitted for the *(unit name/number)* on *(mo/yr)*, and determined that this information *(does/does not)* indicate a significant change in actions, circumstances or information relative to the conditions present when BLM conducted the original wilderness inventory or when the agency updated the wilderness inventory for this unit in *(year).*

For information that does not indicate a change in conditions or findings, the example response could continue:

> BLM specialists have verified that no changes are present that affect the size, naturalness, outstanding opportunities for solitude or primitive and unconfined recreation or supplemental values. As such, the submitted information represents a disagreement with BLM's findings rather than new information warranting re-evaluation of our inventory analysis and conclusions.

Preliminary inventory findings may be subject to release under the Freedom of Information Act (FOIA). BLM-Utah field offices should make updated and approved wilderness characteristics

inventory findings (using the forms provided in BLM Manual 6310, Appendix B) available to the public as soon as practicable after their completion and before the inventory data is used to inform decisions. BLM offices should make the findings publicly available by posting updated inventory forms on BLM websites, resulting in improved transparency and a possible decrease in FOIA requests from the public concerning BLM's final wilderness characteristics inventory findings.

As with any public document, the BLM must protect certain types of information consistent with applicable law, including Privacy Act information and sensitive cultural resources information, prior to the release of inventory findings. BLM field offices should consult with their respective FOIA, Privacy Act, and cultural resources specialists, as well as with their local/regional Solicitor's Office if they are concerned about information or data contained in these final inventory findings, as portions of these files may need to be redacted prior to their release.

WO IM 2013-106: The Role of Cooperating Agencies (CAs) in the Wilderness Characteristics Inventory and Land Use Planning Process

The BLM is responsible for compiling and maintaining the wilderness characteristics inventory, making findings regarding the presence or absence of wilderness characteristics, and incorporating the results of the inventory into the NEPA and/or land use planning processes. CAs for the project for which the inventory is being updated may collaborate and coordinate with the BLM in the inventory process (including data collection and analysis), the development of planning criteria, the formulation of alternatives, the estimation of effects of alternatives, and the selection of a preferred alternative under a Memorandum of Understanding (MOU). However, as with any member of the public, the opportunity to provide data and information does not mean that CAs may make decisions on how to manage public lands found to have wilderness characteristics. Any information provided to the BLM by CAs is given the same level of consideration as a submittal from any member of the public.

The BLM, as the agency that manages these lands, is ultimately responsible for making the final decisions in accordance with all legal requirements, and ensuring that the public interest is safeguarded. However, the BLM may, as appropriate, conduct field trips or educational sessions to explain the general inventory process to CAs or the public.

Additional Resources

Determinations on the presence or absence of wilderness characteristics is made by a BLM inventory team and signed by the authorized officer. Team members must be informed in the application of Manual 6310.

While there are currently no courses for lands with wilderness characteristics offered through DOI Learn, additional training is available through the Arthur Carhart National Wilderness Training Center - Agency Resources for BLM and through BLM's National Training Center Knowledge Resource Center. The Washington Office's National Conservation Lands Division periodically offers a webinar on lands with wilderness characteristics. The Utah State Office's Branch of Outdoor and Heritage Resources will schedule specific training modules on request.

BLM-UTAH ADDITIONAL GUIDANCE FOR MANUAL 6320 – CONSIDERING LANDS WITH WILDERNESS CHARACTERISTICS IN THE BLM LAND USE PLANNING PROCESS

Lands with wilderness characteristics units are analyzed in a land use plan in a full range of alternatives that consider protecting none, some, or all of the lands with wilderness characteristics. The plan must include a suite of potential management actions, some of which are designed to protect the size, apparent naturalness and identified outstanding opportunities for solitude or a primitive-unconfined recreation of a unit. Manual 6320 contains information on considering lands with wilderness characteristics during a Resource Management Plan (RMP) revision or amendment. Field offices undergoing a RMP revision or amendment should expect to work closely with the Utah State Office National Conservation Lands Program Lead throughout the RMP development process to incorporate the lands with wilderness characteristics policy. As most BLM-Utah field offices are currently in the implementation stage of their respective RMPs, rather than a revision or amendment, this IM focuses on site-specific NEPA rather than addressing this resource within the land use planning process.

How do we consider lands with wilderness characteristics within the NEPA process?

When a proposed implementation-level action is being considered that could impact the presence of wilderness characteristics, all field offices must ensure early in the NEPA process that a wilderness characteristics inventory of potentially affected lands (i.e., parcels that may meet the size criteria or exceptions and the naturalness criteria) is completed and documented in accordance with WO IM 2011-154 and Manual 6310. Figure 1 (Attachment 2-11) provides an illustration of the process to ensure that the lands with wilderness characteristics inventory is up to date. At a minimum, Field Offices should confirm that existing inventories are up to date when there is reason to believe that any action will adversely impact the existing or potential wilderness characteristics of an area. Any findings should be made available to the public as soon as practicable.

If new information that meets the minimum standards for review (Manual 6310 Section .06.B) is submitted by the public during a formal scoping or public comment period that could affect the BLM's determinations of wilderness characteristics within the project area, these submissions are generally considered to be substantive, timely comments.

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BLM-Utah analyzes the effects of proposed actions on all affected resources, including wilderness characteristics, when undertaking implementation-level reviews under NEPA. Analysis of the effects of an action on lands with wilderness characteristics must be completed whether or not the RMP selected an alternative to manage the lands for protection of wilderness characteristics. Restated, this means that even when a decision to select an alternative that

impairs wilderness characteristics conforms to the RMP, the impacts to the lands with wilderness characteristics unit must still be documented.

The process described in this guidance should be followed in all implementation-level NEPA reviews to ensure that impacts to lands with wilderness characteristics are analyzed, and that appropriate mitigation is considered before implementation-level decisions are made. This may include avoidance, minimization and compensation. Additionally, BLM may still reach a decision in an implementation level NEPA document to protect lands with wilderness characteristics even in areas where the land use planning decision does not emphasize the protection of lands with wilderness characteristics as a priority over other multiple uses. BLM should implement reasonable measures to minimize impacts to wilderness characteristics that are consistent with the purpose and need for the project, even when a LUP decision does not offer de facto protection for wilderness characteristics in land use planning allocations.

A. Determining if lands with wilderness characteristics are an affected resource

In accordance with the Utah NEPA Guidebook (July 2010), BLM-Utah uses an interdisciplinary team (ID) checklist to guide the preparation of a NEPA document. The checklist is completed at the onset of the NEPA process to determine what issues need to be analyzed in the NEPA document and whether lands with wilderness characteristics are a resource that is included on the checklist. There is no requirement to address lands with wilderness characteristics in an Environmental Assessment (EA) or Environmental Impact Statement (EIS) where BLM has completed an updated inventory and determined that they do not exist.

B. Interdisciplinary Team Checklist

Information on use of the interdisciplinary checklist can be found in Chapter 5 of the Utah NEPA Guidebook. If the ID team member with responsibility for wilderness resources (usually an Outdoor Recreation Planner) on the ID checklist determines that wilderness characteristics are not present (NP), or not impacted (NI) to a degree that requires detailed analysis, there is no additional requirement to assess potential impacts to wilderness characteristics in the NEPA document. However, the specialist should briefly document the rationale for the NI or NP determination.

1. If a project area consists of BLM-administered surface ownership in roadless areas that are less than 5,000 contiguous acres and do not potentially meet the size exception criteria (Manual 6310 Section .06.C.2.a), then the lands with wilderness characteristics resource is NP.

   If a project area includes parcels previously determined by BLM as lacking wilderness characteristics, and the BLM has received no new information (internally or externally) that conditions have changed, then the lands with wilderness characteristics resource is NP. The initial project review is an excellent opportunity to ensure that BLM's findings for wilderness characteristics within the project area is complete and current. Do not merely compare the project area with a geodatabase of previously identified lands with wilderness characteristics. Review pertinent information to determine whether or not full documentation of an update to the inventory is necessary.

All records and methodology used to reach a determination that lands with wilderness characteristics are not present must be documented. Example language may include: "This area was determined not to contain wilderness characteristics during the *(name of inventory (e.g., 1999 Utah Wilderness Inventory. inventory to support the 2008 Approved Resource Management Plan, etc.))*. A recent interdisciplinary team review of the inventory information indicates that there has been no change in circumstances that reverse this finding."

2. If wilderness characteristics are present, but would not be impacted by the implementation of a proposed project to an extent that detailed analysis is required, then explain why the determination of NI is appropriate. For example a site-specific EA for the renewal of a livestock grazing permit might state: "Livestock grazing is considered an acceptable land use in areas with wilderness characteristics. The proposed action does not result in any changes to the historic or current grazing regime or alter the number of animal-unit months. If the grazing permit is renewed, there would be no authorization of new range improvement projects or other surface disturbing activities. Therefore, there would be no impacts to wilderness characteristics and a detailed analysis of impacts to lands with wilderness characteristics is not required."

3. If a project area includes lands without any prior inventory for the presence or absence of wilderness characteristics on record, and the potential for wilderness characteristics may exist, then the BLM must determine whether or not a new inventory should be completed. The BLM should initiate an inventory based on specialists' knowledge of the potential for the presence of wilderness characteristics within the planning or project area, even when no new information has been submitted by the public. Additionally, when new information is received and an update to the inventory is pending, an initial determination of PI is appropriate until the presence or absence of wilderness characteristics is determined. Upon further review, if BLM determines that wilderness characteristics are not present, then the checklist will be updated to a determination of NP.

   If the ID team member with responsibility for wilderness resources determines that the proposed action would potentially impact (PI) lands with wilderness characteristics, document the potential effect to the unit on the checklist. For example, "The authorization of a ROW has the potential to impact naturalness and outstanding opportunities for solitude and primitive and unconfined recreation in the *(unit name and number)* unit." If a PI is included on the checklist, potential impacts to lands with wilderness characteristics are carried forward as an issue for analysis in the NEPA document.

C. Addressing lands with wilderness characteristics in NEPA documents

There are two scenarios involving lands with wilderness characteristics that are addressed differently in NEPA documents.

1. Lands inventoried by the BLM and found to have wilderness characteristics that have been evaluated through the RMP process ***(Scenario 1)***; and
2. Lands inventoried by the BLM and found to have wilderness characteristics that have not been evaluated in a RMP ***(Scenario 2)***. *(Note: This can include additional lands that*

were not evaluated in an RMP that are contiguous to units that were evaluated in a RMP.)

This IM instructs BLM-Utah on the method to address the two different scenarios described above in each section of the NEPA document, the FONSI (for a completed EA), and in the decision document (Decision Record (DR) for a completed EA, Record of Decision (ROD) for a completed EIS). If the discussion applies to both situations, it is titled *All lands with wilderness characteristics, regardless of evaluation in an RMP*. If it only applies to lands that have already undergone planning, it is titled *Scenario 1 - Lands with wilderness characteristics evaluated in a RMP*. If it only applies to lands that have been inventoried but have not undergone planning, it is titled *Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP*.

1. Chapter 1: Purpose and Need

Chapter 1 of an EA or EIS typically includes the purpose and need for the proposed action and a list of relevant issues in the project area. Issues identified in Chapter 1 are the focus of the environmental analysis.

All lands with wilderness characteristics, regardless of evaluation in an RMP

Under the "Identification of Issues" section, identify potential issues related to lands with wilderness characteristics. For example:

"The proposed action could impact *(naturalness, outstanding opportunities for solitude, outstanding opportunities for primitive and unconfined recreation, supplemental values)* and degrade wilderness characteristics in the *(unit name and number)*.

- How would wilderness characteristics potentially be affected by each alternative?"

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

If the RMP ROD included a decision to protect wilderness characteristics for a given unit within the project area, such as a 2008 RMP managing the unit as a "Natural Area"[1], or if the RMP applied management restrictions (i.e., conditions of use, mitigation measures) to reduce impacts to wilderness characteristics, then the proposed action must be consistent with the RMP objectives/allowable uses and management actions that are in place to protect wilderness characteristics. Document under the "Conformance with BLM Land Use Plan(s)" section.

If the project does not conform to the land use planning decisions, the BLM should evaluate whether to modify the proposal to ensure conformance, deny the project, or amend the RMP to allow for the approval of the proposal.

2. Chapter 2: Proposed Action and Alternatives

In accordance with NEPA, the BLM must explore alternative means of meeting the purpose and need for action. This includes consideration of whether or not the purpose and need of the proposed action could be fulfilled while avoiding or minimizing impacts to wilderness characteristics. Alternatives should be developed to address unresolved resource conflicts.

All lands with wilderness characteristics, regardless of evaluation in an RMP

Relevant and reasonable measures that could alleviate environmental effects of a proposed action must be identified for all resources. Analyze a full range of reasonable alternatives to provide a basis for comparing impacts to wilderness characteristics and to other resource values or uses.

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

Lands with wilderness characteristics managed for the protection of wilderness characteristics as a priority over other multiple uses (includes "Natural Areas")

Identify a preferred alternative or proposed action that conforms to the RMP decisions to protect wilderness characteristics. (Note: A land use plan amendment would be required prior to authorizing any actions that impact wilderness characteristics in an area managed for protection of wilderness characteristics).

Lands with wilderness characteristics managed for emphasis of other multiple uses

The preferred alternative or proposed action must demonstrate conformance with the RMP decisions for all affected resources. Manual 6320 directs: "In areas where the management decision is not to protect wilderness characteristics, consider measures to minimize impacts on those characteristics." For externally generated actions, if appropriate design features are not included in the Proposed Action, consider an alternative that minimizes effects to lands with wilderness characteristics. Often, measures that minimize impacts to other renewable resources (e.g., site designs to protect visual resources or intact wildlife habitat) would also minimize impacts to lands with wilderness characteristics.

Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP

Include an alternative to the Proposed Action that is modified by appropriate protections, relocations, or design features to eliminate or considerably reduce the effects on wilderness characteristics, if possible. In some instances, the No Action alternative may satisfy this criterion.

3. Chapter 3: Affected Environment

The affected environment section succinctly describes the existing condition of each resource that may be affected by implementing the proposed action. The description must be of sufficient detail to serve as a baseline against which to measure the potential effects of implementing a proposed action. Lands with wilderness characteristics are considered resources, and not special designations, in all BLM correspondence and documents.

All lands with wilderness characteristics, regardless of evaluation in an RMP

The specific wilderness characteristics of a unit should be described in the narrative of the inventory reports for each unit determined to contain lands with wilderness characteristics. At a minimum, document:

- The name and number of the lands with wilderness characteristics unit and a short statement that provides context, such as the general location and a description of the unit's wilderness characteristics;

- Provide the total acreage of the lands with wilderness characteristics unit and the associated acreage that overlaps the project or study area (if applicable); and
- Provide a map depicting the project or study area in relation to the lands with wilderness characteristics unit.

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

Tier to and incorporate by reference information included in the RMP/Final EIS. Refer to specific sections and page numbers in both documents. For example:

- "The *(unit name)* unit was inventoried during revision of the (*document name*) RMP and found to have wilderness characteristics. Protection of lands wilderness characteristics for the affected unit was analyzed in at least one alternative *(reference appropriate sections and page numbers in the RMP/Final EIS)*. The *(document name)* ROD selected an alternative that emphasizes other multiple uses as a priority over protecting wilderness characteristics because... *(include reference and page number(s) in the ROD/Approved RMP)*".
- "The *(unit name)* unit was inventoried during revision of the *(document name)* RMP and found to have wilderness characteristics. The *(document name)* ROD manages the unit for protection of wilderness characteristics and included the following prescriptions… *(include reference and page number(s) in the ROD/Approved RMP)*".

During reviews of existing inventories, document whether the existing inventory information reflects current conditions or whether there have been any changes, including significant new information submitted by the public. Cite the information from the RMP or inventory reports. For example:

- "The *(Name)* Field Office has reviewed the existing wilderness inventory findings. There have been no substantial changes to this information, as the field office has not authorized nor is aware of any actions that affect the presence or absence of wilderness characteristics within the project area or related wilderness characteristics units."

Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP

Reference any inventories that have been conducted within the project area, including units identified since the completion of the land use plan. Include the dates of the field office inventory. Cite where the inventory findings are located and how they can be obtained by the public. For example:

- "The *(Name)* Field Office updated the wilderness inventory for the *(name of unit)* unit on *(date)* and determined that the project area (or a portion thereof) contains wilderness characteristics. Copies of the BLM's wilderness characteristics inventory permanent documentation file have been included in the administrative record and are available for review at *(website link)* or at the field office upon request."

4. Chapter 4: Environmental Effects

The EA or EIS analysis must predict the degree of impacts to a resource from the implementation of the proposed action or alternative. The level of detail must be sufficient to

support reasoned conclusions concerning the amount and the degree of change (impact) caused by the proposed action and alternatives.

All lands with wilderness characteristics, regardless of evaluation in an RMP

a. **Direct and Indirect Impacts:** Under the resource section for *Lands with wilderness characteristics*, analyze relevant short- and long-term effects on the area's size, its apparent naturalness, and outstanding opportunities for solitude or primitive and unconfined types of recreation and identified supplemental values.

Direct effects are the effects caused by the action which occur at the same time and location as the implementation of the action or alternative. Indirect effects are the effects caused by the action that occur later in time or are farther removed in distance, but are still reasonably foreseeable. For example, if a project is located in an area with wilderness characteristics, within the analysis, the BLM should disclose whether the visual and auditory effects from the project on naturalness and solitude or primitive recreation opportunities would extend beyond the area of direct disturbance.

The analysis must describe the duration and magnitude of potential impacts to wilderness characteristics. Determining the magnitude of expected impacts is an analytical process and should be approached independently for each new proposed project and for each lands with wilderness characteristics unit.

To help the public and the decision-maker understand the context of the direct and indirect impacts on the lands with wilderness characteristics, consider answering the following questions for each alternative analyzed in the NEPA process (when applicable):

1. **Size:** Would the action impact the unit so that there are no longer 5,000 acres or more of natural (i.e., roadless, primarily undeveloped) BLM lands? If so, would the area still meet the size criteria as defined in BLM Manual 6310, Section .06, Subsection C, 2(a), i(2)?

- Where is project located within the wilderness characteristics unit? Is the project located in the interior of the unit or near the boundary?
- Would the action bisect a lands with wilderness characteristics unit and segregate the area into multiple sub-units? If so, what would be the size of the sub-units?

2. **Naturalness:** Does the action affect the unit so that it no longer appears to be affected primarily by the forces of nature?

- Does the action affect the area so that it no longer appears to have been affected primarily by the forces of nature, and so that any work of human beings is no longer substantially unnoticeable? (*Note: examples of human-made features that may be considered substantially unnoticeable in certain cases are: trails, trail signs, bridges, fire breaks, pit toilets, fisheries enhancement facilities, fire rings, historic properties, archaeological resources, hitching posts, snow gauges, water quantity and quality measuring devices, research monitoring markers and devices, minor radio repeater sites, air quality monitoring devices, fencing, spring developments, barely visible linear disturbances, and stock ponds. Although individually these facilities may not substantially affect naturalness, their impacts should also be assessed cumulatively.*)

- Document all substantially noticeable human impacts that will be present in the area after implementation of each alternative. Note the expected duration of the impacts (i.e., long-term, short-term, defined period of time, etc.) If several minor impacts will occur, does their cumulative effect on the area's degree of apparent naturalness reach a threshold that cause the area to no longer meet the naturalness criterion?

3. **Solitude and Primitive and Unconfined Recreation:** Does the action affect the area so that it no longer provides the outstanding opportunities for solitude or primitive and unconfined types of recreation documented in the unit's permanent documentation file? Note the expected duration of the impacts. (*Note: Reference the inventory report when determining the effect on primitive and unconfined types of recreation. Some areas may provide outstanding opportunities for a diversity of primitive and unconfined recreational activities possible in the area, or simply for the outstanding quality of one opportunity. Not every unit will contain both outstanding opportunities for solitude and outstanding opportunities for primitive and unconfined recreation. Assess the effects only for the characteristics that have been documented as present.)*

- ***Solitude*:** Determine whether each alternative affects the area so that it would remove, or preclude, outstanding opportunities for solitude. Would the action cause a visitor to be unable to avoid the sights, sounds and evidence of other people in the area? Factors or elements of an action that may influence a visitor's solitude include distance between the project and areas of frequent visitation, vegetative screening and topography around the project area, likelihood that the project will attract significant additional public visitation, and the ability of visitors to avoid the project area and find seclusion in other parts of the inventory unit.
- ***Primitive and Unconfined Recreation*:** Determine whether each alternative affects the area in such a way that it prevents or removes outstanding opportunities for primitive and unconfined types of recreation. Would the action impair the qualities of the primitive and unconfined recreation opportunities to the degree that they would no longer be outstanding?

4. **Supplemental Values:** Does the alternative impact a unit's supplemental values? Determine and document any potential impacts to the supplemental values documented in the unit's permanent documentation file. Impacts to supplemental values may be analyzed in their respective resource sections in the NEPA document. Where applicable, analysis of impacts to supplemental values may simply reference other resource sections.

b. **Cumulative Impacts**: Document how the proposed action and alternatives would cumulatively impact lands with wilderness characteristics.

- Describe the cumulative impact analysis area, including acreage. Typically, the area of analysis should include the wilderness characteristics unit and any other lands that have been determined to have wilderness characteristics, such as Wilderness Study Areas and designated wilderness within the cumulative impact analysis area, including those areas managed by other agencies.
- List all relevant past, present or reasonably foreseeable actions that have affected or may affect lands with wilderness characteristics within the cumulative impact analysis area.

These may include future vegetation treatments for wildlife habitat restoration, travel management planning and other projects that are reasonably foreseeable.
- Analyze the cumulative effects to wilderness characteristics. Each alternative should be addressed separately following guidance provided in Section 6.8.3 of the BLM NEPA Handbook (H-1790-1). Be aware that indirect effects contribute to cumulative effects.

5. Record of Decision/Decision Record and Finding of No Significant Impact

For EA-level projects, the BLM must determine whether the effects of the selected alternative are significant. The FONSI is a document that explains the reasons why an action will have no significant effects. Neither an EA, FONSI, nor EIS is a decision document. The BLM uses the Decision Record (DR) to document decisions when an EA results in a FONSI. A Record of Decision (ROD) is used to document the selected alternative if an EIS is completed.

Impairment of wilderness characteristics does not automatically constitute a significant impact on the human environment that warrants preparation of an EIS. The NEPA analysis determines significance on a case-by-case basis, considering the level and intensity of impacts, and the context of the impact in consideration of the presence of other areas possessing wilderness characteristics that are protected within the project analysis area (including designated wilderness and Wilderness Study Areas).

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

For EA-level projects, in the long-form FONSI, explain how the effects of the action being considered do not exceed those analyzed or approved in the RMP. Reference specific sections of the RMP/Final EIS and ROD/Approved RMP.

If the decision (DR or ROD) is to approve an action that will result in loss of some or all of the wilderness characteristics in an area, provide the rationale for the decision.

- Explain how approval of the action is necessary to meet the purpose and need of the project.
- Explain that in the ROD/Approved RMP that the BLM chose to emphasize other multiple uses as a priority over protecting wilderness characteristics, and instead selected an alternative that allows for other uses of the lands that may be incompatible with managing to protect wilderness characteristics.
- Discuss any design features or mitigation incorporated into the selected alternative that would minimize effects to wilderness characteristics.

Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP

Address whether the approval of the proposed action would impact existing wilderness characteristics so as to negate the eligibility of all or a portion of the inventoried area for consideration in a future planning effort for wilderness resource protection. BLM should consider selection of another alternative, such as the No Action Alternative or an alternative that avoids the lands with wilderness characteristics. The BLM may also consider deferral of the action, subject to valid existing rights, until a new land use plan is completed.

- Include in the NEPA analysis at least one alternative that avoids impacts to wilderness characteristics.

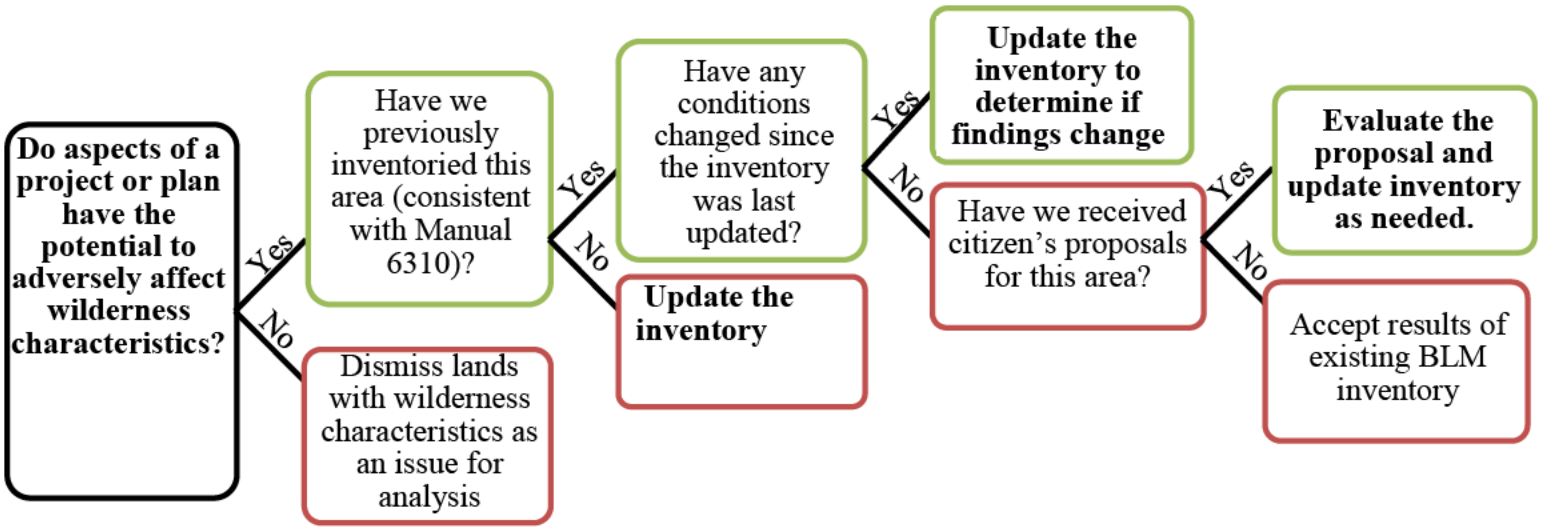
- If applicable, explain how the selected alternative meets the purpose and need of the proposed action and why BLM selected it rather than another alternative that includes management actions to protect wilderness characteristics in the decision document.
- Discuss any design feature or mitigation incorporated into the selected alternative that minimizes effects to wilderness characteristics.

If the current RMP does not address a wilderness characteristics unit that is affected by a new proposed action, BLM should also consider whether a plan amendment is appropriate[2]. BLM is not required to initiate a plan amendment each time an inventory is updated. The updated inventory is a change to the existing environment but does not change management decisions in the RMP. Plan amendments may be prompted in response to new or changed uses on the land, or to incorporate significant new information from resource assessment, monitoring, or research. When determining whether or not to amend a land use plan, the BLM must not only consider the resource, but also other workload priorities, budgetary constraints, and staff capabilities.

[1]The terms "Natural Area" and "designation" are no longer used by the BLM in reference to lands with wilderness characteristics. Therefore, any discussion of "natural areas" should be clearly related to the context of Utah's 2008 planning decisions.

[2]The National Defense Authorization Act (NDAA § 2815 [a and d], 113 Stat. 512, 852 [1999]) provided in § 2815(d) that the Secretary of the Interior may not proceed with any amendment of any individual resource management plan adjacent to or near the Utah Test and Training Range and Dugway Proving Grounds or beneath Military Operating Areas, Restricted Areas, and airspace that make up the Utah Test and Training Range until the Secretary of Defense submits a study to Congress evaluating the impacts of any proposed changes to land management plans upon military training, testing, and operational readiness. BLM land use plans affected by the NDAA are the Box Elder RMP, House Range Resource Area RMP, Iso-tract Management Framework Plan (MFP), Park City RMP, Pony Express RMP, Randolph RMP, and Warm Springs Resource Area RMP.

Figure 1. Ensuring the inventory is current prior to analysis



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impairs wilderness characteristics conforms to the RMP, the impacts to the lands with wilderness characteristics unit must still be documented.

The process described in this guidance should be followed in all implementation-level NEPA reviews to ensure that impacts to lands with wilderness characteristics are analyzed, and that appropriate mitigation is considered before implementation-level decisions are made. This may include avoidance, minimization and compensation. Additionally, BLM may still reach a decision in an implementation level NEPA document to protect lands with wilderness characteristics even in areas where the land use planning decision does not emphasize the protection of lands with wilderness characteristics as a priority over other multiple uses. BLM should implement reasonable measures to minimize impacts to wilderness characteristics that are consistent with the purpose and need for the project, even when a LUP decision does not offer de facto protection for wilderness characteristics in land use planning allocations.

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Information on use of the interdisciplinary checklist can be found in Chapter 5 of the Utah NEPA Guidebook. If the ID team member with responsibility for wilderness resources (usually an Outdoor Recreation Planner) on the ID checklist determines that wilderness characteristics are not present (NP), or not impacted (NI) to a degree that requires detailed analysis, there is no additional requirement to assess potential impacts to wilderness characteristics in the NEPA document. However, the specialist should briefly document the rationale for the NI or NP determination.

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   If a project area includes parcels previously determined by BLM as lacking wilderness characteristics, and the BLM has received no new information (internally or externally) that conditions have changed, then the lands with wilderness characteristics resource is NP. The initial project review is an excellent opportunity to ensure that BLM's findings for wilderness characteristics within the project area is complete and current. Do not merely compare the project area with a geodatabase of previously identified lands with wilderness characteristics. Review pertinent information to determine whether or not full documentation of an update to the inventory is necessary.

All records and methodology used to reach a determination that lands with wilderness characteristics are not present must be documented. Example language may include: "This area was determined not to contain wilderness characteristics during the *(name of inventory (e.g., 1999 Utah Wilderness Inventory. inventory to support the 2008 Approved Resource Management Plan, etc.))*. A recent interdisciplinary team review of the inventory information indicates that there has been no change in circumstances that reverse this finding."

2. If wilderness characteristics are present, but would not be impacted by the implementation of a proposed project to an extent that detailed analysis is required, then explain why the determination of NI is appropriate. For example a site-specific EA for the renewal of a livestock grazing permit might state: "Livestock grazing is considered an acceptable land use in areas with wilderness characteristics. The proposed action does not result in any changes to the historic or current grazing regime or alter the number of animal-unit months. If the grazing permit is renewed, there would be no authorization of new range improvement projects or other surface disturbing activities. Therefore, there would be no impacts to wilderness characteristics and a detailed analysis of impacts to lands with wilderness characteristics is not required."

3. If a project area includes lands without any prior inventory for the presence or absence of wilderness characteristics on record, and the potential for wilderness characteristics may exist, then the BLM must determine whether or not a new inventory should be completed. The BLM should initiate an inventory based on specialists' knowledge of the potential for the presence of wilderness characteristics within the planning or project area, even when no new information has been submitted by the public. Additionally, when new information is received and an update to the inventory is pending, an initial determination of PI is appropriate until the presence or absence of wilderness characteristics is determined. Upon further review, if BLM determines that wilderness characteristics are not present, then the checklist will be updated to a determination of NP.

   If the ID team member with responsibility for wilderness resources determines that the proposed action would potentially impact (PI) lands with wilderness characteristics, document the potential effect to the unit on the checklist. For example, "The authorization of a ROW has the potential to impact naturalness and outstanding opportunities for solitude and primitive and unconfined recreation in the *(unit name and number)* unit." If a PI is included on the checklist, potential impacts to lands with wilderness characteristics are carried forward as an issue for analysis in the NEPA document.

C. Addressing lands with wilderness characteristics in NEPA documents

There are two scenarios involving lands with wilderness characteristics that are addressed differently in NEPA documents.

1. Lands inventoried by the BLM and found to have wilderness characteristics that have been evaluated through the RMP process ***(Scenario 1)***; and
2. Lands inventoried by the BLM and found to have wilderness characteristics that have not been evaluated in a RMP ***(Scenario 2)***. *(Note: This can include additional lands that*

were not evaluated in an RMP that are contiguous to units that were evaluated in a RMP.)

This IM instructs BLM-Utah on the method to address the two different scenarios described above in each section of the NEPA document, the FONSI (for a completed EA), and in the decision document (Decision Record (DR) for a completed EA, Record of Decision (ROD) for a completed EIS). If the discussion applies to both situations, it is titled *All lands with wilderness characteristics, regardless of evaluation in an RMP*. If it only applies to lands that have already undergone planning, it is titled *Scenario 1 - Lands with wilderness characteristics evaluated in a RMP*. If it only applies to lands that have been inventoried but have not undergone planning, it is titled *Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP*.

1. Chapter 1: Purpose and Need

Chapter 1 of an EA or EIS typically includes the purpose and need for the proposed action and a list of relevant issues in the project area. Issues identified in Chapter 1 are the focus of the environmental analysis.

All lands with wilderness characteristics, regardless of evaluation in an RMP

Under the "Identification of Issues" section, identify potential issues related to lands with wilderness characteristics. For example:

"The proposed action could impact *(naturalness, outstanding opportunities for solitude, outstanding opportunities for primitive and unconfined recreation, supplemental values)* and degrade wilderness characteristics in the *(unit name and number)*.

- How would wilderness characteristics potentially be affected by each alternative?"

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

If the RMP ROD included a decision to protect wilderness characteristics for a given unit within the project area, such as a 2008 RMP managing the unit as a "Natural Area"[1], or if the RMP applied management restrictions (i.e., conditions of use, mitigation measures) to reduce impacts to wilderness characteristics, then the proposed action must be consistent with the RMP objectives/allowable uses and management actions that are in place to protect wilderness characteristics. Document under the "Conformance with BLM Land Use Plan(s)" section.

If the project does not conform to the land use planning decisions, the BLM should evaluate whether to modify the proposal to ensure conformance, deny the project, or amend the RMP to allow for the approval of the proposal.

2. Chapter 2: Proposed Action and Alternatives

In accordance with NEPA, the BLM must explore alternative means of meeting the purpose and need for action. This includes consideration of whether or not the purpose and need of the proposed action could be fulfilled while avoiding or minimizing impacts to wilderness characteristics. Alternatives should be developed to address unresolved resource conflicts.

All lands with wilderness characteristics, regardless of evaluation in an RMP

Relevant and reasonable measures that could alleviate environmental effects of a proposed action must be identified for all resources. Analyze a full range of reasonable alternatives to provide a basis for comparing impacts to wilderness characteristics and to other resource values or uses.

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

Lands with wilderness characteristics managed for the protection of wilderness characteristics as a priority over other multiple uses (includes "Natural Areas")

Identify a preferred alternative or proposed action that conforms to the RMP decisions to protect wilderness characteristics. (Note: A land use plan amendment would be required prior to authorizing any actions that impact wilderness characteristics in an area managed for protection of wilderness characteristics).

Lands with wilderness characteristics managed for emphasis of other multiple uses

The preferred alternative or proposed action must demonstrate conformance with the RMP decisions for all affected resources. Manual 6320 directs: "In areas where the management decision is not to protect wilderness characteristics, consider measures to minimize impacts on those characteristics." For externally generated actions, if appropriate design features are not included in the Proposed Action, consider an alternative that minimizes effects to lands with wilderness characteristics. Often, measures that minimize impacts to other renewable resources (e.g., site designs to protect visual resources or intact wildlife habitat) would also minimize impacts to lands with wilderness characteristics.

Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP

Include an alternative to the Proposed Action that is modified by appropriate protections, relocations, or design features to eliminate or considerably reduce the effects on wilderness characteristics, if possible. In some instances, the No Action alternative may satisfy this criterion.

3. Chapter 3: Affected Environment

The affected environment section succinctly describes the existing condition of each resource that may be affected by implementing the proposed action. The description must be of sufficient detail to serve as a baseline against which to measure the potential effects of implementing a proposed action. Lands with wilderness characteristics are considered resources, and not special designations, in all BLM correspondence and documents.

All lands with wilderness characteristics, regardless of evaluation in an RMP

The specific wilderness characteristics of a unit should be described in the narrative of the inventory reports for each unit determined to contain lands with wilderness characteristics. At a minimum, document:

- The name and number of the lands with wilderness characteristics unit and a short statement that provides context, such as the general location and a description of the unit's wilderness characteristics;

- Provide the total acreage of the lands with wilderness characteristics unit and the associated acreage that overlaps the project or study area (if applicable); and
- Provide a map depicting the project or study area in relation to the lands with wilderness characteristics unit.

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

Tier to and incorporate by reference information included in the RMP/Final EIS. Refer to specific sections and page numbers in both documents. For example:

- "The *(unit name)* unit was inventoried during revision of the (*document name*) RMP and found to have wilderness characteristics. Protection of lands wilderness characteristics for the affected unit was analyzed in at least one alternative *(reference appropriate sections and page numbers in the RMP/Final EIS)*. The *(document name)* ROD selected an alternative that emphasizes other multiple uses as a priority over protecting wilderness characteristics because... *(include reference and page number(s) in the ROD/Approved RMP)*".
- "The *(unit name)* unit was inventoried during revision of the *(document name)* RMP and found to have wilderness characteristics. The *(document name)* ROD manages the unit for protection of wilderness characteristics and included the following prescriptions… *(include reference and page number(s) in the ROD/Approved RMP)*".

During reviews of existing inventories, document whether the existing inventory information reflects current conditions or whether there have been any changes, including significant new information submitted by the public. Cite the information from the RMP or inventory reports. For example:

- "The *(Name)* Field Office has reviewed the existing wilderness inventory findings. There have been no substantial changes to this information, as the field office has not authorized nor is aware of any actions that affect the presence or absence of wilderness characteristics within the project area or related wilderness characteristics units."

Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP

Reference any inventories that have been conducted within the project area, including units identified since the completion of the land use plan. Include the dates of the field office inventory. Cite where the inventory findings are located and how they can be obtained by the public. For example:

- "The *(Name)* Field Office updated the wilderness inventory for the *(name of unit)* unit on *(date)* and determined that the project area (or a portion thereof) contains wilderness characteristics. Copies of the BLM's wilderness characteristics inventory permanent documentation file have been included in the administrative record and are available for review at *(website link)* or at the field office upon request."

4. Chapter 4: Environmental Effects

The EA or EIS analysis must predict the degree of impacts to a resource from the implementation of the proposed action or alternative. The level of detail must be sufficient to

support reasoned conclusions concerning the amount and the degree of change (impact) caused by the proposed action and alternatives.

All lands with wilderness characteristics, regardless of evaluation in an RMP

a. **Direct and Indirect Impacts:** Under the resource section for *Lands with wilderness characteristics*, analyze relevant short- and long-term effects on the area's size, its apparent naturalness, and outstanding opportunities for solitude or primitive and unconfined types of recreation and identified supplemental values.

Direct effects are the effects caused by the action which occur at the same time and location as the implementation of the action or alternative. Indirect effects are the effects caused by the action that occur later in time or are farther removed in distance, but are still reasonably foreseeable. For example, if a project is located in an area with wilderness characteristics, within the analysis, the BLM should disclose whether the visual and auditory effects from the project on naturalness and solitude or primitive recreation opportunities would extend beyond the area of direct disturbance.

The analysis must describe the duration and magnitude of potential impacts to wilderness characteristics. Determining the magnitude of expected impacts is an analytical process and should be approached independently for each new proposed project and for each lands with wilderness characteristics unit.

To help the public and the decision-maker understand the context of the direct and indirect impacts on the lands with wilderness characteristics, consider answering the following questions for each alternative analyzed in the NEPA process (when applicable):

1. **Size:** Would the action impact the unit so that there are no longer 5,000 acres or more of natural (i.e., roadless, primarily undeveloped) BLM lands? If so, would the area still meet the size criteria as defined in BLM Manual 6310, Section .06, Subsection C, 2(a), i(2)?

- Where is project located within the wilderness characteristics unit? Is the project located in the interior of the unit or near the boundary?
- Would the action bisect a lands with wilderness characteristics unit and segregate the area into multiple sub-units? If so, what would be the size of the sub-units?

2. **Naturalness:** Does the action affect the unit so that it no longer appears to be affected primarily by the forces of nature?

- Does the action affect the area so that it no longer appears to have been affected primarily by the forces of nature, and so that any work of human beings is no longer substantially unnoticeable? (*Note: examples of human-made features that may be considered substantially unnoticeable in certain cases are: trails, trail signs, bridges, fire breaks, pit toilets, fisheries enhancement facilities, fire rings, historic properties, archaeological resources, hitching posts, snow gauges, water quantity and quality measuring devices, research monitoring markers and devices, minor radio repeater sites, air quality monitoring devices, fencing, spring developments, barely visible linear disturbances, and stock ponds. Although individually these facilities may not substantially affect naturalness, their impacts should also be assessed cumulatively.*)

- Document all substantially noticeable human impacts that will be present in the area after implementation of each alternative. Note the expected duration of the impacts (i.e., long-term, short-term, defined period of time, etc.) If several minor impacts will occur, does their cumulative effect on the area's degree of apparent naturalness reach a threshold that cause the area to no longer meet the naturalness criterion?

3. **Solitude and Primitive and Unconfined Recreation:** Does the action affect the area so that it no longer provides the outstanding opportunities for solitude or primitive and unconfined types of recreation documented in the unit's permanent documentation file? Note the expected duration of the impacts. (*Note: Reference the inventory report when determining the effect on primitive and unconfined types of recreation. Some areas may provide outstanding opportunities for a diversity of primitive and unconfined recreational activities possible in the area, or simply for the outstanding quality of one opportunity. Not every unit will contain both outstanding opportunities for solitude and outstanding opportunities for primitive and unconfined recreation. Assess the effects only for the characteristics that have been documented as present.)*

- ***Solitude*:** Determine whether each alternative affects the area so that it would remove, or preclude, outstanding opportunities for solitude. Would the action cause a visitor to be unable to avoid the sights, sounds and evidence of other people in the area? Factors or elements of an action that may influence a visitor's solitude include distance between the project and areas of frequent visitation, vegetative screening and topography around the project area, likelihood that the project will attract significant additional public visitation, and the ability of visitors to avoid the project area and find seclusion in other parts of the inventory unit.
- ***Primitive and Unconfined Recreation*:** Determine whether each alternative affects the area in such a way that it prevents or removes outstanding opportunities for primitive and unconfined types of recreation. Would the action impair the qualities of the primitive and unconfined recreation opportunities to the degree that they would no longer be outstanding?

4. **Supplemental Values:** Does the alternative impact a unit's supplemental values? Determine and document any potential impacts to the supplemental values documented in the unit's permanent documentation file. Impacts to supplemental values may be analyzed in their respective resource sections in the NEPA document. Where applicable, analysis of impacts to supplemental values may simply reference other resource sections.

b. **Cumulative Impacts**: Document how the proposed action and alternatives would cumulatively impact lands with wilderness characteristics.

- Describe the cumulative impact analysis area, including acreage. Typically, the area of analysis should include the wilderness characteristics unit and any other lands that have been determined to have wilderness characteristics, such as Wilderness Study Areas and designated wilderness within the cumulative impact analysis area, including those areas managed by other agencies.
- List all relevant past, present or reasonably foreseeable actions that have affected or may affect lands with wilderness characteristics within the cumulative impact analysis area.

These may include future vegetation treatments for wildlife habitat restoration, travel management planning and other projects that are reasonably foreseeable.
- Analyze the cumulative effects to wilderness characteristics. Each alternative should be addressed separately following guidance provided in Section 6.8.3 of the BLM NEPA Handbook (H-1790-1). Be aware that indirect effects contribute to cumulative effects.

5. Record of Decision/Decision Record and Finding of No Significant Impact

For EA-level projects, the BLM must determine whether the effects of the selected alternative are significant. The FONSI is a document that explains the reasons why an action will have no significant effects. Neither an EA, FONSI, nor EIS is a decision document. The BLM uses the Decision Record (DR) to document decisions when an EA results in a FONSI. A Record of Decision (ROD) is used to document the selected alternative if an EIS is completed.

Impairment of wilderness characteristics does not automatically constitute a significant impact on the human environment that warrants preparation of an EIS. The NEPA analysis determines significance on a case-by-case basis, considering the level and intensity of impacts, and the context of the impact in consideration of the presence of other areas possessing wilderness characteristics that are protected within the project analysis area (including designated wilderness and Wilderness Study Areas).

Scenario 1 - Lands with wilderness characteristics evaluated in a RMP

For EA-level projects, in the long-form FONSI, explain how the effects of the action being considered do not exceed those analyzed or approved in the RMP. Reference specific sections of the RMP/Final EIS and ROD/Approved RMP.

If the decision (DR or ROD) is to approve an action that will result in loss of some or all of the wilderness characteristics in an area, provide the rationale for the decision.

- Explain how approval of the action is necessary to meet the purpose and need of the project.
- Explain that in the ROD/Approved RMP that the BLM chose to emphasize other multiple uses as a priority over protecting wilderness characteristics, and instead selected an alternative that allows for other uses of the lands that may be incompatible with managing to protect wilderness characteristics.
- Discuss any design features or mitigation incorporated into the selected alternative that would minimize effects to wilderness characteristics.

Scenario 2 - Lands with wilderness characteristics not evaluated in a RMP

Address whether the approval of the proposed action would impact existing wilderness characteristics so as to negate the eligibility of all or a portion of the inventoried area for consideration in a future planning effort for wilderness resource protection. BLM should consider selection of another alternative, such as the No Action Alternative or an alternative that avoids the lands with wilderness characteristics. The BLM may also consider deferral of the action, subject to valid existing rights, until a new land use plan is completed.

- Include in the NEPA analysis at least one alternative that avoids impacts to wilderness characteristics.

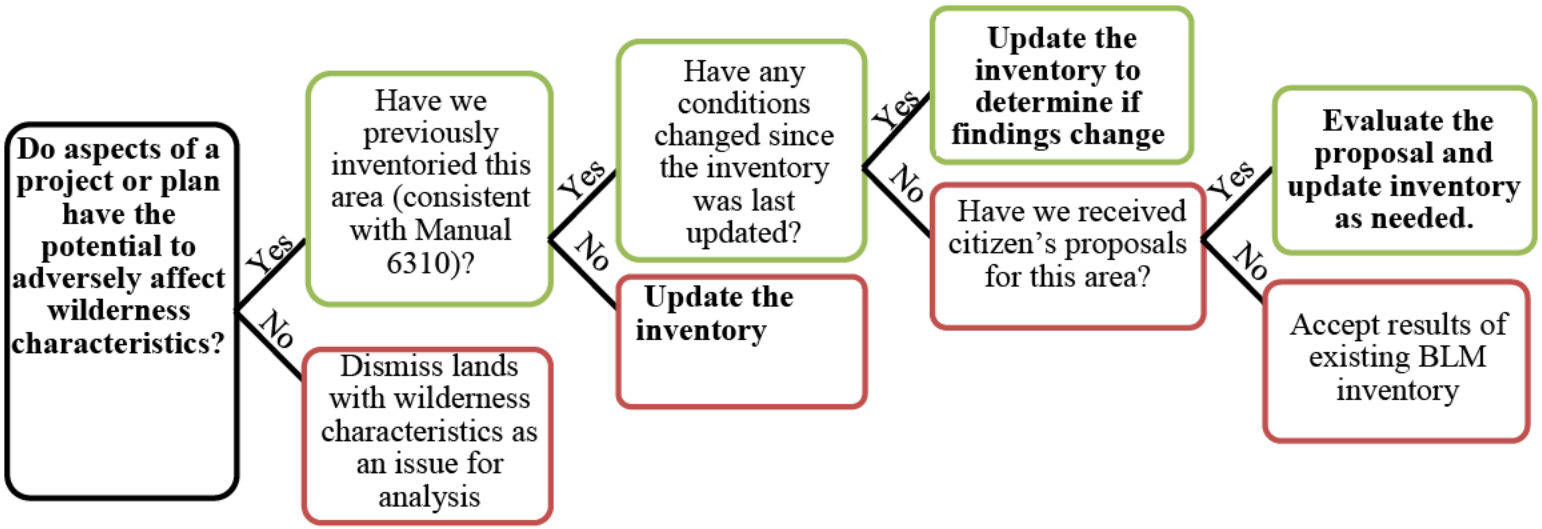
- If applicable, explain how the selected alternative meets the purpose and need of the proposed action and why BLM selected it rather than another alternative that includes management actions to protect wilderness characteristics in the decision document.
- Discuss any design feature or mitigation incorporated into the selected alternative that minimizes effects to wilderness characteristics.

If the current RMP does not address a wilderness characteristics unit that is affected by a new proposed action, BLM should also consider whether a plan amendment is appropriate[2]. BLM is not required to initiate a plan amendment each time an inventory is updated. The updated inventory is a change to the existing environment but does not change management decisions in the RMP. Plan amendments may be prompted in response to new or changed uses on the land, or to incorporate significant new information from resource assessment, monitoring, or research. When determining whether or not to amend a land use plan, the BLM must not only consider the resource, but also other workload priorities, budgetary constraints, and staff capabilities.

[1]The terms "Natural Area" and "designation" are no longer used by the BLM in reference to lands with wilderness characteristics. Therefore, any discussion of "natural areas" should be clearly related to the context of Utah's 2008 planning decisions.

[2]The National Defense Authorization Act (NDAA § 2815 [a and d], 113 Stat. 512, 852 [1999]) provided in § 2815(d) that the Secretary of the Interior may not proceed with any amendment of any individual resource management plan adjacent to or near the Utah Test and Training Range and Dugway Proving Grounds or beneath Military Operating Areas, Restricted Areas, and airspace that make up the Utah Test and Training Range until the Secretary of Defense submits a study to Congress evaluating the impacts of any proposed changes to land management plans upon military training, testing, and operational readiness. BLM land use plans affected by the NDAA are the Box Elder RMP, House Range Resource Area RMP, Iso-tract Management Framework Plan (MFP), Park City RMP, Pony Express RMP, Randolph RMP, and Warm Springs Resource Area RMP.

Figure 1. Ensuring the inventory is current prior to analysis



United States Department of the Interior

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In Reply Refer To:
6310 & 6320 (UT-934) **P**

September 30, 2016

EMS TRANSMISSION 10/04/2016
Instruction Memorandum No. UT 2016-027
Expires: 09/30/2019

To: Recreation and Wilderness Staff, Planning and Environmental Coordinators, Field Managers, and District Managers

From: Utah State Director

Subject: Bureau of Land Management (BLM)-Utah Guidance for the Lands with Wilderness Characteristics Resource

Program Area: Lands with wilderness characteristics resource

Purpose: This Instruction Memorandum provides additional guidance to BLM Utah in considering external information, updating, and maintaining an inventory of lands with wilderness characteristics. This guidance outlines the process by which BLM Utah will analyze potential impacts to lands with wilderness characteristics through the National Environmental Policy Act (NEPA) process and consider potential management options for the lands with wilderness characteristics resource outside of the land use planning process.

Policy/Action: This instruction memorandum (IM) serves as BLM-Utah's additional guidance to:

- Prepare and maintain on a continuing basis an inventory of wilderness characteristics on BLM-administered public lands that reflects changes in conditions;
- Communicate with the public regarding the wilderness characteristics inventory process; and
- Consider the wilderness characteristics resource through the National Environmental Policy Act (NEPA) and/or land use planning process

Timeframe: This policy is effective immediately.

Budget Impact: This guidance may require additional staff time during the development of a NEPA document. The additional time needed to comply with this guidance is nominal and should not represent an adverse budget impact.

Background: Lands with wilderness characteristics have been recognized as a distinct resource since the passage of the Federal Land Policy and Management Act of 1976 (FLPMA), and should be considered equally along with all other resources present in a planning area. Section 201 of FLPMA requires the BLM to maintain, on a continuing basis, an inventory of all public lands and their resources and other values, including wilderness characteristics. BLM field offices must maintain and update resource inventory information to ensure that adequate data is available to support decision making.

BLM Manual 6310 states that, "State Directors will implement policy and provide statewide program coordination and guidance for conducting wilderness characteristics inventories." BLM Manual 6320 states that, "State Directors will implement policy and provide statewide program coordination and guidance for the consideration of lands with wilderness characteristics inventories and, as warranted, the protection of lands with wilderness characteristics in land use plans." The topics addressed in this IM respond to BLM-Utah's need for additional wilderness characteristics guidance identified by the BLM-Utah Executive Leadership Team in 2014 and are intended to ensure consistency in the application of policy.

Manual/Handbook Sections Affected: This IM supplements national policies in BLM Manual 6310 - *Conducting Wilderness Characteristics Inventory on BLM Lands* and BLM Manual 6320 - *Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process*, while integrating national guidance in Washington Office (WO) IM 2013-106: Bureau of Land Management Manual No. 6310 and 6320 — *Additional Guidance Regarding Public and Cooperating Agency Involvement in and Access to Wilderness Characteristics Inventory Information and the Land Use Planning Process*.

These national documents continue to serve as BLM-Utah's primary and foundational policies for inventorying, planning and managing for wilderness characteristics, which are not repeated in this Utah IM. Readers should consult these sources prior to interpreting or implementing this additional guidance.

Coordination: BLM-Utah Outdoor and Heritage Resources and Planning and Environmental Coordination program staff developed this guidance in coordination with the BLM-Utah Leadership Team; the BLM Washington Office National Landscape Conservation System staff; and the U.S. Department of the Interior's Intermountain Region Office of the Solicitor staff.

Contact: Allison Ginn, National Conservation Lands Program Lead, BLM Utah State Office at (801) 539-4053, or via email aginn@blm.gov.

Signed by:
Jenna Whitlock
Acting Utah State Director

Authenticated by:
Doug York
Utah State Records Manager

2 Attachments:

1- BLM-Utah Additional Guidance For Manual 6310 – Conducting Wilderness Inventory On BLM Lands (7pp)
2- BLM-Utah Additional Guidance For Manual 6320 – Considering Lands With Wilderness Characteristics In The BLM Land Use Planning Process (11pp)

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Timeframe: This policy is effective immediately.

Budget Impact: This guidance may require additional staff time during the development of a NEPA document. The additional time needed to comply with this guidance is nominal and should not represent an adverse budget impact.

Background: Lands with wilderness characteristics have been recognized as a distinct resource since the passage of the Federal Land Policy and Management Act of 1976 (FLPMA), and should be considered equally along with all other resources present in a planning area. Section 201 of FLPMA requires the BLM to maintain, on a continuing basis, an inventory of all public lands and their resources and other values, including wilderness characteristics. BLM field offices must maintain and update resource inventory information to ensure that adequate data is available to support decision making.

BLM Manual 6310 states that, "State Directors will implement policy and provide statewide program coordination and guidance for conducting wilderness characteristics inventories." BLM Manual 6320 states that, "State Directors will implement policy and provide statewide program coordination and guidance for the consideration of lands with wilderness characteristics inventories and, as warranted, the protection of lands with wilderness characteristics in land use plans." The topics addressed in this IM respond to BLM-Utah's need for additional wilderness characteristics guidance identified by the BLM-Utah Executive Leadership Team in 2014 and are intended to ensure consistency in the application of policy.

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BLM Idaho: Statewide Supplemental Guidance for Lands with Wilderness Characteristics

Background

It is often necessary for Bureau of Land Management (BLM) field offices to maintain and update resource inventory information to ensure adequate data is available to support decision making. Inventory updates are frequently performed when a land use plan is being revised, although they can also be updated at any time to ensure that the baseline information is current and relevant. This is especially important when using this information to perform an analysis for the National Environmental Policy Act (NEPA). One of the resource inventories that requires updating is lands with wilderness characteristics. Lands with wilderness characteristics, while a seemingly new concept to many, have been recognized as a distinct resource since the passage of the Federal Land Policy and Management Act of 1976 (FLPMA), and should be considered equally with all other resources present in a planning or project area. Section 201 of FLPMA requires the BLM to maintain, on a continuing basis, an inventory of all public lands and their resources and other values, including wilderness characteristics. To ensure that a consistent approach is taken on this matter, the BLM issued two manuals in March of 2012:

Manual 6310 – *Conducting Wilderness Characteristics Inventory on BLM Lands*

Manual 6320 – *Considering Lands with Wilderness Characteristics in Land Use Plans*

All of the Idaho guidance should be should be considered in the context of Manuals 6310 and 6320.

In an effort to ensure that the BLM has the most up to date information to use in analysis and decision making, this Idaho policy has been developed to guide the BLM in updating and maintaining its inventory of wilderness characteristics. This policy is also intended to assist staff in determining how to analyze potential impacts to wilderness characteristics through the NEPA process and to consider potential options to reduce impacts to the resource when management options have not been determined through the land use planning process. The following direction outlines the steps the BLM Idaho will take to ensure that wilderness characteristics are considered as a resource value.

This direction is divided into three parts. Part I identifies the process by which the BLM Idaho will ensure inventories are up to date and considers all available information while determining if wilderness characteristics are an issue for analysis in relevant NEPA processes. Part II will assist the BLM Idaho in considering management options for lands with wilderness through the NEPA process. Part III will provide guidance on how to appropriately analyze impacts to wilderness characteristics where potential resource conflicts exist.

Part I – Maintaining and Updating Inventories

It is BLM policy that field offices complete and maintain a current inventory of lands with wilderness characteristics (see BLM Manual 6310.06 A Maintaining the Inventory). This is particularly important when projects are proposed in areas that are known to have wilderness characteristics or in areas that may have wilderness characteristics but have not been inventoried. Additionally, if new inventory findings are received from the public, the BLM should acknowledge the receipt of this information in a timely manner.

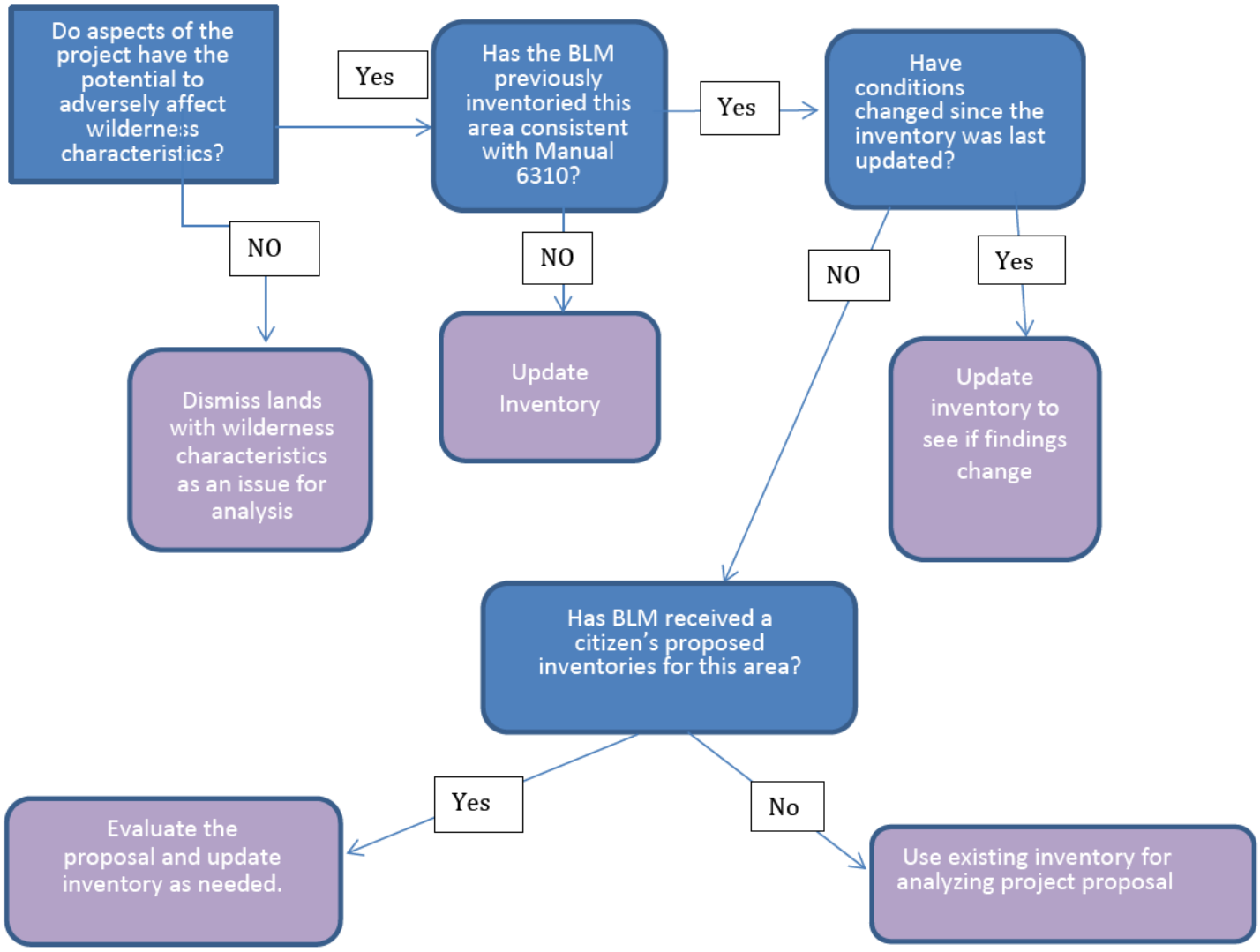
The BLM Idaho should ensure that inventories are completed and documented before approving activities where wilderness characteristics may exist and when there is potential for adverse impacts. Following submittal of a project proposal within or near lands that may have wilderness characteristics, or that would potentially cause negative impacts to wilderness characteristics, consider the following:

- Determine if the inventory needs to be updated. No update is necessary if there is no potential for adverse impacts to lands with wilderness characteristics from the proposed action. This

determination should be carefully documented in the project file and/or the NEPA document as an issue considered but dismissed from further analysis.

- If an update is necessary, follow the procedures outlined in the BLM Manual 6310 for documentation of the inventory process.
- Make the results of the updated inventory available to the public (see more guidance about this below) and notify submitters of the citizen's inventory of the results when applicable.
- If the updated inventory shows that no wilderness characteristics exist in the project area, dismiss the issue from further analysis.
- If the updated inventory shows that wilderness characteristics are determined to be present and have the potential to be impacted, follow the procedures in Part II.

Figure 1. Ensuring the inventory is up to date



Inventory Maintenance

Regardless of past inventory efforts, the BLM must maintain its inventory of wilderness resources on public lands. Conditions relating to wilderness characteristics often change over time. For example, permitted projects that occurred prior to the BLM policy on lands with wilderness characteristics may result in a reduction, or elimination of, one or more wilderness characteristics. Conversely, an area once lacked wilderness characteristics may now possess them due to natural or human-caused reclamation activities. Other activities such as wildfire suppression activities (dozer-lines or engine tracks, highly visible seeded rows from rehabilitation efforts), trespass, or proliferation of unauthorized Off Highway Vehicle routes, may reduce or eliminate wilderness characteristics. According to Manual 6310, the following circumstances may help to determine when to consider if updates to an existing wilderness characteristics inventory are necessary:

1. The public or the BLM identifies wilderness characteristics as an issue for analysis during the NEPA process.
2. The BLM is undertaking aland use planning process (i.e., land use plan revision or amendment).
3. The BLM receives new information concerning resource conditions, including wilderness characteristics information submitted by the public that meets the BLM's minimum standard described in the BLM Manual 6310 B(1).
4. The BLM acquires additional lands.

The BLM may find it appropriate in other circumstances to update its wilderness characteristics inventory. At a minimum, field offices should confirm that existing inventories are up to date when there is reason to believe that an action will adversely impact the existing or potential wilderness characteristics of an area.

The BLM has an obligation to review any new wilderness characteristics information submitted by the public, and determine whether the submitted information meets the Minimum Standards for Review of New Information as outlined in the BLM Manual 6310, Section .06, Subsection B1. This minimum standards review should be performed within 60 days of receipt of the public's submission. Upon completion of the review, the field office should respond in writing to the person or entity submitting the information. The response should include an evaluation of the information's completeness, and whether it meets the BLM's minimum standards for further review.

The task of performing updates to an inventory, particularly in response to large amounts of new information from the public, may present staffing and budget challenges to field offices. Field offices should routinely update existing inventories when any of the triggers listed above necessitate an update. Not all submittals from the public will require a full update of the inventory; however, some documentation of the review of their information should be included in the inventory files. If a field office receives a large amount of new information from the public, and updating existing inventories will result in a significant burden on staff-time and budget, the field office should develop a plan of action and associated timeline for completing the inventory updates. Considerations for prioritizing areas to complete inventory updates include:

- Areas for which projects have been proposed.
- Well-known or potentially controversial areas.
- Areas that have a high probability for future proposed actions.

If field offices determine they do not have the internal capacity to complete inventory updates in a

reasonably responsive time frame, they should seek assistance from the District Office, State Office and Washington Office. This assistance may be provided in the form of additional budget, or through other means, such as the BLM interns or seasonal employees. If the inventory update is required specifically for an external or proponent-driven project, then field offices may also request that the cost of the completion of the inventory update be funded by that proponent (i.e., as cost recovery). The field office should ensure that all inventories completed by third parties meet the standards identified in the BLM Manual 6310 prior to acceptance of the findings.

In order to maintain consistency across the state and to ensure compliance with Manual 6310, the Idaho State Office National Conservation Lands Program Lead will review all new and updated inventory findings prior to releasing the information to the public.

Releasing Inventory Information to the Public

All the BLM field offices should release finalized and signed wilderness characteristics inventory findings to the public as soon as practicable *after* their completion and *before* the inventory data is used to inform decisions. This should occur before the publication of any draft NEPA analysis associated with an action. Hard copies of all documentation should be kept in the field office.

At a minimum, the following items should be available for every inventoried lands with wilderness characteristics unit:

- Forms 1 and 2 in Appendix B of BLM Manual 6310
- A map of each inventoried area, clearly depicting the general location of the area, the boundaries of the area, and any routes that have been cherry-stemmed out of the unit
- Documentation of any updates to the inventory for the unit (including maps)
- Determination memorandum signed by the authorized officer

Field offices should provide notification to the submitters of inventory information that was used to inform inventory updates when these updates become available.

Part II: Consideration of Lands with Wilderness Characteristics in Planning.

The Resource Management Plan (RMP) is not required to be amended or revised solely as a result of an inventory update. According to Section 201 of FLPMA, *"tThe preparation and maintenance of such inventory or the identification of such areas shall not, of itself, change or prevent change of the management or use of public lands."* The updated inventory is a change to the existing environment analysis baseline for the inventoried resource. The RMP analyzed the existing environment with the information that was available at the time of analysis. The authorized officer has the discretion to determine when a change in land use planning allocations and management actions are necessary to protect an area with wilderness characteristics. At the implementation level, new NEPA analysis should incorporate new information as it becomes available. New analyses should consider the full context of the updated inventory as it relates to the proposed actions. An amendment is not required to avoid or mitigate impacts to wilderness characteristics. This can be accomplished through the project-activity level NEPA process by development of alternatives, mitigation measures, or design features.

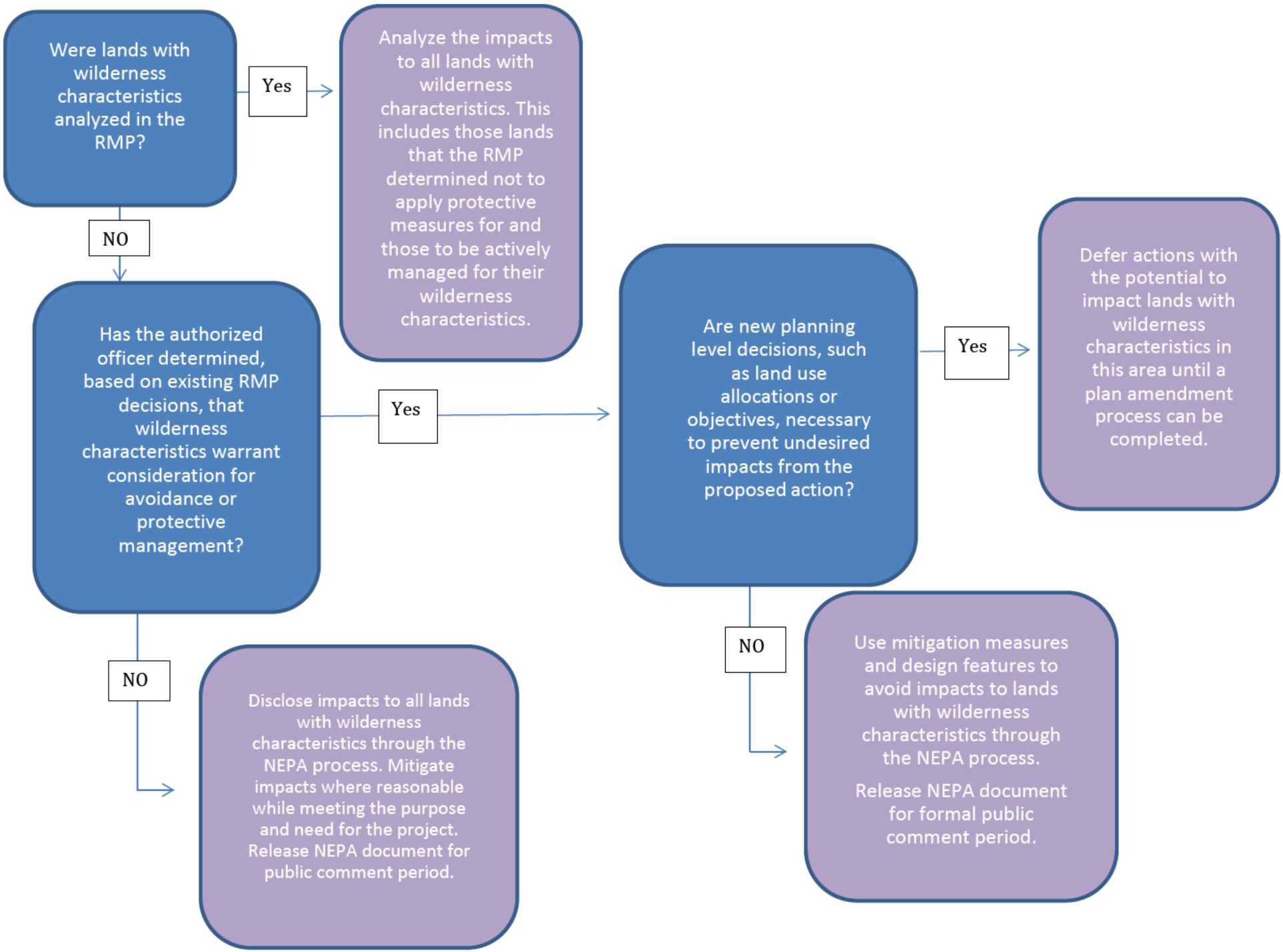
If wilderness characteristics might be impacted by a proposed project or management action, the field office must determine if the area was previously analyzed as part of an RMP revision or an amendment process. If the RMP considered management of the area within the range of alternatives analyzed in the Environmental Impact Statement, the field office will follow the management prescriptions as identified in the Approved RMP.

If the area was not addressed through an RMP revision or amendment, the authorized officer must determine if the new information about the presence of wilderness characteristics warrants specific management or protection not already provided by the existing RMP. This should include consideration of the other resource values and uses present, the scarcity of various resources and other factors as provided under Sections 201 and 202 of FLPMA. A determination regarding whether a land use plan amendment or revision is warranted should be made through regular periodic RMP evaluations under the direction of the Land Use Planning Manual (1601).

The authorized officer will consider potential adverse impacts to wilderness characteristics through the NEPA process for a proposed project. A NEPA process considering potential impacts to wilderness characteristics within an area not previously considered for protection in a land use planning process should analyze alternative management options for the area including an alternative that avoids impacts to wilderness characteristics. This could be accomplished through analysis of the No Action alternative and/or an action alternative proposing mitigation of adverse impacts to lands with wilderness characteristics. Analysis of the proposed action or any alternatives should disclose the potential adverse impacts to lands with wilderness characteristics from approval of the activities. Careful consideration should be given to cumulative effects of multiple projects that impact wilderness characteristics when they have not been considered for protection in a land use plan. The NEPA documents should be released for public comment if the analysis finds that the effects will result in a change to the wilderness characteristics. The decision record for the project should identify the rationale for the final decision on whether or not to allow impacts.

If the authorized officer determines that impacts to wilderness characteristics in an area must be avoided, she should determine whether existing resource protection measures are sufficient to avoid impacts from the proposed activity or if planning level decisions are necessary to protect the area. Not all protection measures may require a plan amendment. An authorized officer could determine that an area warrants protection but that existing planning decisions or decisions related to protection of other resource values (e. g. management for non-motorized recreation, Visual Resource Management class II, no surface occupancy) are adequate to avoid potential impacts to wilderness characteristics. This may protect lands with wilderness characteristics from some proposed actions but may not protect from all uses. The authorized officer could still determine that new allocations and management actions are necessary to protect the wilderness characteristics, which would initiate a land use plan amendment. Interim management of the area needing additional protection should defer activities that cannot be adequately mitigated with existing management decisions until an amendment can be completed.

BLM Idaho
Statewide Lands with Wilderness Characteristics Guidance



Part III: Analyzing Potential Impacts to Lands with Wilderness Characteristics

Impacts should be assessed using the wilderness characteristics inventory criteria (roadless, naturalness, outstanding opportunities for primitive/unconfined recreation and supplemental values) defined in the BLM Manual 6310 as a guide, combined with referencing the existing lands with wilderness characteristics inventory reports for the affected area, reviewers should be able to accurately describe and analyze the impacts.

Potential impacts should be analyzed for the individual wilderness characteristics determined to be present in the inventoried unit. The nature of these characteristics should be described in the narrative of the inventory reports for each specific area determined to have lands with wilderness characteristics, and summarized in the affected environment of the NEPA document. For example, if the project is a proposed non-motorized trail that winds through a lands with wilderness characteristics unit, it would be appropriate to make a determination if the project is temporary or long-term (in this case a trail would be a long-term impact) and determine if the project is consistent with the defining characteristics of the area (would it provide additional opportunities for solitude or take away from opportunities for solitude, or would the project provide additional opportunities for primitive types of recreation or remove those opportunities). Would the project negatively impact the naturalness of an area? If so, what is the magnitude of this impact (e.g., the impact would be minimal because the design of the trail would limit bank cuts and prohibit the use of built structures).

Assessing the presence or absence of impacts, and determining the magnitude of those impacts, is an analytical process and should be approached independently for each new proposed project and for each inventoried lands with wilderness characteristics unit. The reviewer should also determine whether the impacts from the proposed project are so great that the area would no longer meet the inventory criteria; or conversely, determine whether the impacts are isolated and the impact to the unit as a whole is minimal, thereby not affecting the determination that the area possesses wilderness characteristics.

Below are some additional questions to consider for each inventory criteria when conducting an impact assessment for lands with wilderness characteristics.

1. **Size:** Would the proposed action bisect the unit so that there are no longer 5,000 acres or more of contiguous BLM lands? If so, would the area still meet one of the other size criteria as defined in the BLM Manual 6310, Section .06, Subsection C, 2(a), i (2)?

2. **Naturalness:** Does the proposed action affect the unit so that it no longer appears to be affected primarily by the forces of nature?
    a. Does the proposed action affect the area so that it no longer appears to have been affected primarily by the forces of nature, and so that any work of human beings is no longer substantially unnoticeable? (Note -- examples of human-made features that may be considered substantially unnoticeable in certain cases are: trails, trail signs, bridges, fire breaks, pit toilets, fisheries enhancement facilities, fire rings, historic properties, archaeological resources, hitching posts, snow gauges, water quantity and quality measuring devices, research monitoring markers and devices, minor radio repeater sites, air quality monitoring devices, fencing, spring developments, barely visible linear disturbances, and stock ponds). Although individually these facilities may not substantially affect naturalness, their impacts should also be assessed cumulatively.

    b. Describe human impacts that will remain after the project is completed. Document

noticeable human impacts that will be added to the area. If several minor impacts will be added, does their cumulative effect on the area's degree of apparent naturalness reach a threshold that would make the area no longer meet the naturalness criterion?

3. **Solitude and Primitive and Unconfined Recreation**: Does the proposed action affect the area so that it no longer provides outstanding opportunities for solitude or primitive and unconfined types of recreation? (Note - An area does not need to contain outstanding opportunities for both solitude and primitive and unconfined types of recreation, only one of the two. Additionally, an area does not need to possess outstanding opportunities on every acre).

    a. *Solitude*: Determine if the proposed action affects the area so that it would remove, or preclude, outstanding opportunities for solitude. Would the proposed action create a situation whereby a visitor would not be able to avoid the sights, sounds and evidence of other people in the area? Factors or elements of a proposed action that may influence a visitor's solitude include distance between areas of frequent visitation, vegetative screening around the proposed action, topography of the area around the proposed action, likelihood that the project will attract significant additional public visitation, and the ability of visitors to avoid the proposed action and find seclusion in other parts of the inventory unit.

    b. *Primitive and Unconfined Recreation*: Determine if the proposed action affects the area in such a way that it prevents or removes outstanding opportunities for primitive and unconfined types of recreation. Would the proposed action impair the qualities of the primitive and unconfined recreation opportunities to the degree that they would no longer be outstanding? Examples of primitive and unconfined types of recreation include hiking, backpacking, fishing, hunting, spelunking, horseback riding, climbing, river running, cross-country skiing, snowshoeing, dog sledding, photography, bird watching, canoeing, kayaking, sailing, and sightseeing for botanical, zoological, or geological features, among others. (Note - It is important to reference the inventory report for an area when determining a proposed action's effect on primitive and unconfined types of recreation. Some areas may provide outstanding opportunities for a diversity of primitive and unconfined recreational activities possible in the area, or simply for the outstanding quality of one opportunity).

Supplemental Values: Does the proposed action negatively impact any supplemental values which were inventoried for the area? Determine and document any potential impacts to inventoried supplemental values of the area. (Note - The presence of supplemental values are not required for an area to be considered as containing lands with wilderness characteristics. As such, if there are impacts to the supplemental values of an area, but to none of the other inventoried criteria, the determination of whether the area possesses wilderness characteristics would be unaffected. It may be necessary to consider the impacts to the supplemental values in their respective resource sections in the NEPA document if impacted. You may reference the other resource section for these impacts if applicable.)

Questions and Answers Related to the Settlement of Longstanding Land Use Plan Litigation in Utah

GENERAL QUESTIONS

What litigation does this settlement address?
If approved by the district court, the agreement will settle a longstanding legal challenge originally filed in December 2008 in federal district court for the District of Columbia and later transferred to the District of Utah in 2012. The litigation involves challenges to the land use and travel management plans for the BLM-Utah Richfield, Moab, Price, Monticello, Kanab, and Vernal Field Offices, as well as challenges to the November 2014 oil and gas lease sale.

In 2015, the Utah district court gave the BLM three years to correct errors it identified in BLM-Utah Richfield's land use and travel planning relating to the National Historic Preservation Act (NHPA) and the Wild & Scenic Rivers Act, and the Federal Land Policy and Management Act (FLPMA) initially identified by the court in 2013. The court further required the BLM to undertake on-the-ground archaeological surveys along the entirety of every route designated as open; the BLM appealed the district court's rulings related to the NHPA and its requirement for archaeological surveys to the Tenth Circuit.

This settlement would resolve all of plaintiffs' claims in the district court and the pending appeals. It will not be effective, however, unless the Tenth Circuit agrees to dismiss the appeals and the district court agrees to dismiss plaintiffs' case and vacate its earlier rulings.

What area would be covered by the settlement?
If approved by the district court, the settlement will resolve litigation affecting all of the lands in the BLM-Utah Richfield, Moab, Price, Monticello, Kanab, and Vernal Field Offices, which is approximately 10 million acres. Most of the BLM's obligations under the settlement would pertain to approximately half of the area managed by the Richfield, Moab, Price, Kanab, and Vernal Field Offices and significantly less than half of the area included in the plaintiffs' lawsuit. Certain air quality commitments would pertain to the Price and Vernal Offices while others apply to all six field offices.

Who are the parties to the settlement?
The parties to the settlement include a consortium of ten conservation groups (Southern Utah Wilderness Alliance, The Wilderness Society, Natural Resources Defense Council, Sierra Club, National Parks Conservation Association, National Trust for Historic Preservation, Utah Rivers Council, Great Old Broads for Wilderness, Rocky Mountain Wild, Grand Canyon Trust), three off-road vehicle (ORV) organizations (Blue Ribbon Coalition, Colorado Off-Highway Vehicle Coalition, Trails Preservation Alliance), and federal defendants (including the BLM and the Interior Department).

Although they are not parties to the agreement, several entities who intervened on behalf of the United States in the litigation have reviewed the agreement and agreed not to oppose it in the federal district court. These include the Utah School and Institutional Trust Lands Administration, EOG Resources, XTO Energy, Crescent Point Energy US Corp., and Badlands Energy.

Other entities who intervened on behalf of the United States have indicated that they will oppose the settlement. These include the State of Utah, and Carbon, Duchesne, Daggett, Emery, Grand, Kane, San Juan, and Uintah Counties.

What is required for the settlement to go into effect?
The settlement has been signed by the plaintiffs, defendants, and certain intervenors, but it will only go into effect if the Tenth Circuit dismisses the appeals of the federal defendants and intervenors supporting the federal defendants and the district court agrees to dismiss the plaintiffs' lawsuit and vacate two prior orders. Intervenors who so choose will have an opportunity to oppose those actions by the district court and Tenth Circuit.

What would be the BLM's primary travel management commitments under the settlement?
If the district court approves the settlement, the BLM will commit to do the following:

- During the next eight years, the BLM would prepare 13 new travel management plans for parts of the BLM-Utah Richfield, Moab, Price, Kanab, and Vernal Field Offices. State and local governments, federal agencies, tribal governments, and the public would be invited to participate in each of these individual travel management planning processes.
- In preparing the new travel management plans, the BLM would conduct on-the-ground archaeological surveys along routes proposed for designation where each field office determines through state-of-the-art predictive modelling that there is a high potential for cultural resources. The BLM would also conduct these surveys along routes in areas of critical environmental concern (ACECs) that are designated to protect cultural resources. The BLM would develop its exact survey commitments for each travel management plan in consultation with Native American tribes, the State of Utah, cultural resource experts, and other consulting parties.
- The BLM would conduct additional monitoring of motorized vehicle use off of designated routes in Wilderness Study Areas, Natural Areas, and lands with BLM-inventoried wilderness characteristics in those areas where it is creating new travel management plans under the settlement. This additional monitoring would take place in conjunction with the BLM's ongoing obligation to monitor motorized vehicle use on all designated routes. If the BLM determines that motorized vehicle use is causing certain types of harm on any route, regardless of its location, the BLM will take appropriate management action as required by regulation.
- Over the course of five years, the BLM would evaluate three previously proposed ACECs that were not designated in the 2008 land use plans. As part of this re-evaluation, the BLM would determine whether further action is necessary to protect any relevant and important values.

What are the BLM's primary oil and gas commitments under the settlement?
If the district court approves the settlement, the BLM will commit to do the following:

- The BLM would update its 2011 Utah Air Resource Management Strategy (ARMS) and 2013 photochemical modeling analysis in the Price and Vernal Field Offices to take account for the most up-to-date information. The ARMS and photochemical modeling analysis are tools that the BLM can use to ensure that certain decisions related to oil and gas development are consistent with federal air quality standards. These tools are non-binding, meaning that the BLM would not need to use the ARMS or photochemical modeling analysis for any oil and gas development decision.
- For any lease sales or land use plan changes related to oil and gas development undertaken in the next eight years in the Richfield, Moab, Price, Monticello, Kanab, and Vernal Field Offices, the BLM would determine through the NEPA process whether air quality mitigation measures can be incorporated into lease stipulations and notices.

What are the plaintiffs' commitments under this settlement?
The settlement requires the plaintiffs to move to dismiss all of their claims against the six land use plans and travel management plans, as well as the November 2014 oil and gas lease sale. In addition, the plaintiffs will request that the district court vacate its prior rulings in the litigation.

How does this settlement benefit BLM?
If approved by the district court, the settlement agreement will have a number of significant benefits for the BLM:

- The settlement would resolve eight years of contentious litigation that has consumed substantial BLM, Department of Justice (DOJ), and other federal government resources and has required the BLM to divert funds from other BLM state budgets. The settlement would allow the BLM to appropriately focus its time and resources on other agency priorities.
- The settlement would preserve the 2008 land use plans in the Richfield, Moab, Price, Monticello, Kanab, and Vernal Field Offices. Preserving the 2008 land use plans would provide the BLM and the public certainty regarding thousands of land management decisions in all program areas across much of the eastern and southern portions of Utah.
- The settlement primarily would commit the BLM to travel management planning in less than half of the geographic area covered by the plaintiffs' lawsuit. It also would commit the BLM to undertaking archeological surveys only along routes in areas with a high potential for cultural resources.
- The settlement encourages robust public participation in the travel planning process, which will allow BLM to hear and consider concerns from local communities about travel management plans and route designations.
- The settlement would save the Department of the Interior and DOJ considerable litigation costs that would be required to continue to litigate the plaintiffs' claims. Litigating would require completing the BLM's current appeal and then litigating in trial court the plaintiffs' claims related to the other five land use plans, travel management plans, and the 2014 oil and gas lease sale in the Moab, Price, Monticello, Kanab, and Vernal Field Offices
  The settlement will only go into effect if the district court vacates its adverse decisions against BLM and in particular its burdensome order requiring the BLM to conduct archeological surveys on every mile of route designated for use by the public.

QUESTIONS ABOUT TRAVEL MANAGEMENT PLANNING

Would the settlement agreement reverse or otherwise modify the decisions made in the 2008 land use plans or in existing travel management plans?
No. Those decisions would remain in place. The settlement agreement would not modify, supersede or otherwise affect the 2008 land use plans; the plaintiffs' lawsuit challenging those plans would be dismissed, ending longstanding litigation over the plans.

Under the settlement, the BLM would prepare new travel management plans for route designation in certain areas. Until those planning processes are complete, existing travel management plans would remain in effect. Areas not covered by the new travel management plans would continue to be governed by existing travel management plans.

Where would the BLM be engaging in new travel management planning?
The settlement includes maps that identify where BLM would engage in new travel management planning. These areas include roughly half of the area within the Richfield, Moab, Price, Kanab, and

Vernal Field Offices. The settlement does not commit BLM to engaging in new travel management planning within the Monticello Field Office.

Would I be able to participate in BLM's travel management planning process?
Yes. Public involvement is an important part of BLM's travel management planning process.

Would the settlement require the BLM to close roads or restrict OHV use?
No. The settlement does not identify roads that the BLM would have to close and it also would not impose any new restrictions on ORV use. The BLM has an existing legal obligation to take appropriate management action—which could potentially involve road closures—if motorized vehicle use is causing certain types of harms. The settlement would not change that existing legal obligation.

Would the settlement affect Revised Statute 2477 (RS 2477) claims?
No. Neither the settlement nor the BLM's development or adoption of new travel management plans would affect RS 2477 claims that have been, or may be, asserted by the State of Utah or local governments within the state.

Would the settlement create new wilderness study areas or natural areas or require BLM to inventory lands for wilderness characteristics?
No. The settlement makes no designations or management decisions of any kind, including designating new wilderness study areas or natural areas, and does not otherwise affect the BLM's obligations to maintain inventories under existing law. As provided by the BLM's regulations, the BLM will consider whether ORV use is damaging public land resources, including BLM-inventoried wilderness characteristics, and if damage is found, will take appropriate action to minimize the damage through the travel management process.

Would the settlement create new travel planning regulations?
No. The settlement would require the BLM to follow travel planning procedures and documentation requirements that are compliant with existing regulations, within the agency's discretion, and designed for transparency and public involvement that are consistent with current BLM policy.

Which travel management plans would govern areas for which the BLM is not preparing new plans?
The new travel management plans that would be required by the settlement cover approximately half of each of the Utah BLM's Richfield, Moab, Price, Kanab, and Vernal Field Offices. The route designations in existing travel management plans would continue to apply in those portions of all six field offices not covered by the new travel management plans required by the settlement.

QUESTIONS ABOUT OIL AND GAS

Why is the BLM including oil and gas commitments in the settlement agreement?
In addition to their oil and gas related challenges to the land use plans, Plaintiffs added a challenge to the November 2014 oil and gas lease sale to their complaint. This settlement would resolves all of those claims.

Would the settlement undo the November 2014 oil and gas lease sale?
No. The settlement agreement would not affect completed lease sales.

Would the settlement prohibit the BLM from approving new oil and gas projects?
No. The settlement agreement would not limit the BLM's authority to approve new oil and gas projects consistent with existing law and regulations.

Would the settlement require the BLM to impose mitigation measures when approving new oil and gas projects?
No. The settlement would require the BLM to analyze potential mitigation measures during the environmental review process required by NEPA. The BLM would make decisions about new projects based on existing laws, regulations, and policies, which would not be affected by the settlement.

OTHER QUESTIONS

What happens next?
The parties to the settlement will file a motion with the district court requesting that it vacate its prior rulings in the case. If the court agrees, and the plaintiffs successfully dismiss their claims, the BLM will ask the Tenth Circuit to dismiss its appeal, the settlement will become effective, and the BLM will begin the process of implementing the settlement consistent with the existing regulatory framework. If the court does not agree to vacate its prior rulings in the case, the parties will have no further obligations under the settlement agreement and the BLM will continue to litigate in the district court and in the Tenth Circuit.

Does the settlement affect the recent Bears Ears monument designation?
No. The Bears Ears monument designation does not affect the BLM's travel planning commitments it would assume under the settlement, and the BLM's obligations under the settlement would not affect the Bears Ears monument designation.

Settlement Agreement in
***Southern Utah Wilderness Alliance, et al. v. U.S. Department of the Interior, et al.*,**
U.S. District Court (D. Utah) Consolidated Case No. 2:12-cv-257 DAK
U.S. Court of Appeals for the Tenth Circuit Nos. 15-4151, 15-4152, 15-4153, 15-4155, 15-4158

This Settlement Agreement is entered into between: (1) Plaintiffs Southern Utah Wilderness Alliance ("SUWA"), Natural Resources Defense Council, Wilderness Society, National Parks Conservation Association, Grand Canyon Trust, Sierra Club, National Trust for Historic Preservation, Utah Rivers Council, Great Old Broads for Wilderness, and Rocky Mountain Wild; (2) Federal Defendants U.S. Department of the Interior, S.M.R. Jewell, in her official capacity as Secretary of the Department of the Interior, the U.S. Bureau of Land Management, and Janice Schneider, in her official capacity as Assistant Secretary for Land and Minerals Management of the U.S. Department of the Interior (collectively, "Federal Defendants"); and (3) Defendant-Intervenors BlueRibbon Coalition, Colorado Off-Highway Vehicle Coalition, and Trails Preservation Alliance. Plaintiffs, Federal Defendants, and Defendant-Intervenors who have signed this Settlement Agreement will be collectively referred to herein as "the parties," and individually as a "party," unless specifically identified otherwise. In addition to the above-named parties, the above-captioned cases include Defendant-Intervenors State of Utah, Carbon County, Duchesne County, Daggett County, Emery County, Grand County, Kane County, San Juan County, Uintah County, Utah School And Institutional Trust Lands Administration ("SITLA"), Badlands Energy, Crescent Point Energy US Corp., EOG Resources, and XTO Energy. Defendants-Intervenors sought, and were granted, intervention shortly after each complaint was filed.

WHEREAS, in 2008, the U.S. Bureau of Land Management ("BLM") issued six Resource Management Plans ("RMPs") and associated Travel Management Plans ("TMPs") for the Kanab, Moab, Monticello, Price, Richfield, and Vernal Field Offices, which are all administered by the Utah State Office of BLM ("BLM-Utah").

WHEREAS, Plaintiffs subsequently filed two complaints challenging each of the RMPs and TMPs, alleging, among other things, that BLM violated the Administrative Procedure Act ("APA"), 5 U.S.C. § 706(2)(A), the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. §§ 1701 *et seq.*, the National Historic Preservation Act ("NHPA"), 54 U.S.C. §§ 300101 *et seq.*, the National Wild and Scenic Rivers Act ("WSRA"), 16 U.S.C. § 1271, the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 *et seq.*, and BLM's off-road vehicle ("ORV") designation criteria regulation, 43 C.F.R. § 8342.1.

WHEREAS the district court consolidated the two cases and, based upon the parties' agreement to litigate the matter in stages, proceeded to adjudicate the claims challenging the Richfield RMP and TMP.

WHEREAS, on November 4, 2013, the district court issued a merits ruling that was partially adverse to Federal Defendants. The court found that "[i]n designating 4,277 miles of routes in this case, BLM did not discuss the minimization criteria in the ROD, RMP, or any other travel planning documents," and "therefore, there [was] no evidence in the ROD that the minimization criteria was applied or applied correctly." The court also found that BLM violated the NHPA in adopting the Richfield TMP. Specifically, the court found that BLM did not make a good-faith effort to identify cultural resources along designated routes in light of its instruction memorandum ("IM") 2007-030, which the court interpreted to require BLM to conduct intensive "Class III" surveys along all 4,277 miles of designated routes in the Richfield Field Office. The court also found that BLM did not adequately explain its RMP decisions not to designate the potential Henry Mountains Area of Critical Environmental Concern ("ACEC") as an ACEC and that BLM's eligibility decision regarding certain river segments in Happy, Buck, and Pasture Canyons under the WSRA was arbitrary. The court ruled in favor of BLM on Plaintiffs' remaining claims.

WHEREAS, on May 22, 2015 the district court issued its remedy order requiring BLM to resolve these legal infirmities in a phased manner within three years.

WHEREAS, in October 2015, BLM and several Defendant-Intervenors timely appealed the district court's merits decision and the remedy order.

WHEREAS, on February 17, 2016, Plaintiffs amended their complaint adding site-specific allegations stemming from BLM's November 2014 Oil and Gas Lease Sale in BLM's Price and Vernal Field Offices, and the district court has approved a briefing schedule for Plaintiffs' claims relating to BLM's Price and Vernal Field Offices, which has been extended pending settlement efforts.

WHEREAS, since 2013, BLM has worked with numerous consulting parties, including Plaintiff SUWA and Defendant-Intervenors State of Utah, SITLA, and Duchesne, Emery, San Juan, and Uintah Counties, and the BlueRibbon Coalition, to develop a comprehensive travel and transportation planning programmatic agreement, pursuant to 36 C.F.R. § 800.14(b), that guides how BLM accounts for cultural resources when designating routes. BLM anticipates that this programmatic agreement, to be titled "Programmatic Agreement for Travel Management Activities," will be completed in early 2017.

WHEREAS, the parties, without any admissions relating to Plaintiffs' claims, believe that it is in the interests of the public, the parties, and judicial economy to resolve these claims without further litigation.

WHEREAS, Defendant-Intervenors SITLA, Badlands Energy, Crescent Point Energy US Corp., EOG Resources, and XTO Energy do not oppose or object to the parties entering into this Settlement Agreement.

NOW, THEREFORE, the parties hereby stipulate and agree to the following:

A. GENERAL PROVISIONS

1. In exchange for the consideration set forth herein, Plaintiffs release Federal Defendants, all other federal agencies, the United States, and all of their employees and officials from, and Plaintiffs covenant not to sue on, all claims, causes of action, obligations, or liabilities that they alleged or could have alleged in the above-captioned cases based on facts that existed as of the date the Settlement Agreement is signed by the last party to sign to the Settlement Agreement. The parties do not waive any claims or defenses that they may have in any subsequent litigation or administrative proceedings initiated after that date, except as expressly stated herein.

2. This Settlement Agreement in no way affects or relieves any party of its responsibility to comply with the United States Constitution or with any applicable federal law or regulation, including the APA, NEPA, FLPMA, and NHPA. Nothing in this Settlement Agreement shall be construed to limit or modify the discretion accorded to Federal Defendants by any applicable federal law or regulation, including the APA, NEPA, FLPMA, and NHPA, or general principles of administrative law with respect to either the procedures to be followed in making any determination required herein or the substance of any determination.

3. This Settlement Agreement is for the purpose of settling the above-captioned litigation. Nothing in this Settlement Agreement shall be deemed as precedent in this or any other proceeding or shall constitute an admission or concession by any party as to the validity of any fact or legal position concerning the claims or defenses in this or any other proceeding. Nothing in this Settlement Agreement shall be construed to be an admission or shall constitute evidence that the commitments made by BLM in this Settlement Agreement are necessary to satisfy any requirement under any applicable law.

4. Though any party may use this Settlement Agreement to document the fact that one or more claims were disposed of pursuant to the terms and conditions herein, the discussions leading to the Settlement Agreement are confidential under 10th Circuit Rule 33.1.

5. It is hereby expressly understood and agreed that this Settlement Agreement was negotiated at arm's-length with each party receiving advice from legal counsel. The parties hereby agree that any and all rules of construction to the effect that ambiguity is construed against the drafting party shall be inapplicable in any dispute concerning the terms, meaning, or interpretation of this Settlement Agreement. Unless the context clearly requires otherwise, all of the following apply to the interpretation of this Settlement Agreement: (a) the masculine, feminine, and neuter genders each include the others; (b) the words "includes" and "including" and "such as" are not limiting; (c) "days" refers to calendar days unless otherwise specified; and (d) headings are included for convenience and do not affect the construction or interpretation of any provision of, or the rights or obligations of a party under, this Settlement Agreement. This Settlement Agreement shall be governed by and construed under federal law.

6. Nothing in this Settlement Agreement shall be construed to make any other person or entity not executing this Settlement Agreement a third-party beneficiary to this Settlement Agreement.

7. This Settlement Agreement in no way affects the rights of any party as against any person or entity not a party hereto. Nothing in this Settlement Agreement shall be interpreted as imposing obligations on any federal agency or other non-federal entity that is not a signatory to this Settlement Agreement.

8. This Settlement Agreement contains all of the agreements between the parties, and is intended to be and is the final and sole agreement between the parties concerning the complete and final resolution of Plaintiffs' causes of action in the above-captioned cases. The parties agree that any other prior or contemporaneous representations or understanding not explicitly contained in this Settlement Agreement, whether written or oral, are of no legal or equitable force or effect.

9. The provisions of this Settlement Agreement shall apply to and be binding upon each of the parties.

10. The undersigned warrant that they have full authority to enter into this Settlement Agreement and by their signatures bind to the terms of this Settlement Agreement the party or persons on whose behalf they have signed.

11. The obligations imposed upon Federal Defendants under this Settlement Agreement can only be undertaken using appropriated funds. No provision of this Settlement Agreement shall be interpreted as or constitute a commitment or requirement that Federal Defendants obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other law.

12. Any subsequent modifications, supplements, or amendments to this Settlement Agreement must be in writing, and must be signed and executed by or on behalf of the affected parties, or their successors in interest, as necessary.

B. SPECIFIC PROVISIONS

New Travel Management Plans in Certain Travel Management Areas

13. **New Travel Management Plans subject to this Settlement Agreement.** BLM will issue a new TMP for each of the following travel management areas ("TMA") within the Richfield, Vernal, Price, Moab, and Kanab Field Offices according to the deadlines set forth below, which will start to run on the effective date of this Settlement Agreement established in Paragraph 37. Each TMP will be considered issued upon the date the authorized officer signs the decision document approving the TMP. The geographic scope of each TMA is included in the Attachments A1-5 (Maps 1 through 5), which are hereby incorporated into this Settlement Agreement:

a. Richfield Field Office (Attachment A1: Map 1)
    i. Henry Mountains and Fremont Gorge: 2.5 years
b. Vernal Field Office (Attachment A2: Map 2)
    i. Dinosaur (North): 3.5 years
    ii. Book Cliffs: 5.5 years
    iii. Nine Mile Canyon: 7 years
c. Price Field Office (Attachment A3: Map 3)

i. San Rafael Desert: 2.5 years

ii. San Rafael Swell (including part of the former Forest Planning Unit in the Richfield Field Office): 4.5 years

iii. Nine Mile Canyon: 7 years

d. Moab Field Office (Attachment A4: Map 4)

i. Indian Creek: 4 years

ii. Book Cliffs: 5.5 years

iii. Labyrinth/Gemini Bridges: 6 years

iv. Dolores River: 8 years

e. Kanab Field Office (Attachment A5: Map 5)

i. Trail Canyon: 4 years

ii. Paunsaugunt: 6 years

14. **Travel planning outside of TMAs.** The TMPs for the Richfield, Vernal, Price, Moab, and Kanab Field Offices that are in effect as of the effective date of this Settlement Agreement will remain in effect until BLM issues new TMPs for the TMAs identified in paragraph 13; those new TMPs will supersede the corresponding portions of the TMPs. However, subject to valid existing rights, nothing herein restricts BLM's discretion to revise or amend the 2008 TMPs, to impose limitations or closures, as provided by 43 C.F.R. §§ 8341.2 and 8364.1, to open, close, modify, or add new routes, or otherwise consider or institute temporary management prescriptions in accordance with applicable law and regulations. Any remaining public lands in Utah that fall outside of the geographic scope of the TMAs identified in paragraph 13, including the remainder of the public lands in the Richfield, Price, Vernal, Moab, and Kanab Field Offices, are not subject to the provisions outlined in paragraphs 15-24 of this Settlement Agreement.

Process for Completing TMPs

15. **Applicable law and agency guidance.** BLM will prepare the new TMPs for each of the TMAs identified in paragraph 13 pursuant to applicable statutes, regulations, BLM-Utah

Instruction Memorandum No. 2012-066 ("BLM-Utah IM 2012-066"), and the terms identified in paragraphs 16-24 of the Settlement Agreement. In addition to BLM-Utah IM 2012-066, relevant existing guidance includes, but is not limited to: BLM-Utah Guidance for the Lands with Wilderness Characteristics Resource, Instruction Memorandum No. UT 2016-027 (September 30, 2016); BLM National Environmental Policy Act Handbook H-1790-1 (January 2008); BLM-Utah Handbook 8110, *Guidelines for Identifying Cultural Resources* (2002); BLM Handbook H-8342, Travel and Transportation (March 16, 2012); BLM Manual 1613, *Areas of Critical Environmental Concern* (September 29, 1988); BLM Manual 1626, *Travel and Transportation* (July 14, 2011); BLM Manual 6320, *Considering Lands with Wilderness Characteristics in BLM Land Use Planning* (March 15, 2012); BLM Manual 6330, *Management of BLM Wilderness Study Areas* (July 13, 2012), 6340, *Management of BLM Wilderness* (July 13, 2012); and BLM Manual 8110, *Identifying and Evaluating Cultural Resources on Public Lands* (December 3, 2004). Nothing in the Settlement Agreement makes binding the afore-mentioned guidance. Nothing in this Settlement Agreement shall be construed as limiting BLM's discretion to promulgate new manuals, handbooks, or instruction memoranda consistent with relevant law and regulations. The parties may agree to modify the Settlement Agreement to reflect updated regulations or guidance, consistent with paragraph 12.

16. **Procedural requirements.** BLM will follow the procedure set forth below when conducting its travel planning for the TMPs for the TMAs identified in paragraph 13, except as provided in paragraphs 18 and 19 for the Henry Mountains and Fremont Gorge TMA and the San Rafael Desert TMA.

a. **Cooperating agencies.** Prior to initiation of public scoping for a new TMP, BLM will invite eligible federal, tribal, state, and local government agencies to participate in the development of the TMPs as cooperating agencies. Cooperating agency agreements will be established in accordance with law and regulations, including 43 C.F.R. § 46.225.

b. **Public scoping.** At the initiation of the travel planning scoping period for a new TMP, BLM will make available to the public and stakeholders maps of all BLM-inventoried routes

being considered for designation under 43 C.F.R. § 8342.1. Such route inventory maps will include spur routes leading to Utah State Institutional Trust lands, facilities, campsites, and other points of interest, which may include overlooks and natural and historic features. The maps will provide a unique identifier, including any state or county identifying number or common name known to BLM, for each individual route and be of sufficient detail that the public can provide meaningful input on each individual route's purpose and need, as well as potential resource and user conflicts. The maps and their underlying GIS data will be made available on the internet and BLM will make a reasonable effort to make paper copies available in each respective field office. BLM will provide a reasonable period for the public and stakeholders to provide information regarding the maps or any routes being considered for designation within the TMA, which may include evidence of valid existing rights and route maintenance agreements, prior to BLM's preliminary route evaluation.

c. **Preliminary route evaluations.** A BLM interdisciplinary team ("ID Team") will conduct a preliminary evaluation of each route being considered for designation in the TMP. The preliminary evaluation will include (1) assessing how each potential route designation within the TMA is consistent with 43 C.F.R. § 8342.1; (2) consideration of the goals and objectives for resource values and uses established in the applicable RMP; (3) consideration and documentation of any purpose and need of the route, including but not limited to activities relating to existing motorized and non-motorized uses for recreation, hunting, law enforcement, search and rescue, fire suppression, access to private or Utah State Institutional Trust lands, exploration and development, administrative, and authorized motorized travel; and (4) consideration and documentation of any known or asserted resource or user conflict. BLM will also consider designating spur routes leading to Utah State Institutional Trust lands, facilities, campsites, and other points of interest, which may include overlooks and natural and historic features. When considering routes for designation, BLM will consider whether there are multiple routes leading to the same location. The ID Teams may consider designating routes in any manner consistent with BLM's authority under 43 C.F.R.

§ 8340.0-5(g), which includes, but is not limited to, designating routes for motorized, non-motorized, and administrative travel.

d. **Public and stakeholder review of preliminary route evaluations.** At the conclusion of the ID Team's preliminary evaluation of all the routes being considered for designation in the TMP, BLM will prepare (1) a Travel Management Plan Scoping Report, including an appendix with copies of all public and stakeholder correspondence received to date, unless prohibited by law; (2) preliminary alternatives maps; and (3) draft route reports. BLM will make these documents available to the public and stakeholders upon completion. Commensurate with the level of public and stakeholder interest, BLM may seek further public and stakeholder input as to the preliminary alternatives maps and draft route reports and/or hold a public meeting to further engage the public in the travel planning process. All written input received from the public and stakeholders will be made available to the public as provided by law.

e. **NEPA compliance.** BLM will consider all substantive and timely input received as a result of its public and stakeholder engagement efforts in updating the draft route reports and developing a draft TMP NEPA document. BLM will make the updated route reports and the draft TMP NEPA document simultaneously available for public review and comment for a 30-day period (or longer, at BLM's sole discretion). In providing for public review and comment, BLM will follow applicable NEPA regulations.

f. **Final decision.** BLM will consider the information obtained during the public review and comment period to develop final route reports, its final NEPA document, and its decision document approving each new TMP. Decision records or records of decisions approving TMPs will be appealable to the Interior Board of Land Appeals as provided in 43 C.F.R. Part 4.

g. **Responses to public and stakeholder comments.** BLM will respond to substantive and timely public and stakeholder comments in accordance with all cooperating agency agreements and applicable NEPA regulations. BLM may occasionally receive, outside of a specified

comment period, submissions from the public or stakeholders; BLM may consider such submissions at its sole discretion.

17. **Documentation requirements.** BLM will adhere to the following documentation requirements when conducting its travel planning for the new TMPs for the TMAs identified in paragraph 13:

a. **Purpose and need.** BLM will identify and document in each route report the purpose and need for the route. BLM will identify all known current motorized and non-motorized use that occurs on the route. In considering if a route has a purpose and need, BLM will take into account information indicating if a route is no longer used by motorized vehicles, is revegetating or reclaiming, and/or is impassable to motorized vehicles. A route without an identified purpose and need will not be proposed as part of the dedicated route network in any action alternatives in the NEPA document.

b. **Affected resources.** For each route for which BLM has identified a purpose and need, BLM will document in the route report any public land resources, as set forth in 43 C.F.R. § 8342.1(a), that may be affected by motorized vehicle use of the route. Public land resources include, but are not limited to, identified cultural resources and public lands with BLM-inventoried wilderness characteristics, regardless of whether BLM administers or manages the subject public lands to maintain or enhance those resources.

c. **Resource impact.** BLM will identify and document in each route report all direct and indirect impacts to "soil, watershed, vegetation, or other resources of the public lands," 43 C.F.R. § 8342.1(a), including identified cultural resources and public lands with BLM-inventoried wilderness characteristics, that are caused by motorized vehicle use.

d. **Route-specific minimization alternatives.** BLM will document in the route report how each alternative route designation will "minimize damage" to affected "soil, watershed, vegetation, or other resources of the public lands," 43 C.F.R. § 8342.1(a), including identified cultural resources and public lands with BLM-inventoried wilderness characteristics. In each route

report, BLM will include a brief narrative summary of how it has applied the designation criteria to the route for each alternative route designation.

e. **Travel network minimization alternatives.** BLM will explain in the NEPA document for each TMP how each proposed alternative route network will "minimize damage" to "resources of the public lands," 43 C.F.R. § 8342.1(a), including identified cultural resources and public lands with BLM-inventoried wilderness characteristics. For purposes of minimizing damage to public lands with BLM-inventoried wilderness characteristics, BLM will consider the potential damage to any constituent element of wilderness characteristics, including naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive and unconfined recreation, for each alternative route network. BLM will consider in the NEPA document at least one proposed alternative route network that would not designate for ORV use any route where BLM has determined that such use may "damage," 43 C.F.R. § 8342.1(a), BLM-inventoried wilderness characteristics; however, BLM need not consider closing such a route to ORV use to the extent the use is authorized by an existing right-of-way or other BLM authorization or by law, including *State of Utah v. Andrus*, 486 F. Supp. 995 (D. Utah 1979), which will be documented in the final route report.

f. **Alternative route networks within WSAs and Natural Areas.** For routes or portions thereof that are located on public land within wilderness study areas ("WSAs") and Natural Areas, BLM will analyze in the NEPA document at least one alternative route network that would enhance BLM-inventoried wilderness characteristics by designating the routes or the relevant portions thereof as closed to ORV use, unless ORV use of the route is authorized by an existing right-of-way or other BLM authorization or by law. To the extent ORV use of a route is authorized, this alternative route network will include measures limiting ORV use to enhance BLM-inventoried wilderness characteristics to the greatest extent possible consistent with applicable laws, regulations, or existing right-of-way authorizations.

g. **Alternatives proposed by parties**. Any party to this Settlement Agreement may propose a route network alternative during public scoping and BLM will consider any such

alternative, as appropriate, in its NEPA document. This does not foreclose BLM from determining that such an alternative will not be analyzed in detail.

h. **R.S. 2477 assertions.** Route designations do not signify a recognition or rejection of R.S. 2477 assertions.

i. **Preservation of discretion.** Nothing in this Settlement Agreement shall be construed to require BLM to adopt any particular alternative or portion thereof presented in a route report or NEPA document or to limit in any way BLM's discretion to make route designations or adopt a final TMP, consistent with paragraph 2. Nothing in this Settlement Agreement shall be construed to limit in any way BLM's discretion to open, close, or modify use on routes.

18. **Henry Mountains and Fremont Gorge TMA.** Because BLM has already initiated some components of travel planning for the Henry Mountains and Fremont Gorge TMA to comply with the district court's 2015 remedy order, this paragraph, rather than paragraph 16, applies to BLM's travel planning process there. BLM will invite eligible federal, tribal, state, and local government agencies to be cooperating agencies as outlined in paragraph 16.a, so that cooperating agencies may participate in the remainder of the travel-planning process for the Henry Mountains and Fremont Gorge TMA. BLM will not be required to undertake any of the actions identified in paragraphs 16.b or 16.d other than as specified below: no later than completion of its interdisciplinary evaluation of routes within the TMA, including its consideration of Class III cultural resource survey data, BLM will make available to the public and stakeholders: (1) maps and GIS data of the inventoried routes being considered for designation; (2) preliminary alternatives maps; and (3) draft route reports. The maps will provide a unique identifier for each individual route and be of sufficient detail that the public can provide meaningful input on each individual route's purpose and need, as well as potential resource and user conflicts. In addition, BLM will hold at least one public meeting during this period. BLM will comply with all requirements of paragraphs 16.c, 16.e, 16.f, and 16.g.

19. **San Rafael Desert TMA.** Because BLM has already initiated travel planning for the San Rafael Desert TMA, this paragraph, rather than paragraph 16, applies to BLM's travel planning process there. BLM will invite eligible federal, tribal, state, and local government agencies to be cooperating agencies as outlined in paragraph 16.a, so that cooperating agencies may participate in the remainder of the travel planning process for the San Rafael Desert TMA. However, because BLM already provided a 30-day public travel planning scoping period and has undertaken its preliminary interdisciplinary evaluation of the inventoried routes in this TMA, BLM will not be required to undertake any actions set forth in paragraph 16.b. BLM will also not be required to create new preliminary route evaluation forms. However, BLM will update its preliminary route evaluations to include the information listed in paragraph 16.c. BLM will comply with all requirements of paragraphs 16.d, 16.e, 16.f, and 16.g.

Monitoring During and After Travel Planning

20. **Monitoring in the Vernal, Price, Moab, and Kanab TMAs.**

a. **Baseline Monitoring Report.** Except for the Henry Mountains and Fremont Gorge TMA, for each TMA identified in paragraph 13, BLM will complete a baseline monitoring report that will document visually-apparent unauthorized surface disturbances off routes as well as visually-apparent damage to public lands resources caused by motorized vehicle use within WSAs, Natural Areas, and/or lands with BLM-inventoried wilderness characteristics. To create the baseline monitoring report, BLM will physically inspect those portions of routes within the TMA that are within or constitute a boundary to a WSA, Natural Area, and/or lands with BLM-inventoried wilderness characteristics. For those portions of routes, BLM will document by site photography and written narrative each disturbance and damage site. At a minimum, BLM will document the following information: (1) the geospatial coordinate of the site of disturbance or damage; (2) the route number or other identifier where the disturbance or damage was observed, the date of the physical inspection, the TMA in which the inspection took place, and the name of the inspector; (3)

the observed usage intensity (i.e., none, light, medium, or heavy); (4) the apparent geographic extent of the disturbance or damage; and (5), if possible, (a) the apparent type of motorized vehicle(s) that caused the disturbance or damage, (b) the apparent purpose of the disturbance (e.g., short spur, dispersed camping, play area, or inadvertent travel), and (c) the type of public land resource damaged by motorized vehicle use. The baseline monitoring report will include the information gathered and recorded during the physical inspection, as well as maps showing the location and nature of any documented disturbance or damage sites. BLM will make its baseline monitoring report available for public review at the same time as the preliminary route evaluation documents identified in paragraph 16.d. BLM need not complete the baseline monitoring report prior to that time, but may do so at its discretion. Baseline monitoring reports described in this paragraph may be used to explain or support any BLM final agency action, but do not themselves constitute final agency action.

b. **Monitoring during planning.** After BLM completes the baseline monitoring report required by paragraph 20.a, BLM will, at least one time per year, inspect all sites where BLM's baseline monitoring report previously identified disturbance and damage. If BLM receives credible information that any new visually-apparent unauthorized surface disturbances off routes or visually-apparent damage to public lands resources caused by motorized vehicle use (1) has occurred along those portions of routes within the TMA that are within or constitute a boundary to a WSA, Natural Area, and/or lands with BLM-inventoried wilderness characteristics and (2) is adversely affecting public land resources, then BLM will inspect the portion of that route, subject to available personnel and passable route conditions. BLM will document its inspection and monitoring of these sites during planning by site photography and written narrative describing each disturbance and damage site. BLM's documentation will include, at a minimum, the following information: (1) the geospatial coordinate of the site of disturbance or damage; (2) the route number or other identifier where the disturbance or damage was observed, the date of the physical inspection, the TMA in which the

inspection took place, and the name of the inspector; (3) the observed usage intensity (i.e., none, light, medium, or heavy); (4) the apparent geographic extent of the disturbance or damage; and (5), if possible, (a) the apparent type of motorized vehicle(s) that caused the disturbance or damage, (b) the apparent purpose of the disturbance (e.g., short spur, dispersed camping, play area, or inadvertent travel), and (c) the type of public land resource damaged by motorized vehicle use. BLM's documentation and/or reports described in this paragraph may be used to explain or support any BLM final agency action, but do not themselves constitute final agency action. BLM will undertake monitoring more frequently if it determines additional monitoring is warranted. BLM's monitoring obligation identified in this paragraph for the TMAs identified in paragraph 13 will terminate when BLM issues the new TMP for that TMA, regardless of whether administrative or judicial review is sought.

21. **Monitoring in the Henry Mountains and Fremont Gorge TMA.** BLM will prepare a summary monitoring report for the Henry Mountains and Fremont Gorge TMA that will include: (a) all off-highway vehicle observation reports and other route monitoring data collected in the TMA since the May 22, 2015 remedy order; (b) all additional route monitoring data that has been collected in the TMA in conformance with the Richfield 2008 Resource Management Plan and Record of Decision; and (c) all BLM-generated monitoring data related to the 129 routes within the TMA identified by Plaintiffs in an April 18, 2016 submission to BLM. Starting on the effective date of this Settlement Agreement, BLM will begin documenting all of its route monitoring data that it will collect pursuant to this paragraph in the Henry Mountains and Fremont Gorge TMA using site photography and written narrative in a manner that describes all visually-apparent unauthorized surface disturbance off routes and visually-apparent damage to public lands resources caused by motorized vehicle use. BLM's documentation will include, at a minimum, the following information: (1) the geospatial coordinate of the site of disturbance or damage; (2) the route number or other

identifier where the disturbance or damage was observed, the date of the physical inspection, the TMA in which the inspection took place, and the name of the inspector; (3) the observed usage intensity (i.e., none, light, medium, or heavy); (4) the apparent geographic extent of the disturbance or damage; and (5), if possible, (a) the apparent type of motorized vehicle(s) that caused the disturbance or damage, (b) the apparent purpose of the disturbance (e.g., short spur, dispersed camping, play area, or inadvertent travel), and (c) the type of public land resource damaged by motorized vehicle use. The summary monitoring report will include the information gathered and recorded during the physical inspection, as well as maps showing the location and nature of any disturbance or damage site. BLM will make the summary monitoring report for the Henry Mountains and Fremont Gorge TMA available to the public within 180 days of the effective date of this Settlement Agreement, but, regardless of the effective date of the Settlement Agreement, no sooner than October 15, 2017.

22. **Consideration of Considerable Adverse Effects.**

a. Any party to the agreement may provide BLM with evidence that (1) motorized vehicle use is causing or will cause considerable adverse effects as set forth in 43 C.F.R. § 8341.2(a) or (2) that action is required to protect persons, property, and public lands and resources pursuant to 43 C.F.R. § 8364.1. When BLM receives such information, it will promptly make such information available to all other parties to the Settlement Agreement. BLM will provide a written response assessing whether action pursuant to § 8341.2(a) or § 8364.1 is necessary to the party submitting such information as well as all other parties to the agreement within 90 days of receiving the information.

b. BLM will consider the information collected during monitoring identified in paragraphs 20-21 of this Settlement Agreement and any other relevant information to determine whether motorized vehicle use is causing or will cause considerable adverse effects as set forth in 43

C.F.R. § 8341.2(a) or requires action to protect persons, property, and public lands and resources pursuant to 43 C.F.R. § 8364.1. If so, BLM will take appropriate management action.

c. The obligations outlined in this paragraph start on the effective date of this Settlement Agreement and end eight years after this Settlement Agreement becomes effective, provided that nothing in this Settlement Agreement exempts or absolves BLM from compliance with applicable regulations, including 43 C.F.R. subparts 8341 and 8364.

23. **Monitoring after TMPs are issued.** BLM will develop a long-term motorized vehicle monitoring protocol as part of each new TMP prepared for the TMAs identified in paragraph 13. BLM's proposed long-term monitoring protocol will be outlined in the draft and final NEPA document for each TMP, and the public, cooperating agencies, and other stakeholders will have an opportunity to provide input on each TMP's long-term monitoring protocol during the relevant public comment period. Each TMP's long-term monitoring protocol will become effective as provided in the applicable TMP. Once each TMP is issued, the long-term monitoring protocol specific to that TMP will apply and not the terms of this Settlement Agreement.

NHPA Identification Efforts for Travel Planning

24. **Applicability and limitation.** BLM will complete the following NHPA identification efforts prior to issuing a TMP for the TMAs identified in paragraph 13 of this Settlement Agreement. To the extent that an existing BLM-authorized Class III cultural resource survey exists for the route(s) subject to this Settlement Agreement, BLM in its discretion may choose to rely on the existing Class III survey to meet its obligations under this Settlement Agreement.

a. **Henry Mountains and Fremont Gorge TMA.** Before issuing a TMP for the Henry Mountains and Fremont Gorge TMA identified in paragraph 13, BLM will ensure Class III cultural resource surveys have been conducted for 100% of all routes that will be designated as open

in the Henry Mountains and Fremont Gorge TMP, except for the Fremont Gorge portion of the TMA identified in Attachment A1 (Map 1).

b. **Class III surveys in certain ACECs.** Before issuing TMPs for the Vernal, Price, Moab, and Kanab TMAs identified in paragraph 13, BLM will ensure Class III surveys have been conducted along all routes or portions of routes that are designated as open within the following designated ACECs, which are currently protecting identified relevant and important cultural, archaeological, or historic resources and/or properties. These designated ACECs are identified in Attachment A6 (Map 6), which is hereby incorporated into this Settlement Agreement, and are specifically identified below:

i. Vernal Field Office: Browns Park and Nine Mile Canyon.

ii. Price: Big Hole, Copper Globe, Cottonwood Canyon, Dry Lake Archeological District, Dry Wash, Grassy Trail, Hidden Splendor, Hunt Cabin, King's Crown, Little Susan Mine, Lucky Strike, Molen Seep, Muddy Creek, Muddy-Creek-Tomsich Butte, North Salt Wash, Pictographs, Sand Cove, Shepard's End, Short Creek, Smith Cabin, Swasey's Cabin, Temple Mountain, Tidwell Draw, and Wild Horse Canyon.

iii. Moab: Highway 279, Long Canyon, Shafer Basin, and Ten Mile Wash.

iv. Kanab: Cottonwood Canyon.

c. **Class III surveys in high potential areas.** In addition to the requirements set forth in paragraphs 24.b above, before issuing TMPs for the Vernal, Price, Moab, and Kanab TMAs identified in paragraph 13, BLM will ensure Class III cultural resources surveys have been conducted along all routes or portions of routes that are designated as open in the TMAs identified in paragraph 13 and that are located in areas that BLM has identified in a Class I cultural resource inventory as having a high potential for cultural resources.

Areas of Critical Environmental Concern

25. **Evaluation of nominated ACECs related to special status species.** The parties acknowledge that, in the Vernal RMP protest decision response, BLM committed to "consider[] at the earliest opportunity as part of the next planning process in the [Vernal] Field Office" the potential ACECs nominated to protect the special status species Graham's penstemon and Pariette cactus. For these two nominated ACECs, BLM will evaluate whether the relevance and importance criteria are met in accordance with BLM Manual 1613, *Areas of Critical Environmental Concern* (September 29, 1988). If the relevance and importance criteria are met, BLM will establish any necessary temporary management prescriptions to protect the relevant and important resource values, as required by Manual 1613. In considering these potential ACECs, BLM may consider, among other things, any protection provided by existing management prescriptions, conservation agreements, or conservation strategies, when determining whether temporary management prescriptions may be necessary.

26. **Reevaluation of nominated ACEC with new visual resources information.** The parties acknowledge that BLM has updated its visual resources inventory for the area included in the Vermilion Cliffs nominated ACEC that was considered, but not designated, in the 2008 Kanab RMP. This ACEC is identified on Attachment A7 (Map 7). BLM will re-evaluate this nominated ACEC and consider whether additional management prescriptions may be warranted to protect any unprotected relevant and important resource values in the potential ACEC. This reevaluation will be based on the updated visual resources inventory, and any other relevant new information that may be available. If BLM determines that any relevant and important resource values in the potential ACEC are unprotected, BLM will establish any necessary temporary management prescriptions to protect those resource values, as required by BLM Manual 1613, *Areas of Critical Environmental Concern* (September 29, 1988).

27. **Process.** At the commencement of each evaluation required by paragraphs 25-26 of this Settlement Agreement, BLM will post a notice on the internet and provide an opportunity for interested parties to submit updated information regarding the potential ACEC. Within 30 days of the completion of an evaluation conducted pursuant to paragraphs 25-26, BLM will notify the parties to this Settlement Agreement that it has completed its evaluation and provide the parties with a written summary of the results of its evaluation. BLM will complete the reevaluations before the deadlines specified below as consistent with applicable law, with the time commencing on the effective date of the Settlement Agreement outlined in paragraph 37:

a. Vernal Field Office

i. Pariette cactus potential ACEC – 2 years.

ii. Graham's penstemon potential ACEC – 5 years.

b. Kanab Field Office

i. Vermilion Cliffs potential ACEC – 2 years.

28. **Limitations.** Nothing in this Settlement Agreement affects or limits BLM's discretion in conducting the evaluations, or in deciding whether to initiate a land use plan amendment that would designate an ACEC as a result of the evaluations. The parties agree not to seek administrative or judicial review of BLM's notification, summary, or evaluation outlined in paragraphs 25-26, or to assist in any way any person or entity that attempts to do so. However, to the extent that BLM makes and issues a land use plan amendment decision subsequent to its evaluation that constitutes final agency action within the meaning of 5 U.S.C. § 704, nothing herein limits the parties from seeking administrative or judicial review of BLM's subsequent land use plan amendment decision.

Oil and Gas

29. BLM will continue to use the Utah Air Resource Management Strategy (July 2011) ("2011 ARMS") and the Memorandum of Understanding Among the U.S. Department of Agriculture, U.S. Department of the Interior, and U.S. Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions Through the National Environmental Policy Act Process ("2011 National MOU") to inform and guide BLM's analyses of air-quality impacts for any lease sales and land use plan amendments/revisions, including master leasing plans, that occur on public lands subject to the 2008 Moab, Monticello, Price, Vernal, Richfield and Kanab RMPs, unless those documents are amended or superseded. Nothing in this Settlement Agreement makes binding the provisions of the 2011 ARMS or 2011 National MOU.

a. BLM will update the 2011 ARMS within 1 year from the effective date of the Settlement Agreement. Prior to updating the 2011 ARMS, BLM will provide an opportunity for public comment and BLM will provide a written response to any substantive and timely comments that are submitted. When updating the 2011 ARMs, BLM will:

i. Ensure that the update to the 2011 ARMS is consistent with relevant existing guidance and provides updated guidance on current air quality management issues;

ii. Describe how BLM will use the Intermountain West Data Warehouse, consistent with current BLM guidance;

iii. Describe how BLM will, in future NEPA processes, identify reasonable mitigation and control measures and design features to address adverse impacts to air quality or air quality related values ("AQRVs") on all affected public lands and reduce greenhouse gas emissions when those measures are

reasonable and consistent with relevant BLM statutory authorities and policies and lease rights and obligations.

Nothing in this Settlement Agreement precludes BLM from continuing to make final decisions relating to oil and gas on public lands before completing the updated ARMS.

b. Subject to available funding, within 2 years of the update of the 2011 ARMs, BLM will update the 2013 ARMS photochemical modeling analysis. The analysis will include an updated emissions inventory for both the Vernal and Price Field Offices that will include an estimation of greenhouse gases in addition to criteria and other regulated air pollutants. BLM will conduct photochemical modeling where the updated emissions inventory indicates that modeling is appropriate. The photochemical modeling will examine cumulative impacts to air quality and AQRVs based on existing and reasonably foreseeable development in the planning areas. The modeling will also disclose the contribution of reasonably foreseeable oil and gas development and other activities on BLM land to such cumulative impacts. This process will be consistent with any applicable federal regulations (including those of other federal agencies). Nothing in this Settlement Agreement precludes BLM from continuing to make final decisions relating to oil and gas on public lands before completing the updated photochemical modeling analysis.

c. Consistent with the 2011 ARMS (pgs. 15-16), BLM-Utah will compile an Annual Air Resource Report that will include: (1) BLM air monitoring activities during the year; (2) a summary of air monitoring data collected; (3) trend analysis on air quality issues of concern; (4) topical reports on air quality issues of interest or concern; (5) air resource management plans; and (6) issues for the coming year. The first Annual Air Resource Report will cover the time period between adoption of the ARMS and the date of the report. The yearly reports will be made publically available on the internet. BLM-Utah's obligation to

prepare an Annual Air Resource Report expires after BLM-Utah has prepared eight Annual Air Resource Reports. Annual Air Resource Reports described in this paragraph may be used to explain or support BLM final agency action, but do not themselves constitute final agency action. Nothing in this Settlement Agreement precludes BLM from continuing to make final decisions relating to oil and gas on public lands before completing the Annual Air Resource Reports.

30. For any future lease sales or land use plan amendments/revisions, including master leasing plans, that BLM commences during the eight years after the effective date of this settlement and that BLM determines is covered by the 2011 National MOU that occurs in areas on public lands subject to the 2008 Moab, Monticello, Price, Vernal, Richfield and Kanab RMPs, BLM will determine through the NEPA process whether it may incorporate into lease stipulations and lease sale notices any reasonable and available air quality mitigation measures to address the formation of ozone and the emission of greenhouse gases. When BLM incorporates air quality mitigation measures into lease stipulations and lease sale notices to address the formation of ozone and the emission of greenhouse gases, BLM will explain in its NEPA documentation why BLM has incorporated such mitigation measures.

31. Nothing in this Settlement Agreement shall be construed as limiting BLM's discretion to promulgate new regulations or modify the 2011 ARMs, or any updated version of the ARMS, or the 2011 National MOU, or issue program guidance to comply with new statutes, regulations, or updated air quality or AQRVs regulations issued by the State of Utah or EPA.

Vacatur of District Court Decisions and Dismissal of Third Amended Complaint

32. Plaintiffs agree to dismiss with prejudice their original complaint, amended complaints, and supplemental complaint (ECF Nos. 1, 65, 86, 465, and *SUWA v. U.S. Dep't of the*

Interior, No. 1:10-cv-1930 (D.D.C.) ECF No. 1) in the above-captioned litigation in their entirety. The parties agree that the district court's November 4, 2013 decision (ECF No. 329), May 22, 2015 remedy order (ECF No. 388), and October 16, 2015 judgment (ECF No. 419) should be vacated in their entirety.

33. Within 7 calendar days of the complete execution of this Settlement Agreement, the parties shall jointly file a motion under Fed. R. Civ. P. 62.1 in the district court for an indicative ruling requesting the district court to indicate whether it would grant a motion to (1) vacate its November 4, 2013 decision (ECF No. 329), May 22, 2015 remedy order (ECF No. 388), and October 16, 2015 judgment (ECF No. 419) in their entirety; (2) dismiss with prejudice Plaintiffs' original complaint, amended complaints, and supplemental complaint (ECF Nos. 1, 65, 86, 465, and *SUWA v. U.S. Dep't of the Interior*, No. 1:10-cv-1930 (D.D.C.) ECF No. 1) in the above-captioned litigation in their entirety; and (3) retain limited jurisdiction to enforce the terms of this Settlement Agreement as outlined in paragraph 40. The parties shall also jointly file a motion requesting that the district court stay all proceedings in the district court (2:12-cv-257), including the entirety of its May 22, 2015 remedy order, as amended (ECF Nos. 388, 506, 508, 510, 512), until the district court rules on the parties' joint motion to vacate as outlined in paragraph 35. If the district court does not indicate that it would grant the motion in full or if the district court does not subsequently grant the joint motion to vacate, dismiss, and retain jurisdiction, the parties agree to jointly file a motion seeking to extend all remaining deadlines for BLM to comply with the district court's May 22, 2015 remedy order, as amended, from their current deadlines by the number of months commensurate with the time elapsed between the filing of the motion for an indicative ruling and motion for a stay until the date the district court rules either on the motion for an indicative ruling or on the joint motion to vacate, dismiss, and retain jurisdiction, plus an additional three months. The parties shall also ask the Tenth Circuit Court of Appeals to stay proceedings in 10th Circuit Case Nos. 15-4151,

15-4152, 15-4153, 15-4155, and 15-4158 until the district court issues its order on the motion for an indicative ruling.

34. Should the district court indicate that it will grant the motion, the parties will file a joint motion in the Court of Appeals under Fed. R. App. P. 12.1 asking the Court of Appeals for a limited remand of the matter for further proceedings in the district court as outlined in paragraph 35. The parties shall also ask the Court of Appeals to retain jurisdiction over the appeals in 10th Circuit Case Nos. 15-4151, 15-4152, 15-4153, 15-4155, and 15-4158 until the district court issues its ruling in response to the joint motion to vacate outlined in paragraph 35, so as not to prejudice BLM's ability to pursue its appeal if the terms of paragraphs 35 and 36 of this Settlement Agreement are not satisfied.

35. Should the Court of Appeals remand the matter to the district court while retaining jurisdiction as outlined in paragraph 34, the parties shall jointly move the district court to (1) vacate its November 4, 2013 decision (ECF No. 329), May 22, 2015 remedy order (ECF No. 388), and October 16, 2015 judgment (ECF No. 419) in their entirety; (2) dismiss with prejudice Plaintiffs' original complaint, amended complaints, and supplemental complaint (ECF Nos. 1, 65, 86, 465, and *SUWA v. U.S. Dep't of the Interior*, No. 1:10-cv-1930 (D.D.C.) ECF No. 1) in the above-captioned litigation in their entirety; and (3) retain limited jurisdiction to enforce the terms of this Settlement Agreement as outlined in paragraph 40.

36. Should the district court (1) vacate its November 4, 2013 decision (ECF No. 329), May 22, 2015 remedy order (ECF No. 388), and October 16, 2015 judgment (ECF No. 419) in their entirety; (2) dismiss with prejudice Plaintiffs' original complaint, amended complaints, and supplemental complaint (ECF Nos. 1, 65, 86, 465, and *SUWA v. U.S. Dep't of the Interior*, No. 1:10-cv-1930 (D.D.C.) ECF No. 1) in the above-captioned litigation in their entirety; and (3) retain limited jurisdiction to enforce the terms of this Settlement Agreement as outlined in paragraph 40,

the parties to this Settlement Agreement will move to dismiss the appeals in 10th Circuit Case Nos. 15-4151, 15-4152, 15-4153, 15-4155, and 15-4158 within 7 days of the District Court's vacatur, dismissal, and retention order, with each party bearing its own costs on appeal.

C. EFFECTIVE DATE, REINSTATEMENT, ATTORNEYS' FEES

37. The terms and agreements contained in paragraphs 1-31, and 37-42 of this Settlement Agreement go into effect only when (1) the district court enters an order (a) vacating its November 4, 2013 and May 22, 2015 orders and October 16, 2015 judgment (ECF Nos. 329, 388, 419), (b) dismisses with prejudice Plaintiffs' original complaint, amended complaints, and supplemental complaint (ECF Nos. 1, 65, 86, 465) in the above-captioned litigation in their entirety, and (c) retains limited jurisdiction to enforce the terms of this Settlement Agreement as outlined in paragraph 40; and (2) the Tenth Circuit dismisses the appeals of the parties to this Settlement Agreement.

38. If the district court does not (1) vacate its November 4, 2013 decision (ECF No. 329), May 22, 2015 remedy order (ECF No. 388), and October 16, 2015 judgment (ECF No. 419) in their entirety; (2) dismiss with prejudice Plaintiffs' original complaint, amended complaints, and supplemental complaint (ECF Nos. 1, 65, 86, 465) in the above-captioned litigation in their entirety; and (3) retain limited jurisdiction to enforce the terms of this Settlement Agreement as outlined in paragraph 40, this Settlement Agreement will be void and the parties will have no further obligations under this Settlement Agreement. In this circumstance, Federal Defendants and the Defendant-Intervenors reserve their rights to pursue their appeals in 10th Cir. Nos. 15-4151, 15-4152, 15-4153, 15-4155, 15-4158 and Plaintiffs reserve their rights to pursue their claims in district court.

39. **Deadline limitations.** BLM is not obligated to meet any of the deadlines identified herein if it is prevented from doing so due to an event beyond the reasonable control of BLM that prevents BLM from fulfilling any obligation required by this Settlement Agreement despite the

exercise of due diligence. Such events may include, but are not limited to, situations where BLM does not receive adequate appropriations (including due to sequestration), where BLM-Utah does not receive adequate funds from the Department of the Interior or BLM's national office, delays in the consultation process under Section 106 of the NHPA that are beyond BLM's control, natural disasters, as well as all unavoidable legal impediments or prohibitions. In the case of such an event, BLM shall be relieved of those specific obligations directly precluded by the event, as well as those other obligations whose performance is precluded by the inability to perform, or delay in performing, the directly precluded obligations, and only for the duration of such event, as provided herein. Where BLM cannot comply with any deadlines identified herein due to such an event, it shall provide notice to the parties and, should the deadlines be one of those over which the district court has continuing jurisdiction, shall also notify the district court. Such notice shall include a new estimated date by which BLM will comply with the deadline and a description, to the extent then known by BLM, of the steps taken or proposed to be taken to prevent or minimize the event's interference with BLM's performance of any affected obligations under this Settlement Agreement. BLM will provide status reports to the parties at regular intervals not to exceed 90-days notifying the parties and the district court, if applicable, of BLM's efforts to address and resolve the event. If any party disputes BLM's claim that it cannot comply with any of the deadlines identified herein due to an event, or the adequacy of BLM's efforts to address and resolve such event, such party shall proceed in the manner specified in paragraph 40.

40. **Enforcement.** The exclusive remedies for any alleged breach or noncompliance with the Settlement Agreement are provided for solely in this paragraph.

a. The district court shall retain jurisdiction over this Settlement Agreement for the purpose of judicial resolution of disputes that may arise among the parties to this Settlement Agreement concerning compliance with the TMP and ACEC deadlines specified

in paragraphs 13 and 27, respectively, as well as the one-year deadline to update the ARMS identified in paragraph 29.a. Disputes over BLM's alleged failure to meet any of these deadlines shall be resolved through the process set forth in paragraphs 40.a-c. The district court's continuing jurisdiction to resolve such disputes will be triggered only by BLM's failure to meet a deadline identified in paragraphs 13, 27, and 29.a; it shall not extend to resolve disputes concerning any other issues, including but not limited to questions of whether BLM complied with (i) any other provisions of this Settlement Agreement, (ii) any statutory or regulatory requirements, or (iii) any guidance or policy documents. The district court's jurisdiction shall continue no later than BLM's issuance of the last TMP for the TMAs identified in paragraph 13 or BLM's completion of its evaluation of the last potential ACEC identified in paragraph 27, whichever is later.

b. The parties agree that they will first attempt to resolve any disputes related to compliance with the deadlines in paragraphs 13, 27, and 29.a informally among themselves before invoking the jurisdiction of a court to resolve compliance disputes. If such a dispute arises, the complaining party shall notify the other parties in writing of the dispute. The parties shall meet and confer in an attempt to resolve the dispute within 30 days of the written notice. If the parties do not reach a resolution within 60 days of the written notice of the dispute, the complaining party may invoke the jurisdiction of the court to resolve the dispute, as set forth in paragraph 40.c.

c. In the event the parties are unable to resolve a dispute regarding compliance with the deadlines in paragraphs 13, 27, and 29.a through informal means, any party may thereafter immediately invoke the jurisdiction of this Court to resolve such a dispute, in accordance with the procedures set forth below. The sole remedy for any alleged violation

by BLM of the deadlines specified in paragraphs 13, 27, and 29.a of this Settlement Agreement shall be as follows:

(i) The complaining party shall file a motion, in accordance with the Local Rules of this Court, requesting judicial resolution of the dispute. The parties may, by stipulation approved by the Court, alter the time table for briefing the motion; otherwise, briefing shall proceed as set forth in the Local Rules.

(ii) In exercising the retained jurisdiction to resolve disputes brought before the Court by the parties, the Court shall award only such relief as is provided for in 5 U.S.C. § 706(1), namely, to "compel agency action unlawfully withheld or unreasonably delayed." The Court's decision as to whether relief is appropriate should be guided by the following non-exhaustive list of considerations: (1) the time agencies take to make decisions must be governed by a rule of reason; (2) the Court should consider BLM's reasons for the delay, taking into account that BLM is a land-management agency with numerous competing priorities and limited resources; (3) the Court should consider the effect of expediting delayed action on agency activities of a higher or competing priority; (4) the Court should also take into account the nature and extent of the interests prejudiced by delay.

d. Any party to this Settlement Agreement may meet and confer with BLM to resolve any disputes related to compliance with the obligations outlined in this Settlement Agreement other than the deadlines specified in paragraphs 13, 27, and 29.a.

(i) The complaining party shall initiate the meet and confer process by sending a letter to the applicable BLM-Utah Field Office, BLM-Utah State Director, and the other parties to the Settlement Agreement. The initiation letter shall identify the terms of the Settlement Agreement at issue, include a detailed explanation of the

dispute, and provide all supporting evidence of the alleged noncompliance with the terms of the Settlement Agreement. The BLM-Utah State Director may notify other intervenors of the dispute and, if so, will also notify the parties to the Settlement Agreement that other intervenors have been notified.

(ii) If, within 30 days, BLM-Utah does not respond in writing or does not provide a response that the complaining party deems adequate to resolve the dispute, the complaining party shall notify the other parties to the Settlement Agreement, in writing, that the dispute is unresolved. The BLM-Utah State Director or Associate State Director shall, within 30 days of receipt of the second letter from the complaining party, meet with no more than three representatives of the complaining party. If both the BLM-Utah State Director and Associate State Director are unavailable, the meeting shall be attended by the BLM-Utah State Director's representative with his/her delegated authority related to the issue involved. Other parties to this Settlement Agreement may participate in the meeting at their discretion with no more than three representatives. The BLM-Utah State Director or Associate State Director may notify the other intervenors of the continued dispute and provide them with a separate opportunity to meet, and, if so, will also notify the other parties to the Settlement Agreement. A complaining party may request up to one meeting with BLM-Utah per quarter and a single meeting may address multiple issues.

(iii) BLM-Utah will memorialize the outcome of the meeting and will provide a copy to the parties to the Settlement Agreement within 30 days of the meeting. If BLM-Utah cannot meet the 30 day deadline due to the nature of the issues or other exigent circumstances, BLM will notify the complaining party within 25 days of the meeting

and will provide a response as expeditiously as possible, but no later than 60 days after the meeting. After providing a copy to the parties, BLM's obligations under this subparagraph are complete. The parties agree not to seek administrative or judicial review of BLM's resolution of the dispute, or to assist in any way any person or entity that attempts to do so.

(iv) The meet and confer process set forth in paragraph 40.d is not a prerequisite to the filing of a lawsuit challenging BLM's final agency actions pursuant to paragraph 40.e. The meet and confer process shall remain in effect until BLM's issuance of the last TMP for the TMAs identified in paragraph 13 or BLM's completion of its evaluation of the last potential ACEC identified in paragraph 27, whichever is later.

e. The parties' sole remedy for any alleged violation of paragraphs 15-24, 29 (except for the deadline identified in 29.a), and 30 of this Settlement Agreement shall be to seek administrative review or to file a new civil action seeking judicial review of BLM's final agency action under the APA, 5 U.S.C. §§ 701-06. In no event shall any term of this Settlement Agreement be construed as limiting any claims or defenses that BLM or any party may raise in any such subsequent proceedings. No term of this Settlement Agreement turns BLM's actions into administratively or judicially-reviewable final agency action if they would not otherwise qualify for review under applicable agency rules or as final agency action within the meaning of the APA. Any judicial review of any alleged violation of this Settlement Agreement shall be limited to the administrative record and subject to the APA's standard of review, 5 U.S.C. § 706(2).

f. The parties agree that contempt of court is not available as a remedy for any alleged violation of any portion of this Settlement Agreement. The parties therefore knowingly waive any right that they might have to seek an order for contempt for any such

violation. The parties also agree that a suit for money damages against BLM or any Federal Defendant is not available as a remedy for any alleged violation of any portion of this Settlement Agreement.

41. **Attorneys' fees.** Plaintiffs agree to accept payment of four hundred thousand dollars ($400,000.00) in satisfaction of any and all claims that have been or could be sought for attorneys' fees, costs, and expenses related to the above-captioned litigation against any part of the United States government for all district court and appellate proceedings, including attorneys' fees and costs for any and all settlement negotiations related to the above-captioned litigation. Federal Defendants' payment shall be accomplished by an electronic payment to a bank account. Federal Defendants agree to submit all necessary paperwork to federal funding authorities within twenty-one (21) days of the effective date of the Settlement Agreement. Plaintiffs agree that receipt of this payment from the Federal Defendants shall operate as a release of Plaintiffs' claims for attorneys' fees, costs, and expenses in this matter. Plaintiffs shall send written confirmation of the receipt of the payment to the Federal Defendants within seven (7) days of receiving the payment.

42. **Notices.** Any notices regarding this Settlement Agreement shall be in writing, effective upon receipt, and sent to the following:

For the plaintiffs:

Steve Bloch
Attorney, Southern Utah Wilderness Alliance
425 East 100 South
Salt Lake City, Utah 84111
801-428-3981
steve@suwa.org

Robin Cooley
Staff Attorney, Earthjustice
633 17th Street, Suite 1600
Denver, CO 80202-3625
303-623-9466
rcooley@earthjustice.org

Nada Culver
Senior Counsel and Director, BLM Action Center, The Wilderness Society
1660 Wynkoop, #850
Denver, CO 80202
303-650-5818
nada_culver@tws.org

For BLM:

Edwin L. Roberson
Utah State Director
Bureau of Land Management
440 West 200 South, Suite 500
Salt Lake City, Utah 84101-1345
801-539-4001

John Steiger
Regional Solicitor, Intermountain Region
Office of the Solicitor
U.S. Department of the Interior
125 South State Street, Suite 6201
Salt Lake City, Utah 84138
801-239-0548

Thekla Hansen-Young
U.S. Department of Justice
Appellate Section, Environment and Natural Resources Division
PO Box 7415
Ben Franklin Station
Washington, DC 20044
202-307-2710
thekla.hansen-young@usdoj.gov

Luther L. Hajek
U.S. Department of Justice
Natural Resources Section, Environment and Natural Resources Division
999 18th St. - South Terrace, Suite 370
Denver, CO 80202
303-807-1376
Luke.Hajek@usdoj.gov

For Defendant-Intervenors BlueRibbon Coalition, Colorado Off-Highway Vehicle Coalition, Trails Preservation Alliance.

Paul Turcke
MSBT Law
950 W. Bannock Street, Suite 520
Boise, ID 83702
208-331-1800
pat@msbtlaw.com

BlueRibbon Coalition/Sharetrails
c/o Clif Koontz, Ride with Respect
395 McGill Avenue
Moab, UT 84532
435-259-8334
clif@ridewithrespect.org

Colorado Off-Highway Vehicle Coalition
Trails Preservation Alliance
c/o Don Riggle
P.O Box 38093
Colorado Springs, CO 80937
719-338-4106
info@coloradotpa.org

Any party to this Settlement Agreement may change the contacts or contact information identified for that party in this paragraph by notice in writing to all other parties.

D. SIGNATURE OF PARTIES

43. The undersigned representatives of each party certify that they are fully authorized to consent to the terms and conditions of this Settlement Agreement. Signature on a counterpart shall constitute a valid signature.

Dated: 1/13/17

Jenna Whitlock
Acting Deputy Director,
Bureau of Land Management

Dated: 1/13/17

Steve Bloch
Legal Director, Southern Utah Wilderness Alliance
Counsel for Plaintiffs Southern Utah Wilderness Alliance et al.

Dated: 1/13/17

Robin Cooley
Staff Attorney, Earthjustice
Counsel for Plaintiffs Southern Utah Wilderness Alliance et al.

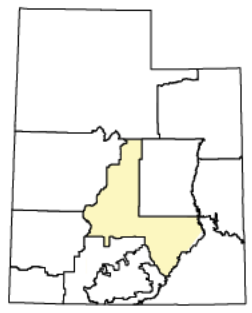
Dated: 13 JAN 2017

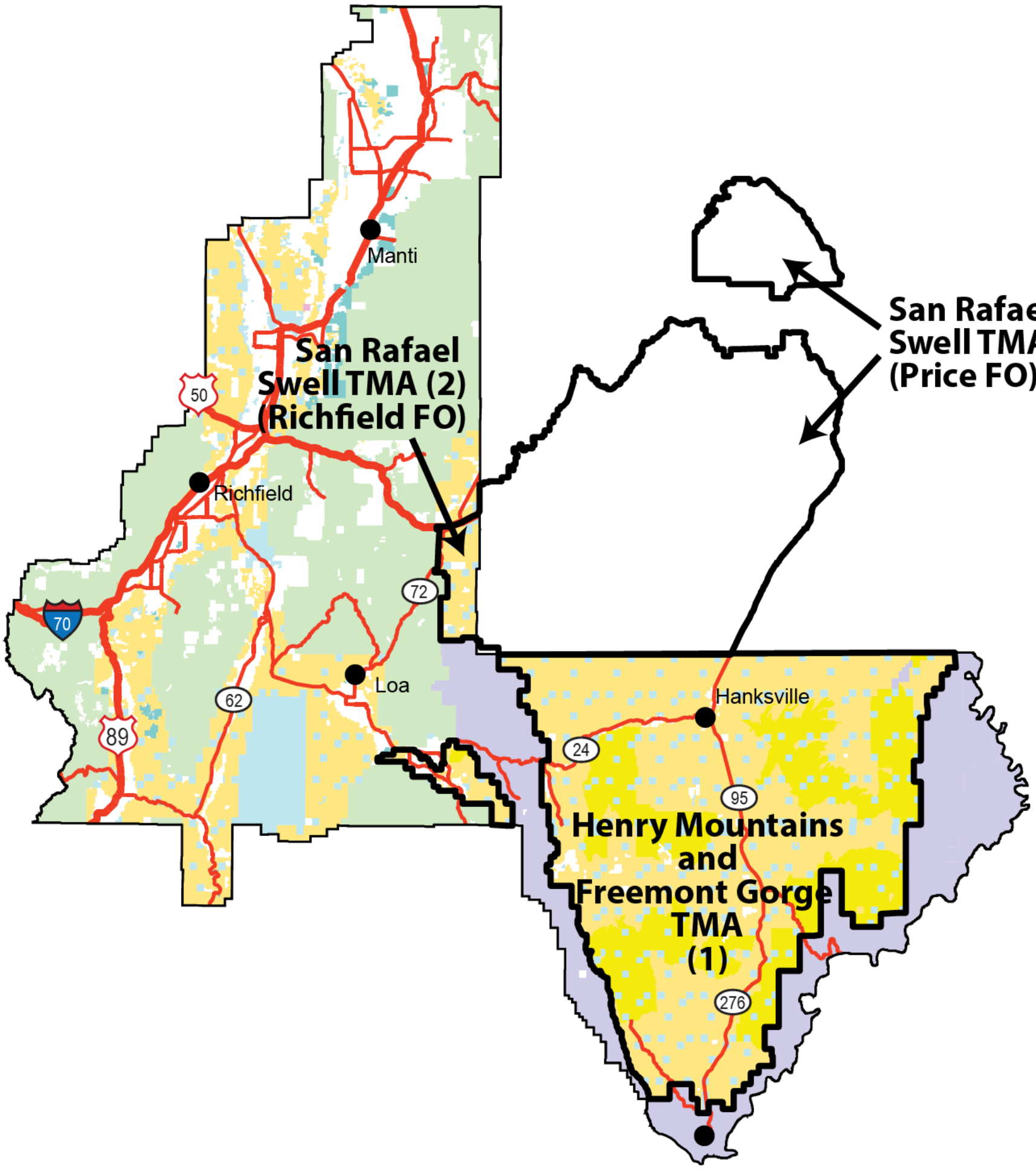
Paul Turcke
Counsel for Defendant-Intervenors BlueRibbon Coalition, Colorado Off-Highway Vehicle Coalition, Trails Preservation Alliance

Attachment A1: Map 1

Legend

- TMA Boundary
- Field Office Bdry
- US Highways
- State Highways
- Bureau of Land Management (BLM)
- BLM Wilderness Area
- Wilderness Study Area
- Indian Reservation (IR)
- Military Reservations and Corps of Engineers
- National Park Service (NPS)
- Private
- State
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- USFW National Wildlife Refuge
- USFS Wilderness Area





NORTH

0 30 60 120 Miles

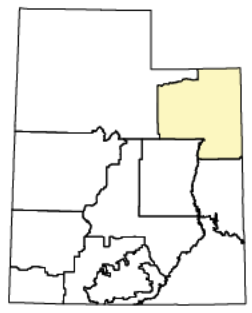
Richfield Field Office

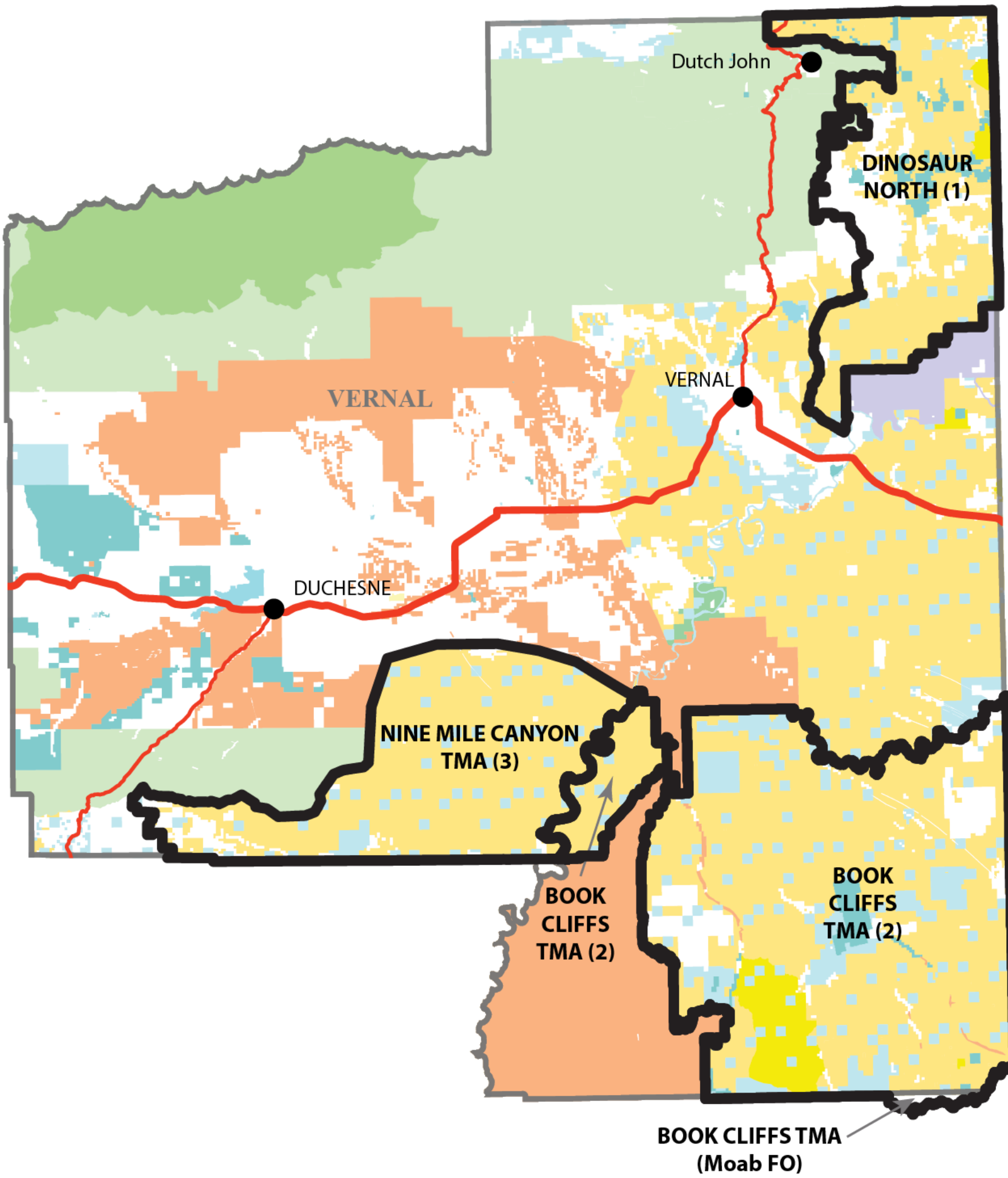
JANUARY 13, 2017

Attachment A2: Map 2

Legend

- TMA Boundary
- Field Office Bdry
- US Highways
- State Highways
- Bureau of Land Management (BLM)
- BLM Wilderness Area
- Wilderness Study Area
- Indian Reservation (IR)
- Military Reservations and Corps of Engineers
- National Park Service (NPS)
- Private
- State
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- USFW National Wildlife Refuge
- USFS Wilderness Area





NORTH

0 5 10 20 30 Miles

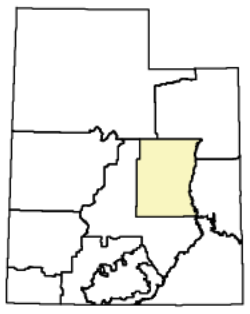
Vernal Field Office

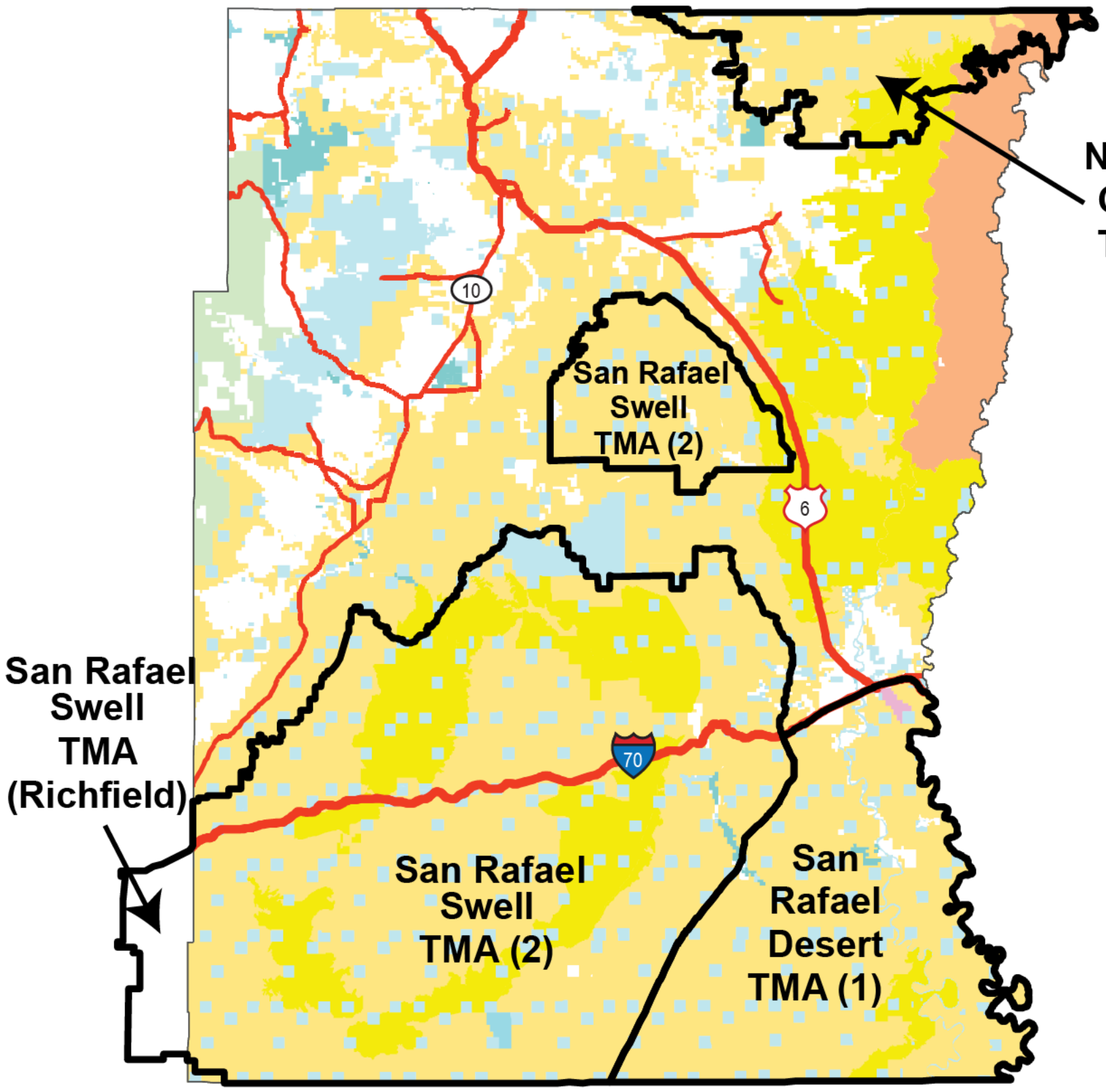
JANUARY 13, 2017

Attachment A3: Map 3

Legend

- US Highways
- State Highways
- TMA Boundary
- Bureau of Land Management (BLM)
- BLM Wilderness Area
- Wilderness Study Area
- Indian Reservation (IR)
- Military Reservations and Corps of Engineers
- National Park Service (NPS)
- Private
- State
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- USFW National Wildlife Refuge
- USFS Wilderness Area





NORTH

0 10 20 40 Miles

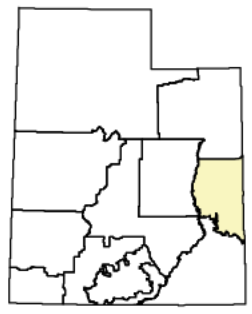
Price Field Office

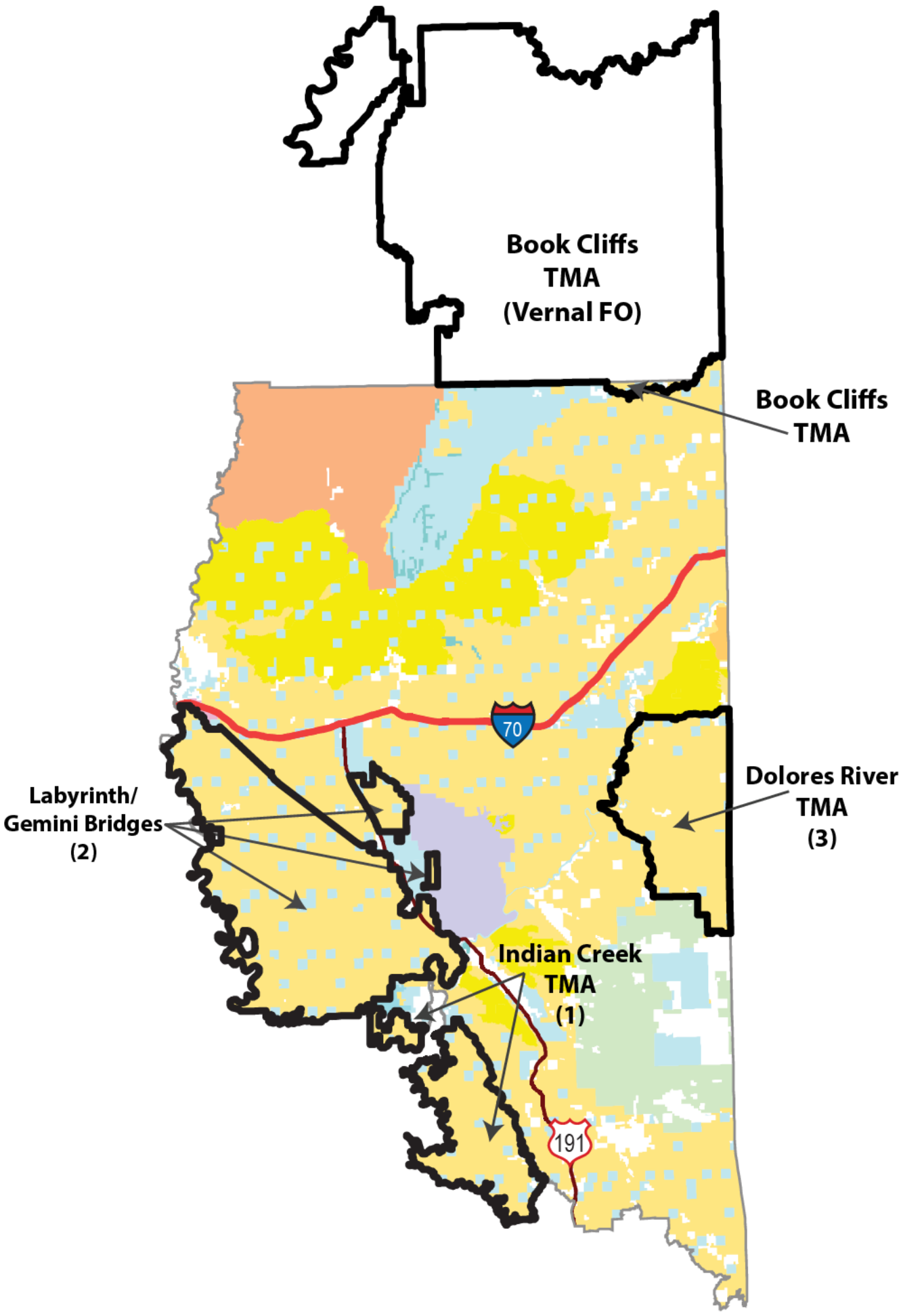
JANUARY 13, 2017

Attachment A4: Map 4

Legend

- US Highways
- State Highways
- Bureau of Land Management (BLM)
- BLM Wilderness Area
- Wilderness Study Area
- Indian Reservation (IR)
- Military Reservations and Corps of Engineers
- National Park Service (NPS)
- Private
- State
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- USFW National Wildlife Refuge
- USFS Wilderness Area





NORTH

0 10 20 30 Miles

Moab Field Office

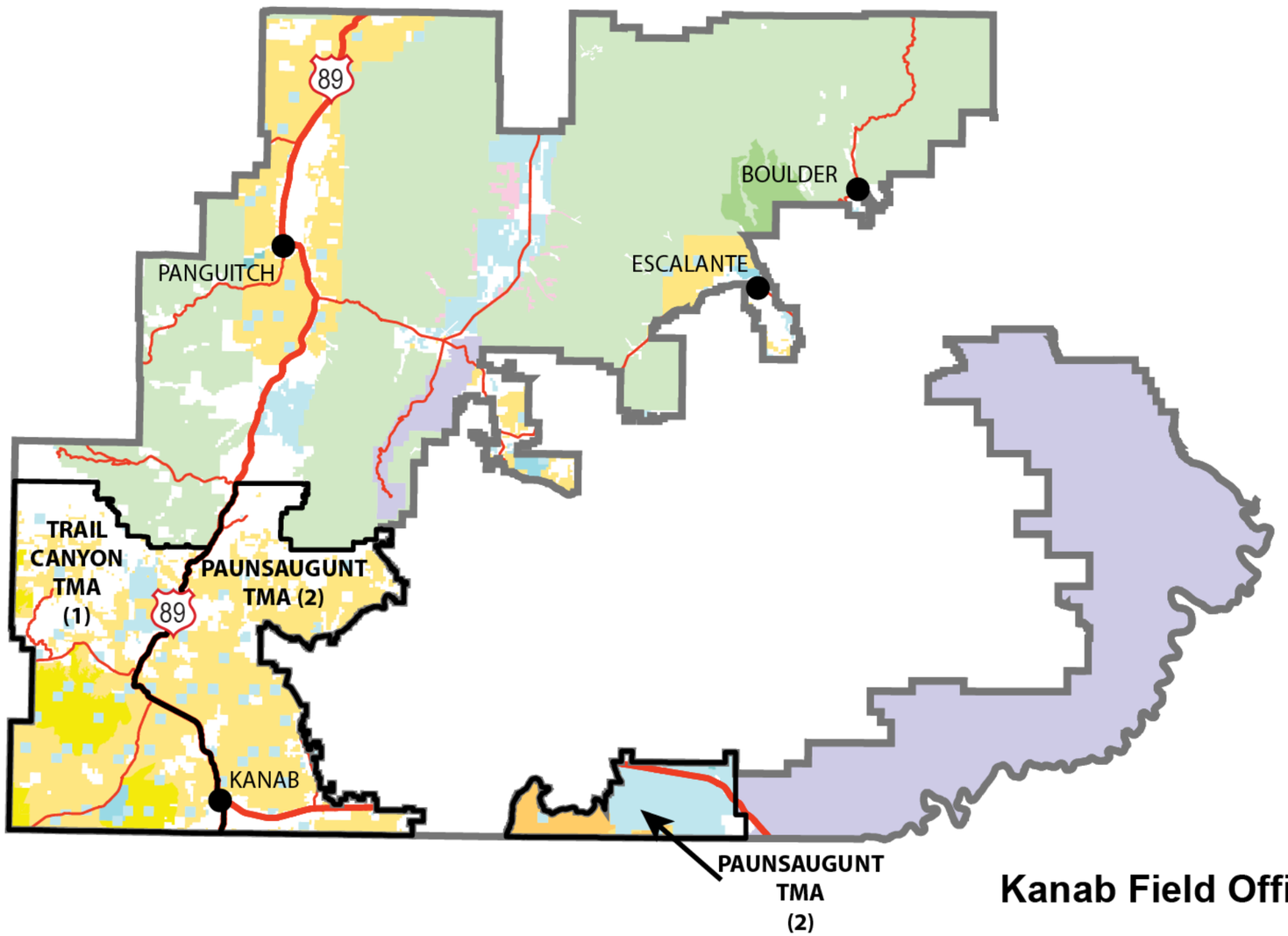
JANUARY 13, 2017

Attachment A5: Map 5

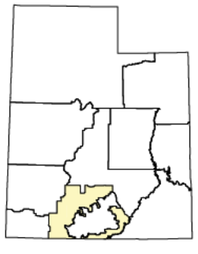
Legend

- US Highways
- State Highways
- Field Office Boundary
- TMA Boundary
- Kanab Field Office Boundary
- Bureau of Land Management (BLM)
- BLM Wilderness Area
- Wilderness Study Area
- Indian Reservation (IR)
- Military Reservations and Corps of Engineers
- National Park Service (NPS)
- Private
- State
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- USFW National Wildlife Refuge
- USFS Wilderness Area

0 5 10 20 30 Miles



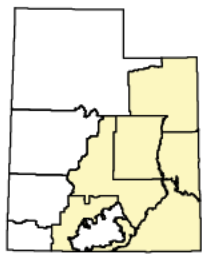
NORTH



JANUARY 13, 2017

Kanab Field Office

Attachment A6 (Map 6)



Legend

Field Office Boundary

ACEC with Relevant and Important Cultural Resource Values

TMAs Containing ACEC

- Vernal FO
- Price FO
- Richfield FO
- Moab FO
- Monticello FO
- Kanab FO

Browns Park

Dinosaur (North) TMA

Nine Mile Canyon TMA

Nine Mile Canyon

Nine Mile Canyon

San Rafael Swell

San Rafael Swell

Muddy Creek

Muddy Creek -Tomsich Butte

Dry Lake

San Rafael Desert

Ten Mile Wash

Gemini Bridges

Hwy 279/Shafer Basin/ Long Canyon

Indian Creek

Trail Canyon

Cottonwood Canyon

Rock Art Sites ACECs
- Big Hole
- Cottonwood Canyon
- Dry Wash
- Grassy Trail
- Kings Crown
- Molen Seep
- North Salt Wash
- Pictographs
- Sand Cove
- Short Creek
- Wild Horse Canyon

Heritage Sites ACECs
- Copper Globe
- Hunt Cabin
- Shepards End
- Smith Cabin
- Swaseys Cabin
- Temple Mountain

Uranium Mining DistrictsACECs
- Hidden Splendor
- Little Susan Mine
- Lucky Strike
- Tidwell Draw

NORTH

0 25 50 100 Miles

JANUARY 13, 2017

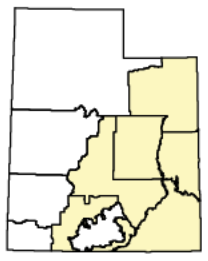
Attachment A7 (Map 7)

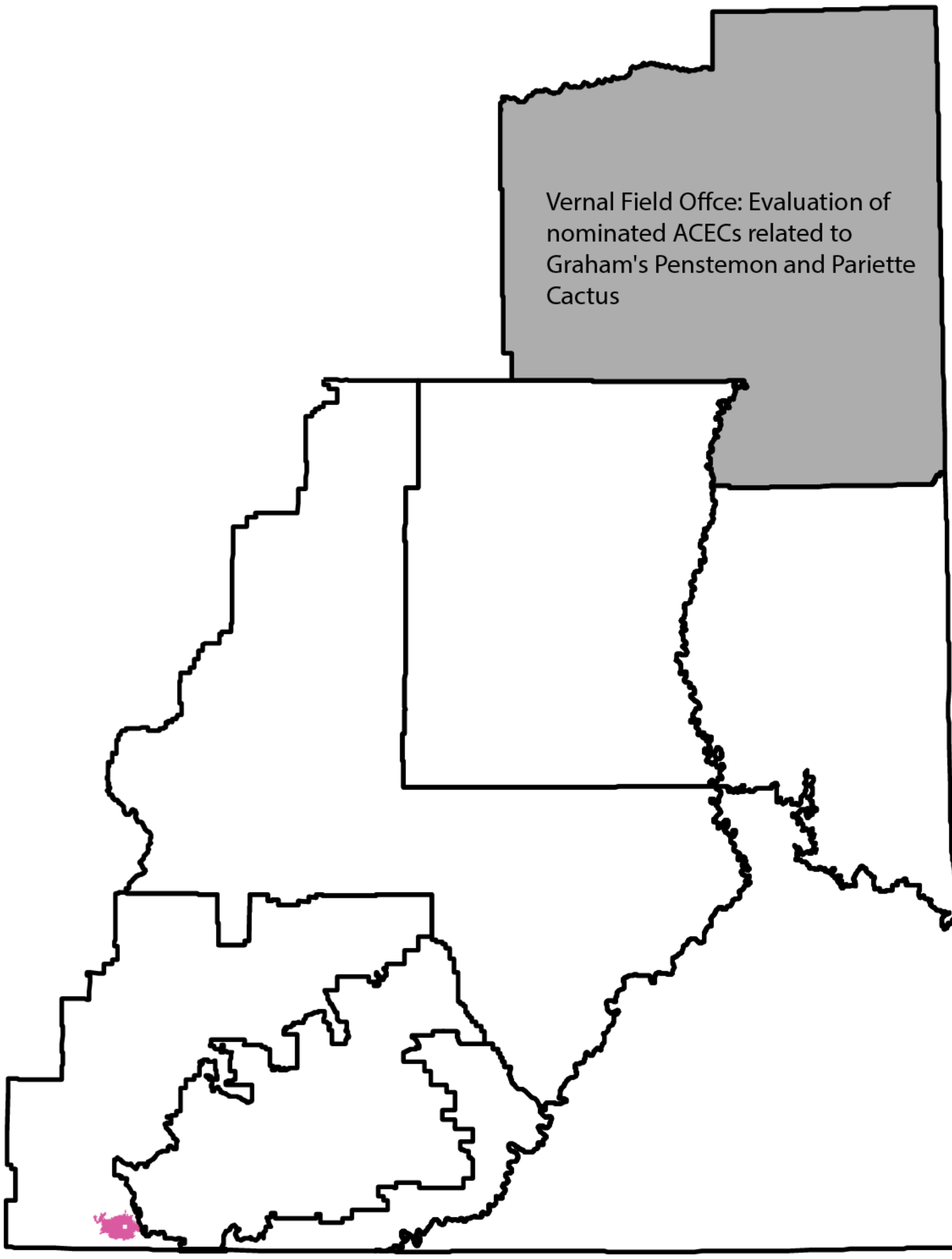
Legend

Field Office Boundary

Potential ACECs Re-Evaluations

Vermilion Cliffs





NORTH

0 25 50 100 Miles

JANUARY 13, 2017

From: echavez@blm.gov
To: rcooley@earthjustice.org; agwirtsman19@law.du.edu
Cc: Ryan Witt; BLM_WO FOIA
Subject: Response to FOIA NM 2018-010/BLM 2018-00833 from Earthjustice
Date: Thursday, December 21, 2017 3:32:34 PM
Attachments: foia nm 2018 010 signed response.pdf
DOI Mail Proposed Interim Waste Minimization Plan Info Needed for APD Approval.pdf
Waste Minimization Plan_Interim Requirements_NM_05.24.2017_TJZ.pdf
APD approved list for Carlsbad FO.xlsx
Processed APDs FFO.xlsx
APD approved list for Roswell FO.xlsx
WMP-ARMSTRONG.pdf
WMP-JALAPENO CORP..pdf

Attached is our response to your Freedom of Information Act (FOIA) request dated June 23, 2017. A follow-up response will be provided for the remaining items in your FOIA request. In order to save on time and postage, a hard copy will not be provided.

Please let me know if you have any questions.

Eileen Griego Chavez

Eileen Griego Chavez
FOIA/Privacy Officer
BLM NM/TX/OK/KS
(505) 954-2129

Bernadette Read
FOIA & Records Specialist
BLM NM/TX/OK/KS
(505) 954-2130

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
New Mexico State Office
P.O. Box 27115
Santa Fe, New Mexico 87502-0115
www.blm.gov/nm

IN REPLY REFER TO:

TAKE PRIDE IN AMERICA

FOIA NM 2018-010
FOIA BLM 2018-00833
1278 (9500)

December 21, 2017

Via Email: rcooley@earthjustice.org

Ms. Robin Cooley
Earthjustice
633 17th St., Ste. 1600
Denver, CO 80202

Dear Ms. Cooley:

This is in response to your Freedom of Information Act (FOIA) request dated June 23, 2017. Your request was received in our Washington Office. Your requested was forwarded and received in this office on December 13, 2017. You stated that you are representing the Sierra Club. Please note that this response only applies to records within the New Mexico field offices.

On December 15, 2017, Christopher Walls, Petroleum Engineer, Carlsbad Field Office, and Eileen Griego Chavez, NM/OK/TX/KS FOIA Officer, contacted Andrew Gwirtsman at the Environmental Law Clinic in Denver, Colorado, regarding your request. Mr. Gwirtsman sent an email to the Bureau of Land Management (BLM) Washington Office (WO) asking about the status of the BLM's response to your FOIA request. (Eileen spoke to Joel Miner of Earthjustice on December 15, 2017. Mr. Miner stated that it was okay for the BLM to speak to the Environmental Law Clinic about your request since they are assisting your office with this request.) In Mr. Gwirtsman's email message dated December 13, 2017, to the BLM WO (Ryan Witt), Mr. Gwirtsman stated that he was " . . . willing to negotiate for a timely partial processing of the request while your office processes the rest of the requested information. Specifically, the Waste Minimization Plans submitted to New Mexico field offices since January 17, 2017 . . . " Christopher and Eileen spoke to Andrew and explained to him that although your office did not ask for the applications for permit to drill (APD), we would provide a listing of approved APDs from January 17, 2017, to the date of your FOIA request (June 23, 2017). Christopher explained that the New Mexico State Office made a decision and informed the New Mexico field offices that instead of having the operator submit waste minimization plans, that we would accept the Gas Capture Plan which is on a State of New Mexico Oil and Gas Conservation Division (NM OCD) form. The form contains the same information that a waste minimization plan would have. Enclosed is a copy of an email from the BLM New Mexico State Office to our field offices entitled "Proposed Interim Waste Minimization Plan Information Needed for APD Approval – Pecos District FOs" (2 pages). Also enclosed is a document entitled "New Mexico BLM Waste Minimization Plan requirements for APD approval (1 page). Christopher also stated

that based on the APD listing, Andrew could then access the NM OCD's website at https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting to view the Gas Capture Plans. Christopher and Eileen showed Andrew how to access the website and view the specific data. Andrew agreed to obtain the APD listing and access the NM OCD website to view the Gas Capture Plans.

The following is provided in response to your itemized request. Please note that these records only apply to field offices within the New Mexico State Office:

1. All Applications for Permit to Drill an oil well approved by all BLM field offices since the effective date (January 17, 2017) of the Methane Waste Prevention Rule, 43 C.F.R. § 3162.3-1(c). If there are more than 100 such APDs, Sierra Club alternatively requests a list of all such APDs.

Although your organization did not request the APD listing as part of Andrew's email to the BLM WO on December 13, 2017, we are providing you with a listing of approved APDs for each of our field offices within New Mexico (Carlsbad, Roswell, and Farmington). Enclosed are 3 Excel spreadsheets containing the requested data.

2. All Waste Minimization Plans submitted to all BLM field offices since the Rule's effective date (January 17, 2017). 43 C.F.R. § 3162.3-1(j).

Enclosed are two waste minimization plans that were submitted to the Roswell Field Office (2 documents totaling 4 pages).

As previously mentioned, Andrew agreed to obtain the listing of APDs. He will then access the NM OCD's website to view the Gas Capture Plans for the Carlsbad Field Office.

After a thorough search of our files within our Farmington Field Office, the BLM did not locate records in response to this specific item of your request.

3. Any Sundry Notice submitted by an operator notifying the BLM about liquids unloading or well purging after January 17, 2017 under 43 C.F.R. § 3179.2014(c), (e), or (f).

The BLM is continuing to conduct a search for responsive records related to this item. A separate response will be provided at a later date.

4. Any Sundry Notice submitted by an operator requesting approval of an alternative monitoring device and protocol after January 17, 2017 under 43 C.F.R. § 3179.302(c) and any approval by BLM of such device and protocol, pursuant to 43 C.F.R. 3179.302(a).

The BLM is continuing to conduct a search for responsive records related to this item. A separate response will be provided at a later date.

5. Any requests for variances by States or tribes after January 17, 2017 under 43 C.F.R. § 3179.401, all internal and external correspondence involving BLM staff that addresses such requests, and any notifications by States or tribes of "any substantive amendments, revisions, or other changes to the State, local or tribal regulation(s) or rule(s) to be applied under the variance." 43 C.F.R. § 3179.401(e).

The BLM is continuing to conduct a search for responsive records related to this item. A separate response will be provided at a later date.

For those records which do not exist, the BLM is not required to create or compile a record to respond to a FOIA request. The Act applies only to records in existence at the time the request is made.

The persons responsible for this no records found response are Eileen Griego Chavez, NM/OK/TX/KS FOIA Officer, and Aden Seidlitz, Acting State Director, New Mexico State Office, Bureau of Land Management, Santa Fe, New Mexico.

Under 43 CFR 2.59, you may appeal this response to the Department's FOIA/Privacy Act Appeals Officer. If you choose to appeal, the FOIA/Privacy Act Appeals Officer must receive your FOIA appeal no later than 90 workdays from the date of this letter. Appeals arriving or delivered after 5 p.m. Eastern Time, Monday through Friday, will be deemed received on the next workday.

Your appeal must be made in writing. You may submit your appeal and accompanying materials to the FOIA/Privacy Act Appeals Officer by mail, courier service, fax, or email. All communications concerning your appeal should be clearly marked with the words "FREEDOM OF INFORMATION APPEAL." You must include with your appeal copies of all correspondence between you and the BLM concerning your FOIA request, including your original FOIA request and the BLM's response. Please submit any information you have which leads you to believe the records do exist, including where they might be found, if the location is known to you. Failure to include with your appeal all correspondence between you and the BLM will result in the Department's rejection of your appeal, unless the FOIA /Privacy Act Appeals Officer determines (in the FOIA/Privacy Act Appeals Officer's sole discretion) that good cause exists to accept the defective appeal.

Please include your name and daytime telephone number (or the name and telephone number of an appropriate contact), email address and fax number (if available) in case the FOIA/Privacy Act Appeals Officer needs additional information or clarification of your appeal.

DOI FOIA Privacy Act Appeals Office Contact Information:

U.S. Department of the Interior
Office of the Solicitor
1849 C Street, NW, MS-6556, MIB
Washington, DC 20240
Attention: FOIA/Privacy Act Appeals Office
Telephone: (202) 208-5339
Fax: (202) 208-6677
Email: FOIA.Appeals@sol.doi.gov

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

In 2007, a number of amendments to the FOIA were enacted. As part of these FOIA amendments, the Office of Government Information Services (OGIS) was created to offer mediation services to resolve disputes between FOIA requesters and federal agencies as a non-exclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation.

You may contact OGIS in any of the following ways:

Office of Government Information Services
National Archives and Records Administration
Room 2510
8601 Adelphi Road
College Park, Maryland 20740-6001
E-mail: ogis@nara.gov
Telephone: (301) 837-1996
Fax: (301) 837-0348
Toll-free: 1-877-684-6448

You may also seek dispute resolution services from our FOIA Public Liaison, Ryan Witt, at (202) 912-7562.

Questions regarding this response may be directed to Thomas Zelenka, Petroleum Engineer, at (505) 954-2110. Questions pertaining to FOIA matters may be addressed to Eileen at (505) 954-2129.

Sincerely,

Sheila Mallory

Aden L. Seidlitz
Acting State Director /FOR/

Enclosures

Chavez, Eileen <echavez@blm.gov>

Fwd: Proposed Interim Waste Minimization Plan Information Needed for APD Approval - Pecos District FOs

Walls, Christopher <cwalls@blm.gov> Fri, Dec 15, 2017 at 11:03 AM
To: Eileen Vigil <echavez@blm.gov>
Cc: Jessica Franco <jfranco@blm.gov>

Eileen,
See below for the Waste Minimization Plan/Gas Capture Plan direction from Santa Fe.

Thanks,
Chris
---------- Forwarded message ----------
From: **Zelenka, Thomas** <tzelenka@blm.gov>
Date: Tue, May 30, 2017 at 12:49 PM
Subject: Proposed Interim Waste Minimization Plan Information Needed for APD Approval - Pecos District FOs
To: James Stovall <jstovall@blm.gov>, Ruben Sanchez <rjsanche@blm.gov>, David Glass <dglass@blm.gov>, Jennifer Sanchez <jamason@blm.gov>, Christopher Walls <cwalls@blm.gov>, Cody Layton <clayton@blm.gov>
Cc: Sheila Mallory <smallory@blm.gov>, Michael Gibson <mjgibson@blm.gov>, Michael Williams <michael.williams@sol.doi.gov>

The NM SO is proposing the attached Waste Minimization Plan information requirements for the Pecos District FOs, Carlsbad and Roswell, to have operators submit with new APD approvals (APDs submitted on or after January 17, 2017). We will accept this information as meeting the WMP APD requirement at this time and you should attach the COA, as noted in this attachment, to the APD approval COAs which provides the ability of the AO to request additional WMP information at a later date if required.

We attempted to incorporate the submittal of the NM OCD Gas Capture Plan (GCP) with NM BLM APDs when there is a recognized gas purchaser. With no gas purchaser, then the NMOCD GCP information will be considered sufficient for APD approval while in both cases, gas purchaser and no gas purchaser, BLM would require an additional COA to be included in the APD COAs for the AO to be able to request more well gas capture development information at a later date. At that later date, BLM will know more definitively what changes will be incorporated in Reg 3178/3179 due to the Executive Orders that have BLM looking at the need to reduce regulations that impede energy development. This COA helps fulfill the full requirement of the WMP as initially set out in new regulation 43 CFR 3162.3-1(j) final rule.

It is at the discretion of the Carlsbad and Roswell FO AOs to require any additional WMP information they feel they will need to meet the requirements of the WMP regulation.

If you have any questions regarding this proposed guidance. Please feel free to contact me.

Thank you.

Thomas Zelenka, P.E.
Petroleum Engineer

Bureau of Land Management
New Mexico State Office
301 Dinosaur Trail
Santa Fe, NM 87508-1560
Office: 505-954-2110
Fax: 505-954-2079
Cell:
Email: tzelenka@blm.gov

BLM

--
Thank you,

Chris Walls
Bureau of Land Management
Carlsbad Field Office
575-234-2234

Waste Minimization Plan_Interim Requirements_NM_05.24.2017_TJZ.docx
18K

New Mexico BLM Waste Minimization Plan Requirements for APD Approval:

Gas Purchaser/Transporter in place at initial production:

Provide NMOCD Gas Capture Plan (GCP) Form:

The NMOCD GCP Form should contain the following:

1. Name of facility
2. Wells that will be located (new and future) at this facility
    a. Well name and number
    b. Well API number
    c. Well location, Sect, T, R, Footages, county, state
    d. Expected IP gas rate, Mcfpd of each well
    e. First planned production date for well(s) that are developed from this facility
3. Gas purchaser name and address. (ADDITIONAL)
4. Gas gathering line length, in feet of pipeline, from facility location to gas gathering connection point, and connection point location (Sect, T, R, county and state).
5. If gas from this well(s) will be processed at the Gas Transporter's gas processing plant, then provide the name of the gas plant (ADDITIONAL) and its location, Sect, T, R, and county and state.

Include COA item language:

For APDs received on or after January 17, 2017 (effective date of this Rule), include this item:

> In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

No Gas Purchaser/Transporter Identified:

Provide NMOCD Gas Capture Plan (GCP) Form:

Well(s)/Facility information:

1. Name of facility
2. Wells that will be located (new and future) at this facility
    a. Well name and number
    b. Well API number
    c. Well location, Sect, T, R, Footages, county, state
    d. Expected IP gas rate, Mcfpd of each well
    e. First planned production date for well(s) that are developed from this facility

Include COA item language:

For APDs received on or after January 17, 2017 (effective date of this Rule), include this item:

> In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

County	Operator	Well Name and Number	Lease Number	Received Date
Eddy	OXY USA INC	15H-CYPRESS 34 FEDERAL COM	NMNM85891	1/30/2017
Eddy	OXY USA INC	1H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	1/31/2017
Eddy	COG Operating LLC	955H-BURCH KEELY UNIT	NMLC028793A	1/31/2017
Eddy	OXY USA INC	2H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	2/1/2017
Eddy	OXY USA INC	3H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM89819	2/2/2017
Eddy	OXY USA INC	4H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM89819	2/2/2017
Eddy	COG Operating LLC	964H-BURCH KEELY UNIT	NMLC028793A	2/2/2017
Eddy	OXY USA INC	5H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	2/7/2017
Eddy	OXY USA INC	6H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	2/8/2017
Eddy	OXY USA INC	23H-PATTON MDP1 18 FEDERAL	NMNM63757	2/8/2017
Eddy	COG Operating LLC	4H-Sidewinder Fed Com	NMNM38636	2/8/2017
Eddy	OXY USA INC	33H-PATTON MDP1 18 FEDERAL	NMNM63757	2/9/2017
Eddy	OXY USA INC	73H-PATTON MDP1 18 FEDERAL	NMNM63757	2/9/2017
Eddy	EOG Resources Inc	501H-Secretariat 3 Fed Com	NMNM118702	2/10/2017
Eddy	COG Operating LLC	91H-Carmen 3 Federal Com	NMLC029020J	2/15/2017
Eddy	BTA Oil Producers	7H-OGDEN 20509 32-29 FED COM	NMNM100335	2/17/2017
Eddy	COG Operating LLC	21H-COPPERHEAD 31 FEDERAL COM	NMNM121474	2/20/2017
Eddy	COG Operating LLC	908H-DODD FEDERAL UNIT	NMLC028731B	2/20/2017
Eddy	XTO Energy Inc	1H-Ross Draw 3031 Federal	NMNM19612	2/21/2017
Eddy	OXY USA INC	24H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	2/21/2017
Eddy	OXY USA INC	1H-PATTON MDP1 17 FEDERAL	NMNM63757	2/23/2017
Eddy	OXY USA INC	2H-PATTON MDP1 17 FEDERAL	NMNM63757	2/23/2017
Eddy	Devon Energy Production	513H-COTTON DRAW UNIT	NMNM012121	2/23/2017
Eddy	Devon Energy Production	512H-COTTON DRAW UNIT	NMNM012121	2/23/2017
Eddy	COG Operating LLC	912H-DODD FEDERAL UNIT	NMLC068722	2/23/2017
Eddy	OXY USA Inc.	2H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM63757	2/24/2017
Eddy	Mewbourne Oil Co	1H-Ghostrider 25 36 W2AP Fed Com	NMNM027994D	2/24/2017
Eddy	OXY USA INC	1H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM63757	2/24/2017
Eddy	BTA Oil Producers	5H-OGDEN 20509 32-29 FED COM	NMNM100335	2/24/2017
Eddy	BTA Oil Producers	6H-OGDEN 20509 32-29 FED COM	NMNM100335	2/27/2017
Eddy	Cimarex Energy Company	1H-MEDWICK 32 FEDERAL COM	NMNM114350	2/28/2017
Eddy	Cimarex Energy Co of Col	4H-MEDWICK 32 FEDERAL COM	NMNM117116	2/28/2017
Eddy	OXY USA INC	171H-CAL-MON 35 FEDERAL	NMNM19199	3/2/2017
Eddy	Mewbourne Oil Co	2H-GHOSTRIDER 25/36 W0AP FED COM	NMNM027994D	3/2/2017
Eddy	Mewbourne Oil Co	2H-GHOSTRIDER 25-36 W0DM FED COM	NMNM027994A	3/6/2017
Eddy	OXY USA Inc.	6H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/7/2017
Eddy	COG Operating LLC	920H-DODD FEDERAL UNIT	NMLC028731B	3/8/2017
Eddy	COG Operating LLC	44H-HOBGOBLIN 7 FEDERAL COM	NMNM117122	3/8/2017
Eddy	Chevron USA Inc	1H-HH SO 10 15 FED 002	NMNM121473	3/9/2017
Eddy	Chevron USA Inc	2H-HH SO 10 15 FED 002	NMNM121473	3/9/2017
Eddy	Cimarex Energy Co.	2H-MEDWICK 32 FEDERAL COM	NMNM114350	3/9/2017
Eddy	Cimarex Energy Co of Col	3H-MEDWICK 32 FEDERAL COM	NMNM114350	3/10/2017
Eddy	Chevron USA Inc	3H-HH SO 10 15 FED 002	NMNM121473	3/14/2017
Eddy	OXY USA INC	3H-PATTON MDP1 17 FEDERAL	NMNM29234	3/14/2017
Eddy	OXY USA INC	4H-PATTON MDP1 17 FEDERAL	NMNM29234	3/14/2017

Eddy	Mewbourne Oil Co	1H-GHOSTRIDER 25-36 W2DM FED COM	NMNM027994A	3/17/2017
Eddy	Chevron USA Inc	4H-HH SO 10 15 FED 002	NMNM121473	3/20/2017
Eddy	Chevron USA Inc	5H-HH SO 10 15 FED 002	NMNM121473	3/20/2017
Eddy	Chevron USA Inc	6H-HH SO 10 15 FED 002	NMNM121473	3/20/2017
Eddy	COG Operating LLC	13H-MALCO 23 FEDERAL COM	NMNM01510	3/20/2017
Eddy	Cimarex Energy Co of Col	5H-MEDWICK 32 FEDERAL COM	NMNM117116	3/22/2017
Eddy	OXY USA INC	3H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM29234	3/23/2017
Eddy	OXY USA INC	4H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM29234	3/23/2017
Eddy	OXY USA INC	5H-PATTON MDP1 17 FEDERAL	NMNM031963	3/28/2017
Eddy	OXY USA Inc.	5H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM29234	3/28/2017
Eddy	OXY USA INC	6H-PATTON MDP1 17 FEDERAL	NMNM031963	3/29/2017
Eddy	OXY USA INC	6H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM031963	3/30/2017
Eddy	Mewbourne Oil Co	1H-ANNABELLE 18-13 W2PO FED COM	NMNM111528	4/5/2017
Eddy	Mewbourne Oil Co	1H-ARCHDUKE 19 W2AP FED	NMNM112268	4/5/2017
Eddy	COG Operating LLC	5H-MYOX 20 FEDERAL COM	NMNM100550	4/10/2017
Eddy	COG Production LLC	2H-TANKLESS FEDERAL COM	NMNM101601	4/12/2017
Eddy	Devon Energy Production	507H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Eddy	EOG Resources Inc	705H-CALM BREEZE 2 FED COM	NMNM0359292	4/27/2017
Eddy	OXY USA INC	24H-CEDAR CANYON 29 FEDERAL COM	NMNM53229	5/2/2017
Eddy	OXY USA INC	26H-CEDAR CANYON 29 FEDERAL	NMNM53229	5/3/2017
Eddy	Mewbourne Oil Co	4H-FULLER 14-23 W2IP FED	NMNM11038	5/9/2017
Eddy	Mewbourne Oil Co	1H-FULLER 14-23 W1IP FED	NMNM11038	5/10/2017
Eddy	Mewbourne Oil Co	2H-FULLER 14-11 W1HA FED	NMNM011038	5/11/2017
Eddy	OXY USA INC	8H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/11/2017
Eddy	OXY USA INC	1H-NIMITZ MDP1 13 FEDERAL COM	NMNM82896	5/11/2017
Eddy	OXY USA INC	1H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/22/2017
Eddy	Mewbourne Oil Co	3H-FULLER 14-11 W2HA FED	NMNM11038	5/22/2017
Eddy	OXY USA INC	2H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/23/2017
Eddy	OXY USA INC	9H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/23/2017
Eddy	RKI EXPLORATION & PRO	3H-TUCKER DRAW 9-4 FED COM	NMNM100558	5/30/2017
Eddy	RKI EXPLORATION & PRO	1H-TUCKER DRAW 9-4 FED COM	NMNM100558	5/30/2017
Eddy	RKI EXPLORATION & PRO	2H-TUCKER DRAW 9-4 FED COM	NMNM100558	5/30/2017
Eddy	Mack Energy Corp	2-RUDOLF FEDERAL	NMNM100844	5/30/2017
Eddy	OXY USA Inc.	1H-MESA VERDE 13 FEDERAL	NMNM114979	5/31/2017
Eddy	Mewbourne Oil Co	3H-FNR 17-20 W2IP FED COM	NMNM114355	5/31/2017
Eddy	WPX Energy	7H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	Mack Energy Corp	4-RUDOLF FEDERAL	NMNM100844	6/1/2017
Eddy	RKI EXPLORATION & PRO	4H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	RKI EXPLORATION & PRO	5H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	RKI EXPLORATION & PRO	6H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	OXY USA Inc.	2H-MESA VERDE 13 FEDERAL	NMNM114979	6/1/2017
Eddy	Mewbourne Oil Co	1H-FNR 17-20 B2IP FED COM	NMNM114355	6/2/2017
Eddy	Mewbourne Oil Co	2H-FNR 17-20 B3IP FED COM	NMNM114355	6/2/2017
Eddy	Mewbourne Oil Co	1H-WOLFMAN 5-4 W0LI FED COM	NMNM105208	6/2/2017
Eddy	OXY USA Inc.	3H-MESA VERDE 13 FEDERAL	NMNM114979	6/5/2017
Eddy	OXY USA Inc.	6H-MESA VERDE 13 FEDERAL	NMNM114979	6/6/2017
Eddy	OXY USA INC	4H-MESA VERDE 13 FEDERAL	NMNM114979	6/6/2017

Eddy	OXY USA INC	5H-MESA VERDE 13 FEDERAL	NMNM114979	6/7/2017
Eddy	Devon Energy Production	234H-LUSITANO 27-15 FED COM	NMNM16131	6/21/2017
Eddy	OXY USA INC	6H-NIMITZ MDP1 12 FEDERAL COM	NMNM82896	6/21/2017
Eddy	OXY USA INC	7H-NIMITZ MDP1 12 FEDERAL COM	NMNM82896	6/21/2017
Eddy	OXY USA INC	2H-NIMITZ MDP1 13 FEDERAL COM	NMNM	6/22/2017
Eddy	OXY USA INC	3H-NIMITZ MDP1 13 FEDERAL COM	NMNM82896	6/22/2017
Lea	COG Operating LLC	26H-BASEBALL CAP FEDERAL COM	NMNM123530	1/17/2017
Lea	EOG Resources Inc	705H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	EOG Resources Inc	706H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	EOG Resources Inc	707H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	EOG Resources Inc	708H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	COG Operating LLC	4H-Tenderloin Federal Com	NMN17440M	1/24/2017
Lea	EOG Resources Inc	5H-AUDACIOUS BTL 19 FED COM	NMNM110838	1/25/2017
Lea	EOG Resources Inc	4H-AUDACIOUS BTL 19 FED COM	NMNM110838	1/25/2017
Lea	EOG Resources Inc	3H-AUDACIOUS BTL 19 FED COM	NMNM110838	1/25/2017
Lea	BC Operating Inc	1H-CAVE LION 5 FEDERAL BC	NMNM13647	1/26/2017
Lea	BC Operating Inc	5H-CAVE LION 5 FEDERAL WC	NMNM13647	1/27/2017
Lea	Devon Energy Production	102H-SEAWOLF 1-12 FED	NMNM114988	1/30/2017
Lea	EOG Resources Inc	702H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	EOG Resources Inc	703H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	EOG Resources Inc	704H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	EOG Resources Inc	705H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	McElvain Energy Inc.	2H-EK 30 BS2 FEDERAL COM	NMNM0245247	2/3/2017
Lea	McElvain Energy Inc.	1H-EK 31 BS2 FEDERAL COM	NMNM0245247	2/3/2017
Lea	Apache Corporation	301H-BLACK & TAN 27 FEDERAL COM	NMNM060393	2/7/2017
Lea	Apache Corporation	303H-BLACK & TAN 27 FEDERAL COM	NMLC029519B	2/7/2017
Lea	Apache Corporation	305H-BLACK & TAN 27 FEDERAL COM	NMNM060393	2/7/2017
Lea	Apache Corporation	307H-BLACK & TAN 27 FEDERAL COM	NMNM0897	2/7/2017
Lea	EOG Resources Inc	704H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	701H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	703H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	702H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	701H-CABALLO 23 FED COM	NMNM108503	2/15/2017
Lea	EOG Resources Inc	702H-CABALLO 23 FED COM	NMNM108503	2/15/2017
Lea	EOG Resources Inc	703H-CABALLO 23 FED	NMNM108503	2/15/2017
Lea	EOG Resources Inc	704H-CABALLO 23 FED	NMNM108503	2/15/2017
Lea	COG Operating LLC	6H-AZORES FEDERAL	NMNM120908	2/20/2017
Lea	Apache Corporation	183-WEST BLINEBRY DRINKARD UNIT	NMNM90161	2/20/2017
Lea	OXY USA INC	43H-MESA VERDE 17 FEDERAL COM	NMNM66925	2/22/2017
Lea	OXY USA INC	73H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	2/22/2017
Lea	Apache Corporation	184-WEST BLINEBRY DRINKARD UNIT	NMNM90161	2/23/2017
Lea	Devon Energy Production	3H-FIGHTING OKRA 18-19 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	82H-FIGHTING OKRA 18-19 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	81H-JAYHAWK 7-6 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	82H-JAYHAWK 7-6 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	83H-JAYHAWK 7-6 FED	NMNM114992	2/27/2017
Lea	OXY USA INC	5H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/7/2017

Lea	COG Operating LLC	25H-BRANEX-COG FEDERAL COM	NMNM0315712	3/7/2017
Lea	EOG Resources Inc	701H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	702H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	703H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	704H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	705H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	706H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	707H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	708H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	709H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	710H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	OXY USA Inc.	14H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/8/2017
Lea	OXY USA Inc.	3H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/8/2017
Lea	OXY USA Inc.	4H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/9/2017
Lea	Cimarex Energy Co.	7H-Hallertau 5 Federal	NMNM0392082A	3/10/2017
Lea	EOG Resources Inc	702H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	EOG Resources Inc	704H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	EOG Resources Inc	705H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	EOG Resources Inc	706H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	COG Operating LLC	21H-Square Bill Federal Com	NMNM119280	3/16/2017
Lea	COG Operating LLC	22H-Square Bill Federal Com	NMNM119280	3/20/2017
Lea	COG Operating LLC	23H-Square Bill Federal Com	NMNM119280	3/20/2017
Lea	Devon Energy Production	84H-JAYHAWK 7-6 FED COM	NMNM114992	3/20/2017
Lea	Devon Energy Production	84H-FIGHTING OKRA 18-19 FED	NMNM114992	3/20/2017
Lea	Devon Energy Production	85H-FIGHTING OKRA 18-19 FED	NMNM114992	3/20/2017
Lea	Devon Energy Production	86H-FIGHTING OKRA 18-19 FED	NMNM114992	3/20/2017
Lea	Devon Energy Production	85H-JAYHAWK 7-6 FED COM	NMNM114992	3/21/2017
Lea	Devon Energy Production	86H-JAYHAWK 7-6 FED COM	NMNM114992	3/21/2017
Lea	Cimarex Energy Co.	11H-Hallertau 5 Federal	NMNM0392082A	3/22/2017
Lea	EOG Resources Inc	701H-TOPAZ 11 FED	NMNM66927	3/22/2017
Lea	Cimarex Energy Co.	16H-Hallertau 5 Federal	NMNM0392082A	3/23/2017
Lea	Mewbourne Oil Co	18H-RED HILLS WEST UNIT	NMNM105560	3/23/2017
Lea	EOG Resources Inc	701H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	702H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	705H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	706H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	707H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	708H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	COG Operating LLC	15H-ZEPPO 5 FEDERAL COM	NMLC029406B	3/27/2017
Lea	COG Operating LLC	1H-Square Bill Federal Com	NMNM119280	3/28/2017
Lea	EOG Resources Inc	704H-OPHELIA 22 FED COM	NMNM122622	3/28/2017
Lea	EOG Resources Inc	705H-OPHELIA 22 FED COM	NMNM122622	3/28/2017
Lea	EOG Resources Inc	706H-OPHELIA 22 FED COM	NMNM122622	3/28/2017
Lea	COG Operating LLC	11H-WHITE FALCON 16 FEDERAL COM	NMNM112942	3/28/2017
Lea	COG Operating LLC	21H-WHITE FALCON 16 FEDERAL COM	NMNM112942	3/28/2017
Lea	COG Operating LLC	22H-WHITE FALCON 16 FEDERAL COM	NMNM112942	3/28/2017
Lea	Cimarex Energy Co.	11H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	3/30/2017

Lea	Cimarex Energy Co.	14H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	3/31/2017
Lea	Cimarex Energy Co.	13H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	3/31/2017
Lea	Cimarex Energy Co.	12H-TRISTE DRAW 25 FEDERAL COM	NMLC06228	3/31/2017
Lea	COG Operating LLC	25H-ZEPPO 5 FEDERAL COM	NMLC029406B	3/31/2017
Lea	EOG Resources Inc	707H-OPHELIA 22 FED COM	NMNM122622	4/3/2017
Lea	EOG Resources Inc	709H-NAUTILUS 16 FED COM	NMNM66927	4/3/2017
Lea	Cimarex Energy Co.	15H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	4/3/2017
Lea	COG Operating LLC	26H-FLAT HEAD FEDERAL COM	NMLC061842	4/6/2017
Lea	Cimarex Energy Co.	1H-VACA DRAW 20-17 FEDERAL	NMNM26394	4/12/2017
Lea	Apache Corporation	302H-BLACK & TAN 27 FEDERAL COM	NMNM60393	4/13/2017
Lea	Apache Corporation	304H-Black and Tan 27 Federal Com	NMLC029519B	4/13/2017
Lea	Apache Corporation	306H-BLACK & TAN 27 FEDERAL COM	NMNM60393	4/17/2017
Lea	Devon Energy Production	508H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Lea	Devon Energy Production	509H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Lea	Devon Energy Production	506H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Lea	Apache Corporation	308H-BLACK & TAN 27 FEDERAL COM	NMNM0897	4/18/2017
Lea	LEGACY RESOURCES OPE	55H-LEA UNIT	NMNM006531A	4/20/2017
Lea	Cimarex Energy Co.	3H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/2/2017
Lea	Cimarex Energy Co.	2H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/2/2017
Lea	Cimarex Energy Co.	5H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/3/2017
Lea	Cimarex Energy Co.	6H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/3/2017
Lea	LEGACY RESOURCES OPE	56H-LEA UNIT	NM006531A	5/5/2017
Lea	OXY USA INC	2H-MESA VERDE 17-8 FEDERAL COM	NM66925	5/16/2017
Lea	OXY USA INC	1H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	5/16/2017
Lea	LEGACY RESOURCES OPE	58H-LEA UNIT	NM0006531	5/19/2017
Lea	OXY USA INC	1H-MESA VERDE 18 FEDERAL COM	NMNM66925	5/24/2017
Lea	OXY USA INC	2H-MESA VERDE 18 FEDERAL COM	NMNM66925	5/24/2017
Lea	Chevron USA Inc	17H-SD EA 18 19 FED COM P15	NMNM132070	5/26/2017
Lea	Chevron USA Inc	18H-SD EA 18 19 FED COM P15	NMNM132070	5/26/2017
Lea	Chevron USA Inc	19H-SD EA 18 19 FED COM P15	NMNM132070	5/26/2017
Lea	Chevron USA Inc	16H-SD EA 18 19 FED COM P15	NMNM27506	5/26/2017
Lea	BTA Oil Producers	8H-VACA DRAW 9418 10 FED	NMNM97153	6/1/2017
Lea	Matador Production Com	124H-FEDERAL 30	NMNM073240	6/2/2017
Lea	Chevron USA Inc	20H-SD EA 18 19 FED COM P15	NMNM132070	6/6/2017
Lea	Chevron USA Inc	8H-SD EA 18 19 FED COM P13	NMNM27506	6/21/2017
Lea	Chevron USA Inc	9H-SD EA 18 19 FED COM P13	NMNM27506	6/22/2017
Lea	Chevron USA Inc	10H-SD EA 18 19 FED COM P13	NMNM27506	6/22/2017
Lea	Chevron USA Inc	11H-SD EA 18 19 FED COM P13	NMNM27506	6/22/2017
Lea	COG Operating LLC	2H-MAS FEDERAL COM	NMLC029519A	6/22/2017
Lea	Chevron USA Inc	12H-SD EA 18 19 FED P14	NMNM27506	6/23/2017

Action Decision	Days Pending
Approved	319
Approved	153
Approved	25
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Approved	148
Approved	27

Tracking	County	Operator	Well Name and Number	Received Date
ATS-F010-17-07	San Juan	WPX Energy Production LLC	710H-W Lybrook UT	11/8/2016
ATS-F010-16-79	San Juan	WPX Energy Production LLC	712H-W Lybrook UT	6/16/2016
ATS-F010-17-06	San Juan	WPX Energy Production LLC	714H-W Lybrook UT	11/7/2016
ATS-F010-17-14	San Juan	WPX Energy Production LLC	716H-W Lybrook UT	11/3/2016
ATS-F010-17-15	San Juan	WPX Energy Production LLC	719H-W Lybrook UT	11/3/2016
ATS-F010-17-08	San Juan	WPX Energy Production LLC	750H-W Lybrook UT	11/8/2016
ATS-F010-17-09	San Juan	WPX Energy Production LLC	752H-W Lybrook UT	11/8/2016
ATS-F010-16-46	San Juan	WPX Energy Production LLC	753H-W Lybrook UT	11/3/2016
ATS-F010-17-17	San Juan	WPX Energy Production LLC	754H-W Lybrook UT	11/3/2016
ATS-F010-16-44	San Juan	WPX Energy Production LLC	755H-W Lybrook UT	11/3/2016
ATS-F010-16-40	San Juan	WPX Energy Production LLC	718H-W Lybrook UT	5/25/2016
ATS-F010-17-10	San Juan	WPX Energy Production LLC	751H-W Lybrook UT	11/9/2016
ATS-F010-16-157	San Juan	WPX Energy Production LLC	500H-Rodeo UT	8/29/2016
ATS-F010-17-01	San Juan	WPX Energy Production LLC	501H-Rodeo UT	10/21/2016
ATS-F010-17-53	San Juan	BP America	3H-NEBU 604 Com	1/30/2017
ATS-F010-16-178	Sandoval	WPX Energy Production LLC	311H-N ESCAVADA UT	1/26/2017
ATS-F010-15-337	Sandoval	WPX Energy Production LLC	312H-N Escavada UT	9/30/2016
ATS-F010-17-51	Sandoval	WPX Energy Production LLC	316H-N ESCAVADA UT	1/17/2017
ATS-F010-17-49	Sandoval	WPX Energy Production LLC	330H-N ESCAVADA UT	1/17/2017
ATS-F010-17-48	Sandoval	WPX Energy Production LLC	331H-N ESCAVADA UT	1/17/2017
ATS-F010-16-136	Sandoval	Encana Oil & Gas	203H-Venado Canyon Unit	9/20/2016
ATS-F010-16-137	Sandoval	Encana Oil & Gas	204H-Venado Canyon Unit	9/20/2016
ATS-F010-16-138	Sandoval	Encana Oil & Gas (Usa) Inc	205H-Venado Canyon Unit	9/20/2016
ATS-F010-16-139	Sandoval	Encana Oil & Gas	206H-Venado Canyon Unit	9/20/2016
ATS-F010-16-140	Sandoval	Encana Oil & Gas	207H-Venado Canyon Unit	9/20/2016
ATS-F010-16-227	San Juan	Encana Oil & Gas	405H-Nageezi Unit	12/12/2016
ATS-F010-16-228	San Juan	Encana Oil & Gas	406H-Nageezi Unit	12/9/2016
ATS-F010-17-56	San Juan	WPX Energy Production LLC	773H-Kimbeto Wash Unit	2/1/2017
ATS-F010-17-69	San Juan	WPX Energy Production LLC	781H-Kimbeto Wash Unit	3/6/2017
ATS-F010-16-216	San Juan	WPX Energy Production LLC	783H-Kimbeto Wash Unit	8/3/2016
ATS-F010-17-67	San Juan	WPX Energy Production LLC	785H-Kimbeto Wash Unit	3/6/2017
ATS-F010-17-68	San Juan	WPX Energy Production LLC	786H-Kimbeto Wash Unit	3/6/2017
ATS-F010-16-104	San Juan	WPX Energy Production LLC	775H-KWU	7/6/2016
ATS-F010-16-159	San Juan	WPX Energy Production LLC	730H-W Lybrook UT	11/3/2016
ATS-F010-16-160	San Juan	WPX Energy Production LLC	732H-W Lybrook UT	11/3/2016
ATS-F010-16-161	San Juan	WPX Energy Production LLC	762H-W Lybrook UT	11/3/2016
ATS-F010-16-214	Rio Arriba	Logos Operating LLC	13-Logos 2406 29H	10/21/2016
ATS-F010-16-105	San Juan	WPX Energy Production LLC	778H-Kimbeto Wash Unit	2/7/2017
ATS-F010-16-239	San Juan	Logos Operating LLC	15-Logos 2508 20D	1/19/2017
ATS-F010-16-236	San Juan	Dugan Production	1-Coffee	9/29/2016
ATS-F010-17-39	San Juan	WPX Energy Production LLC	772H-Kimbeto Wash Unit	12/20/2016
ATS-F010-17-38	San Juan	WPX Energy Production LLC	774H-Kimbeto Wash Unit	12/20/2016
ATS-F010-17-50	San Juan	WPX Energy Production LLC	777H-Kimbeto Wash Unit	1/16/2017

ATS-F010-17-52	San Juan	WPX Energy Production LLC	780H-Kimbeto Wash Unit	1/18/2017
ATS-F010-17-55	San Juan	WPX Energy Production LLC	782H-Kimbeto Wash Unit	2/1/2017
ATS-F010-16-100	San Juan	WPX Energy Production LLC	784H-Kimbeto Wash Unit	2/7/2017
ATS-F010-15-200	San Juan	WPX Energy Production LLC	344H-S Chaco UT	11/5/2015
ATS-F010-15-201	San Juan	WPX Energy Production LLC	345H-S Chaco UT	11/5/2015
ATS-F010-17-35	San Juan	WPX Energy Production LLC	736H-W LYBROOK UT	12/20/2016
ATS-F010-15-348	San Juan	WPX Energy Production LLC	737H-W LYBROOK UT	12/20/2016
ATS-F010-17-54	San Juan	WPX Energy Production LLC	741H-W LYBROOK UT	2/1/2017
ATS-F010-16-06	Sandoval	WPX Energy Production LLC	908H-S Chaco UT	11/9/2015
ATS-F010-17-86	Rio Arriba	WPX Energy Production LLC	880H-Rosa Unit	5/5/2017
ATS-F010-17-88	Rio Arriba	WPX Energy Production LLC	884H-Rosa Unit	5/9/2017
ATS-F010-17-76	Sandoval	WPX Energy Production LLC	302H-W ESCAVADA UNIT	4/17/2017
ATS-F010-17-75	Sandoval	WPX Energy Production LLC	303H-W ESCAVADA UNIT	4/17/2017
ATS-F010-17-77	Sandoval	WPX Energy Production LLC	304H-W ESCAVADA UNIT	4/17/2017
ATS-F010-15-345	Sandoval	WPX Energy Production LLC	317H-N Escavada UT	9/30/2016
ATS-F010-15-346	Sandoval	WPX Energy Production LLC	318H-N Escavada UT	1/26/2017
ATS-F010-17-70	Sandoval	WPX Energy Production LLC	300H-W ESCAVADA UNIT	3/15/2017
ATS-F010-17-72	Sandoval	WPX Energy Production LLC	301H-W ESCAVADA UNIT	3/23/2017
ATS-F010-17-100	Sandoval	WPX Energy Production LLC	305H-W ESCAVADA UNIT	6/5/2017
ATS-F010-17-101	Sandoval	WPX Energy Production LLC	306H-W ESCAVADA UNIT	6/6/2017
ATS-F010-16-230	San Juan	Dugan Production	1-Clay	9/29/2016
ATS-F010-17-112	Rio Arriba	Southland Royalty Co LLC	24-1-CARRACAS 32-5	7/18/2017
ATS-F010-17-62	San Juan	WPX Energy Production LLC	788H-Kimbeto Wash Unit	2/13/2017
ATS-F010-17-60	San Juan	WPX Energy Production LLC	790H-Kimbeto Wash Unit	2/14/2017
ATS-F010-17-61	San Juan	WPX Energy Production LLC	792H-Kimbeto Wash Unit	2/14/2017
ATS-F010-17-105	Sandoval	WPX Energy Production LLC	362H-S ESCAVADA UNIT	6/19/2017
ATS-F010-17-104	Sandoval	WPX Energy Production LLC	363H-S ESCAVADA UNIT	6/19/2017
ATS-F010-17-47	Sandoval	WPX Energy Production LLC	361H-S Escavada UT	6/19/2017
ATS-F010-16-195	Rio Arriba	WPX Energy Production LLC	740H-Rosa Unit	8/30/2017
ATS-F010-17-130	Rio Arriba	WPX Energy Production LLC	830H-ROSA UNIT	8/25/2017
ATS-F010-17-125	San Juan	Logos Operating LLC	3H-HEROS 2308 09L	8/9/2017
ATS-F010-17-126	San Juan	Logos Operating LLC	4H-HEROS 2308 09L COM	8/15/2017
ATS-F010-17-84	San Juan	BP America	1H-NEBU 605 COM	8/3/2017
ATS-F010-17-119	San Juan	BP America Production Co	1H-NEBU 607 COM	8/2/2017
ATS-F010-17-118	San Juan	BP America Production Co	1H-NEBU 606 COM	8/3/2017
ATS-F010-17-59	San Juan	Dugan Production	1-Flats	5/30/2017
ATS-F010-18-10	Rio Arriba	Robert L Bayless Producer LLC	1-LA JARA 26-3H	10/26/2017
ATS-F010-18-19	San Juan	BP America Production Co	2H-NEBU 605 COM	11/8/2017

Action Date	Action Decision	Days Pending
1/27/2017	Approved	80
1/27/2017	Approved	225
1/27/2017	Approved	81
1/27/2017	Approved	85
1/27/2017	Approved	85
1/27/2017	Approved	80
1/27/2017	Approved	80
1/27/2017	Approved	85
1/27/2017	Approved	85
1/27/2017	Approved	85
2/1/2017	Approved	252
2/1/2017	Approved	84
2/23/2017	Approved	178
2/23/2017	Approved	125
3/1/2017	Approved	30
3/1/2017	Approved	34
3/1/2017	Approved	152
3/1/2017	Approved	43
3/1/2017	Approved	43
3/3/2017	Approved	45
3/16/2017	Approved	177
3/16/2017	Approved	177
3/16/2017	Approved	177
3/16/2017	Approved	177
3/16/2017	Approved	177
4/7/2017	Approved	108
4/7/2017	Approved	108
4/10/2017	Approved	68
4/10/2017	Approved	35
4/10/2017	Approved	250
4/10/2017	Approved	35
4/10/2017	Approved	35
4/10/2017	Approved	278
4/10/2017	Approved	158
4/10/2017	Approved	104
4/10/2017	Approved	158
4/12/2017	Approved	173
4/14/2017	Approved	66
5/8/2017	Approved	38
5/11/2017	Approved	111
6/1/2017	Approved	104
6/1/2017	Approved	104
6/1/2017	Approved	136

6/1/2017	Approved	134
6/1/2017	Approved	120
6/1/2017	Approved	114
6/1/2017	Approved	574
6/1/2017	Approved	574
6/1/2017	Approved	163
6/1/2017	Approved	104
6/1/2017	Approved	120
6/1/2017	Approved	570
6/16/2017	Approved	15
6/16/2017	Approved	38
7/31/2017	Approved	105
7/31/2017	Approved	105
7/31/2017	Approved	105
8/1/2017	Approved	305
8/1/2017	Approved	187
8/1/2017	Approved	139
8/1/2017	Approved	131
8/1/2017	Approved	57
8/1/2017	Approved	56
8/2/2017	Approved	175
8/3/2017	Approved	16
8/3/2017	Approved	171
8/3/2017	Approved	170
8/3/2017	Approved	170
9/7/2017	Approved	80
9/7/2017	Approved	80
9/7/2017	Approved	80
9/15/2017	Approved	16
9/15/2017	Approved	21
10/13/2017	Approved	10
10/13/2017	Approved	10
10/17/2017	Approved	75
10/17/2017	Approved	76
10/30/2017	Approved	88
11/1/2017	Approved	134
12/7/2017	Approved	42
12/12/2017	Approved	34

County	Operator	Well Name and Number	Lease Number	Received Date
Chavez	Jalapeno Corporation	Duncan Federal # 12	NM NM 12557	1/23/2017
Chavez	Armstrong Energy Corporation	Liza Jane Federal # 1	NM NM 118119	4/24/2017

Action Decision	APD Complete Date	Days Pending
4/11/2017	3/13/2017	28
6/1/2017	5/8/2017	22

Liza Jane Federal #1
Section 19 T5S R34E
1630' FSL & 1220' FEL
Roosevelt County, NM

Waste Minimization Plan

(1) The anticipated completion date of the proposed well will be July 10, 2017.

(2) The description of anticipated production is oil, gas, and water.
- (i) The anticipated date of first production is July 10, 2017.
- (ii) The expected initial oil production rate from the well is 120 BOPD. The expected initial gas production rate from the well is 500 MCFD.
- (iii) The expected production decline curve is shown in attachment (2.iii):
- (iv) The expected BTU value of the gas production for this well is 1200.

(3) Certification that the operator has provided one or more midstream companies of our plans is shown in attachment (3):

(4) The gas pipeline to which we plan to connect is the northern end of Targa's Vada system which already gathers gas from our existing producers in the area.
- (i) The maximum current daily capacity of the pipeline is understood to be around 4 MMCFD.
- (ii) The current throughput of the line is approximately 1750 MCFD.
- (iii) The anticipated daily capacity of the pipeline at the anticipated date of first gas sales from the proposed well is 4 MMCFD.
- (iv) The anticipated throughput of the pipeline at the anticipated date of first gas sales from the proposed well is 1750 MCFD.
- (v) We are unaware of any plans for expansion of pipeline capacity for this area, other than possibly building a new flowline dedicated to our proposed well, which is not anticipated to increase capacity of the trunkline but may help to avoid surface commingling of gas from separate wells.

(5) We are able to identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well.
- (i) We are able to identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well.
  - (A) The name and location of the gas processing plant closest to the proposed well, and also the intended destination processing plant for the proposed well, is Targa's Saunders Gas Plant located in Section 34 of Township 14 South, Range 33 East.
  - (B) The location and name of the operator of each gas known trunkline within 20 miles of the proposed well is as follows:

    Targa Midstream Services
    10 W. Adams Ave.
    Lovington, NM 88260

(C) The proposed route and tie-in point that connects or could connect the subject well to an existing gas trunkline can be seen in attachment (5.i.C)

(ii) Armstrong Energy is not currently venting or flaring any gas from wells in the same field or any wells within a 20 mile radius of this field.

(iii) At this time there is no need for alternative on-site gas capture approaches such as compression or liquefaction, removal of NGL, or electrical generation. The gas produced from our wells is all captured and sold.

JALAPENO CORPORATION
P.O.BOX 1608
ALBUQUERQUE, NM 87103
PHONE: 505-242-2050
FAX: 505-242-8501

FEBRUARY 15, 2017

Dear Ms. Sanchez,

Attached to this letter you will find Jalapeno Corporations Methane Waste Minimization Plan for the Duncan Federal#12 located in 9S 27E of Chaves County, NM. We have tried to answer the questions as best we could and tried to explain our thinking for the ones that didn't seem to apply for this shallow oil project.

Please call if you have any questions or concerns.

Sincerely,

H. Emmons Yates III

ROSWELL OFFICE
BUREAU OF LAND MGMT
2017 FEB 17 P 3:15
RECEIVED

METHANE WASTE MINIMIZATION PLAN

1) Jalapeno intends to drill and complete the Duncan Federal#12 as an oil well ASAP after its APD approval.
2) If the Duncan#12 is a successful oil well, Jalapeno anticipates initially having somewhere between 20-40 MCF of sour gas per day which will likely decline to 5-20 MCF/day after the first few months of oil production. This gas will be just enough to run the pump jack. Thus, there will be no excess gas.
3) 3a: Attached map showing the nearest pipeline, The El Paso Natural Gas Pipeline. 3b: Map showing the closest sour gas processing plant, Artesia Gas Plant(sour super), located approximately 54 miles to the south in section 7 of 18s-28e. This plant is operated by DCP Midstream.

4) Jalapeno does not intend to connect to a pipeline in order to market any gas. The Duncan Federal#12 is a shallow San Andres oil well in an old oil field. These 2000' oil wells do not produce enough gas to justify the construction of a gas pipeline for the following reasons. A: Usually, all the produced gas is used to run the pump jack. B: The little gas that these wells do produce is very sour and would require a gas treatment facility to be built before the gas could enter the closest pipeline system. C: Building our own gas treatment facility is not a realistic option D: The little amount of gas that these wells produce, even if cleaned up, would not have enough volume to enter the closest pipeline, the El Paso Pipeline. E: Because there is not enough gas to enter the El Paso Pipeline 1 mile away, Jalapeno Corporation would have to build a pipeline that connects to the closest gathering facility that can process the sour gas produced from these shallow San Andres wells, approximately 54 miles away. F) Any one of these steps would make the entire project completely uneconomic.
5) (i)The anticipated date of the first production will be 2 months following the approval of the Dunacn#12 APD. (ii)We hope to hit a 40 bbl/day, 20mcf/day initial production well.(iii) We expect the well's oil and gas production to decline at an average rate of somewhere between 24-35% for the first few years and then hold steady at an annual decline rate between 5-10% thereafter. (Please see attached decline curve projection) (iv) The well is projected to have an EUR of 29,200 MCF of gas over a 20 year period. However, because the gas is sour and there is no realistic way to get it to market the real Btu value is $0. However, if one looks at it from the prospective of what it would take us to pay for the propane to run the pump jack versus using the sour gas, I estimate that the 20 year Btu value is $72,000.
6) Jalapeno Corporation currently has two other wells that are still producing in the, Wolflake field. These wells have been producing for many years and currently produce just enough gas to operate their pump jacks. We estimate they are producing about 5-10 MCF/day. We do not flare or vent any gas as all the gas is consumed by the pump jacks.
7) There are no other realistic opportunities for alternative capture approaches and we believe that running the pump jacks from the little gas these wells produce is the most efficient method possible.

RECEIVED

From:	echavez@blm.gov
To:	rcooley@earthjustice.org; agwirtsman19@law.du.edu
Cc:	Ryan Witt; BLM_WO FOIA
Subject:	Fwd: Response to FOIA NM 2018-010/BLM 2018-00833 from Earthjustice
Date:	Thursday, December 21, 2017 3:54:29 PM
Attachments:	foia nm 2018 010 signed response.pdf DOI Mail Proposed Interim Waste Minimization Plan Info Needed for APD Approval.pdf Waste Minimization Plan_Interim Requirements_NM_05.24.2017_TJZ.pdf APD approved list for Carlsbad FO.xlsx Processed APDs FFO.xlsx APD approved list for Roswell FO.xlsx WMP-ARMSTRONG.pdf WMP-JALAPENO CORP..pdf

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My apologies. The BLM FOIA number should be FOIA BLM 2017-0833, not BLM 2018-0833.

Eileen Griego Chavez
FOIA/Privacy Officer
BLM NM/TX/OK/KS
(505) 954-2129

Bernadette Read
FOIA & Records Specialist
BLM NM/TX/OK/KS
(505) 954-2130

---------- Forwarded message ----------
From: FOIA, BLM_NM <blm_nm_foia@blm.gov>
Date: Thu, Dec 21, 2017 at 1:31 PM
Subject: Response to FOIA NM 2018-010/BLM 2018-00833 from Earthjustice
To: rcooley@earthjustice.org, agwirtsman19@law.du.edu
Cc: Ryan Witt <rwitt@blm.gov>, BLM_WO FOIA <blm_wo_foia@blm.gov>

Attached is our response to your Freedom of Information Act (FOIA) request dated June 23, 2017. A follow-up response will be provided for the remaining items in your FOIA request. In order to save on time and postage, a hard copy will not be provided.

Please let me know if you have any questions.

Eileen Griego Chavez

Eileen Griego Chavez
FOIA/Privacy Officer
BLM NM/TX/OK/KS
(505) 954-2129

Bernadette Read
FOIA & Records Specialist
BLM NM/TX/OK/KS
(505) 954-2130

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
New Mexico State Office
P.O. Box 27115
Santa Fe, New Mexico 87502-0115
www.blm.gov/nm

IN REPLY REFER TO:

TAKE PRIDE IN AMERICA

FOIA NM 2018-010
FOIA BLM 2018-00833
1278 (9500)

December 21, 2017

Via Email: rcooley@earthjustice.org

Ms. Robin Cooley
Earthjustice
633 17th St., Ste. 1600
Denver, CO 80202

Dear Ms. Cooley:

This is in response to your Freedom of Information Act (FOIA) request dated June 23, 2017. Your request was received in our Washington Office. Your requested was forwarded and received in this office on December 13, 2017. You stated that you are representing the Sierra Club. Please note that this response only applies to records within the New Mexico field offices.

On December 15, 2017, Christopher Walls, Petroleum Engineer, Carlsbad Field Office, and Eileen Griego Chavez, NM/OK/TX/KS FOIA Officer, contacted Andrew Gwirtsman at the Environmental Law Clinic in Denver, Colorado, regarding your request. Mr. Gwirtsman sent an email to the Bureau of Land Management (BLM) Washington Office (WO) asking about the status of the BLM's response to your FOIA request. (Eileen spoke to Joel Miner of Earthjustice on December 15, 2017. Mr. Miner stated that it was okay for the BLM to speak to the Environmental Law Clinic about your request since they are assisting your office with this request.) In Mr. Gwirtsman's email message dated December 13, 2017, to the BLM WO (Ryan Witt), Mr. Gwirtsman stated that he was " . . . willing to negotiate for a timely partial processing of the request while your office processes the rest of the requested information. Specifically, the Waste Minimization Plans submitted to New Mexico field offices since January 17, 2017 . . . " Christopher and Eileen spoke to Andrew and explained to him that although your office did not ask for the applications for permit to drill (APD), we would provide a listing of approved APDs from January 17, 2017, to the date of your FOIA request (June 23, 2017). Christopher explained that the New Mexico State Office made a decision and informed the New Mexico field offices that instead of having the operator submit waste minimization plans, that we would accept the Gas Capture Plan which is on a State of New Mexico Oil and Gas Conservation Division (NM OCD) form. The form contains the same information that a waste minimization plan would have. Enclosed is a copy of an email from the BLM New Mexico State Office to our field offices entitled "Proposed Interim Waste Minimization Plan Information Needed for APD Approval – Pecos District FOs" (2 pages). Also enclosed is a document entitled "New Mexico BLM Waste Minimization Plan requirements for APD approval (1 page). Christopher also stated

that based on the APD listing, Andrew could then access the NM OCD's website at https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting to view the Gas Capture Plans. Christopher and Eileen showed Andrew how to access the website and view the specific data. Andrew agreed to obtain the APD listing and access the NM OCD website to view the Gas Capture Plans.

The following is provided in response to your itemized request. Please note that these records only apply to field offices within the New Mexico State Office:

1. All Applications for Permit to Drill an oil well approved by all BLM field offices since the effective date (January 17, 2017) of the Methane Waste Prevention Rule, 43 C.F.R. § 3162.3-1(c). If there are more than 100 such APDs, Sierra Club alternatively requests a list of all such APDs.

Although your organization did not request the APD listing as part of Andrew's email to the BLM WO on December 13, 2017, we are providing you with a listing of approved APDs for each of our field offices within New Mexico (Carlsbad, Roswell, and Farmington). Enclosed are 3 Excel spreadsheets containing the requested data.

2. All Waste Minimization Plans submitted to all BLM field offices since the Rule's effective date (January 17, 2017). 43 C.F.R. § 3162.3-1(j).

Enclosed are two waste minimization plans that were submitted to the Roswell Field Office (2 documents totaling 4 pages).

As previously mentioned, Andrew agreed to obtain the listing of APDs. He will then access the NM OCD's website to view the Gas Capture Plans for the Carlsbad Field Office.

After a thorough search of our files within our Farmington Field Office, the BLM did not locate records in response to this specific item of your request.

3. Any Sundry Notice submitted by an operator notifying the BLM about liquids unloading or well purging after January 17, 2017 under 43 C.F.R. § 3179.2014(c), (e), or (f).

The BLM is continuing to conduct a search for responsive records related to this item. A separate response will be provided at a later date.

4. Any Sundry Notice submitted by an operator requesting approval of an alternative monitoring device and protocol after January 17, 2017 under 43 C.F.R. § 3179.302(c) and any approval by BLM of such device and protocol, pursuant to 43 C.F.R. 3179.302(a).

The BLM is continuing to conduct a search for responsive records related to this item. A separate response will be provided at a later date.

5. Any requests for variances by States or tribes after January 17, 2017 under 43 C.F.R. § 3179.401, all internal and external correspondence involving BLM staff that addresses such requests, and any notifications by States or tribes of "any substantive amendments, revisions, or other changes to the State, local or tribal regulation(s) or rule(s) to be applied under the variance." 43 C.F.R. § 3179.401(e).

The BLM is continuing to conduct a search for responsive records related to this item. A separate response will be provided at a later date.

For those records which do not exist, the BLM is not required to create or compile a record to respond to a FOIA request. The Act applies only to records in existence at the time the request is made.

The persons responsible for this no records found response are Eileen Griego Chavez, NM/OK/TX/KS FOIA Officer, and Aden Seidlitz, Acting State Director, New Mexico State Office, Bureau of Land Management, Santa Fe, New Mexico.

Under 43 CFR 2.59, you may appeal this response to the Department's FOIA/Privacy Act Appeals Officer. If you choose to appeal, the FOIA/Privacy Act Appeals Officer must receive your FOIA appeal no later than 90 workdays from the date of this letter. Appeals arriving or delivered after 5 p.m. Eastern Time, Monday through Friday, will be deemed received on the next workday.

Your appeal must be made in writing. You may submit your appeal and accompanying materials to the FOIA/Privacy Act Appeals Officer by mail, courier service, fax, or email. All communications concerning your appeal should be clearly marked with the words "FREEDOM OF INFORMATION APPEAL." You must include with your appeal copies of all correspondence between you and the BLM concerning your FOIA request, including your original FOIA request and the BLM's response. Please submit any information you have which leads you to believe the records do exist, including where they might be found, if the location is known to you. Failure to include with your appeal all correspondence between you and the BLM will result in the Department's rejection of your appeal, unless the FOIA /Privacy Act Appeals Officer determines (in the FOIA/Privacy Act Appeals Officer's sole discretion) that good cause exists to accept the defective appeal.

Please include your name and daytime telephone number (or the name and telephone number of an appropriate contact), email address and fax number (if available) in case the FOIA/Privacy Act Appeals Officer needs additional information or clarification of your appeal.

DOI FOIA Privacy Act Appeals Office Contact Information:

U.S. Department of the Interior
Office of the Solicitor
1849 C Street, NW, MS-6556, MIB
Washington, DC 20240
Attention: FOIA/Privacy Act Appeals Office
Telephone: (202) 208-5339
Fax: (202) 208-6677
Email: FOIA.Appeals@sol.doi.gov

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

In 2007, a number of amendments to the FOIA were enacted. As part of these FOIA amendments, the Office of Government Information Services (OGIS) was created to offer mediation services to resolve disputes between FOIA requesters and federal agencies as a non-exclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation.

You may contact OGIS in any of the following ways:

Office of Government Information Services
National Archives and Records Administration
Room 2510
8601 Adelphi Road
College Park, Maryland 20740-6001
E-mail: ogis@nara.gov
Telephone: (301) 837-1996
Fax: (301) 837-0348
Toll-free: 1-877-684-6448

You may also seek dispute resolution services from our FOIA Public Liaison, Ryan Witt, at (202) 912-7562.

Questions regarding this response may be directed to Thomas Zelenka, Petroleum Engineer, at (505) 954-2110. Questions pertaining to FOIA matters may be addressed to Eileen at (505) 954-2129.

Sincerely,

Sheila Mallory

Aden L. Seidlitz
Acting State Director /FOR/

Enclosures

Chavez, Eileen <echavez@blm.gov>

Fwd: Proposed Interim Waste Minimization Plan Information Needed for APD Approval - Pecos District FOs

Walls, Christopher <cwalls@blm.gov> Fri, Dec 15, 2017 at 11:03 AM
To: Eileen Vigil <echavez@blm.gov>
Cc: Jessica Franco <jfranco@blm.gov>

Eileen,
See below for the Waste Minimization Plan/Gas Capture Plan direction from Santa Fe.

Thanks,
Chris
---------- Forwarded message ----------
From: **Zelenka, Thomas** <tzelenka@blm.gov>
Date: Tue, May 30, 2017 at 12:49 PM
Subject: Proposed Interim Waste Minimization Plan Information Needed for APD Approval - Pecos District FOs
To: James Stovall <jstovall@blm.gov>, Ruben Sanchez <rjsanche@blm.gov>, David Glass <dglass@blm.gov>, Jennifer Sanchez <jamason@blm.gov>, Christopher Walls <cwalls@blm.gov>, Cody Layton <clayton@blm.gov>
Cc: Sheila Mallory <smallory@blm.gov>, Michael Gibson <mjgibson@blm.gov>, Michael Williams <michael.williams@sol.doi.gov>

The NM SO is proposing the attached Waste Minimization Plan information requirements for the Pecos District FOs, Carlsbad and Roswell, to have operators submit with new APD approvals (APDs submitted on or after January 17, 2017). We will accept this information as meeting the WMP APD requirement at this time and you should attach the COA, as noted in this attachment, to the APD approval COAs which provides the ability of the AO to request additional WMP information at a later date if required.

We attempted to incorporate the submittal of the NM OCD Gas Capture Plan (GCP) with NM BLM APDs when there is a recognized gas purchaser. With no gas purchaser, then the NMOCD GCP information will be considered sufficient for APD approval while in both cases, gas purchaser and no gas purchaser, BLM would require an additional COA to be included in the APD COAs for the AO to be able to request more well gas capture development information at a later date. At that later date, BLM will know more definitively what changes will be incorporated in Reg 3178/3179 due to the Executive Orders that have BLM looking at the need to reduce regulations that impede energy development. This COA helps fulfill the full requirement of the WMP as initially set out in new regulation 43 CFR 3162.3-1(j) final rule.

It is at the discretion of the Carlsbad and Roswell FO AOs to require any additional WMP information they feel they will need to meet the requirements of the WMP regulation.

If you have any questions regarding this proposed guidance. Please feel free to contact me.

Thank you.

Thomas Zelenka, P.E.
Petroleum Engineer

Bureau of Land Management
New Mexico State Office
301 Dinosaur Trail
Santa Fe, NM 87508-1560
Office: 505-954-2110
Fax: 505-954-2079
Cell:
Email: tzelenka@blm.gov

BLM

--
Thank you,

Chris Walls
Bureau of Land Management
Carlsbad Field Office
575-234-2234

Waste Minimization Plan_Interim Requirements_NM_05.24.2017_TJZ.docx
18K

New Mexico BLM Waste Minimization Plan Requirements for APD Approval:

Gas Purchaser/Transporter in place at initial production:

Provide NMOCD Gas Capture Plan (GCP) Form:

The NMOCD GCP Form should contain the following:

1. Name of facility
2. Wells that will be located (new and future) at this facility
    a. Well name and number
    b. Well API number
    c. Well location, Sect, T, R, Footages, county, state
    d. Expected IP gas rate, Mcfpd of each well
    e. First planned production date for well(s) that are developed from this facility
3. Gas purchaser name and address. (ADDITIONAL)
4. Gas gathering line length, in feet of pipeline, from facility location to gas gathering connection point, and connection point location (Sect, T, R, county and state).
5. If gas from this well(s) will be processed at the Gas Transporter's gas processing plant, then provide the name of the gas plant (ADDITIONAL) and its location, Sect, T, R, and county and state.

Include COA item language:

For APDs received on or after January 17, 2017 (effective date of this Rule), include this item:

> In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

No Gas Purchaser/Transporter Identified:

Provide NMOCD Gas Capture Plan (GCP) Form:

Well(s)/Facility information:

1. Name of facility
2. Wells that will be located (new and future) at this facility
    a. Well name and number
    b. Well API number
    c. Well location, Sect, T, R, Footages, county, state
    d. Expected IP gas rate, Mcfpd of each well
    e. First planned production date for well(s) that are developed from this facility

Include COA item language:

For APDs received on or after January 17, 2017 (effective date of this Rule), include this item:

> In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

County	Operator	Well Name and Number	Lease Number	Received Date
Eddy	OXY USA INC	15H-CYPRESS 34 FEDERAL COM	NMNM85891	1/30/2017
Eddy	OXY USA INC	1H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	1/31/2017
Eddy	COG Operating LLC	955H-BURCH KEELY UNIT	NMLC028793A	1/31/2017
Eddy	OXY USA INC	2H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	2/1/2017
Eddy	OXY USA INC	3H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM89819	2/2/2017
Eddy	OXY USA INC	4H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM89819	2/2/2017
Eddy	COG Operating LLC	964H-BURCH KEELY UNIT	NMLC028793A	2/2/2017
Eddy	OXY USA INC	5H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	2/7/2017
Eddy	OXY USA INC	6H-PALLADIUM MDP1-7-6 FEDERAL COM	NMNM57273	2/8/2017
Eddy	OXY USA INC	23H-PATTON MDP1 18 FEDERAL	NMNM63757	2/8/2017
Eddy	COG Operating LLC	4H-Sidewinder Fed Com	NMNM38636	2/8/2017
Eddy	OXY USA INC	33H-PATTON MDP1 18 FEDERAL	NMNM63757	2/9/2017
Eddy	OXY USA INC	73H-PATTON MDP1 18 FEDERAL	NMNM63757	2/9/2017
Eddy	EOG Resources Inc	501H-Secretariat 3 Fed Com	NMNM118702	2/10/2017
Eddy	COG Operating LLC	91H-Carmen 3 Federal Com	NMLC029020J	2/15/2017
Eddy	BTA Oil Producers	7H-OGDEN 20509 32-29 FED COM	NMNM100335	2/17/2017
Eddy	COG Operating LLC	21H-COPPERHEAD 31 FEDERAL COM	NMNM121474	2/20/2017
Eddy	COG Operating LLC	908H-DODD FEDERAL UNIT	NMLC028731B	2/20/2017
Eddy	XTO Energy Inc	1H-Ross Draw 3031 Federal	NMNM19612	2/21/2017
Eddy	OXY USA INC	24H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	2/21/2017
Eddy	OXY USA INC	1H-PATTON MDP1 17 FEDERAL	NMNM63757	2/23/2017
Eddy	OXY USA INC	2H-PATTON MDP1 17 FEDERAL	NMNM63757	2/23/2017
Eddy	Devon Energy Production	513H-COTTON DRAW UNIT	NMNM012121	2/23/2017
Eddy	Devon Energy Production	512H-COTTON DRAW UNIT	NMNM012121	2/23/2017
Eddy	COG Operating LLC	912H-DODD FEDERAL UNIT	NMLC068722	2/23/2017
Eddy	OXY USA Inc.	2H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM63757	2/24/2017
Eddy	Mewbourne Oil Co	1H-Ghostrider 25 36 W2AP Fed Com	NMNM027994D	2/24/2017
Eddy	OXY USA INC	1H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM63757	2/24/2017
Eddy	BTA Oil Producers	5H-OGDEN 20509 32-29 FED COM	NMNM100335	2/24/2017
Eddy	BTA Oil Producers	6H-OGDEN 20509 32-29 FED COM	NMNM100335	2/27/2017
Eddy	Cimarex Energy Company	1H-MEDWICK 32 FEDERAL COM	NMNM114350	2/28/2017
Eddy	Cimarex Energy Co of Col	4H-MEDWICK 32 FEDERAL COM	NMNM117116	2/28/2017
Eddy	OXY USA INC	171H-CAL-MON 35 FEDERAL	NMNM19199	3/2/2017
Eddy	Mewbourne Oil Co	2H-GHOSTRIDER 25/36 W0AP FED COM	NMNM027994D	3/2/2017
Eddy	Mewbourne Oil Co	2H-GHOSTRIDER 25-36 W0DM FED COM	NMNM027994A	3/6/2017
Eddy	OXY USA Inc.	6H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/7/2017
Eddy	COG Operating LLC	920H-DODD FEDERAL UNIT	NMLC028731B	3/8/2017
Eddy	COG Operating LLC	44H-HOBGOBLIN 7 FEDERAL COM	NMNM117122	3/8/2017
Eddy	Chevron USA Inc	1H-HH SO 10 15 FED 002	NMNM121473	3/9/2017
Eddy	Chevron USA Inc	2H-HH SO 10 15 FED 002	NMNM121473	3/9/2017
Eddy	Cimarex Energy Co.	2H-MEDWICK 32 FEDERAL COM	NMNM114350	3/9/2017
Eddy	Cimarex Energy Co of Col	3H-MEDWICK 32 FEDERAL COM	NMNM114350	3/10/2017
Eddy	Chevron USA Inc	3H-HH SO 10 15 FED 002	NMNM121473	3/14/2017
Eddy	OXY USA INC	3H-PATTON MDP1 17 FEDERAL	NMNM29234	3/14/2017
Eddy	OXY USA INC	4H-PATTON MDP1 17 FEDERAL	NMNM29234	3/14/2017

Eddy	Mewbourne Oil Co	1H-GHOSTRIDER 25-36 W2DM FED COM	NMNM027994A	3/17/2017
Eddy	Chevron USA Inc	4H-HH SO 10 15 FED 002	NMNM121473	3/20/2017
Eddy	Chevron USA Inc	5H-HH SO 10 15 FED 002	NMNM121473	3/20/2017
Eddy	Chevron USA Inc	6H-HH SO 10 15 FED 002	NMNM121473	3/20/2017
Eddy	COG Operating LLC	13H-MALCO 23 FEDERAL COM	NMNM01510	3/20/2017
Eddy	Cimarex Energy Co of Col	5H-MEDWICK 32 FEDERAL COM	NMNM117116	3/22/2017
Eddy	OXY USA INC	3H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM29234	3/23/2017
Eddy	OXY USA INC	4H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM29234	3/23/2017
Eddy	OXY USA INC	5H-PATTON MDP1 17 FEDERAL	NMNM031963	3/28/2017
Eddy	OXY USA Inc.	5H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM29234	3/28/2017
Eddy	OXY USA INC	6H-PATTON MDP1 17 FEDERAL	NMNM031963	3/29/2017
Eddy	OXY USA INC	6H-SUNRISE MDP1 8-5 FEDERAL COM	NMNM031963	3/30/2017
Eddy	Mewbourne Oil Co	1H-ANNABELLE 18-13 W2PO FED COM	NMNM111528	4/5/2017
Eddy	Mewbourne Oil Co	1H-ARCHDUKE 19 W2AP FED	NMNM112268	4/5/2017
Eddy	COG Operating LLC	5H-MYOX 20 FEDERAL COM	NMNM100550	4/10/2017
Eddy	COG Production LLC	2H-TANKLESS FEDERAL COM	NMNM101601	4/12/2017
Eddy	Devon Energy Production	507H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Eddy	EOG Resources Inc	705H-CALM BREEZE 2 FED COM	NMNM0359292	4/27/2017
Eddy	OXY USA INC	24H-CEDAR CANYON 29 FEDERAL COM	NMNM53229	5/2/2017
Eddy	OXY USA INC	26H-CEDAR CANYON 29 FEDERAL	NMNM53229	5/3/2017
Eddy	Mewbourne Oil Co	4H-FULLER 14-23 W2IP FED	NMNM11038	5/9/2017
Eddy	Mewbourne Oil Co	1H-FULLER 14-23 W1IP FED	NMNM11038	5/10/2017
Eddy	Mewbourne Oil Co	2H-FULLER 14-11 W1HA FED	NMNM011038	5/11/2017
Eddy	OXY USA INC	8H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/11/2017
Eddy	OXY USA INC	1H-NIMITZ MDP1 13 FEDERAL COM	NMNM82896	5/11/2017
Eddy	OXY USA INC	1H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/22/2017
Eddy	Mewbourne Oil Co	3H-FULLER 14-11 W2HA FED	NMNM11038	5/22/2017
Eddy	OXY USA INC	2H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/23/2017
Eddy	OXY USA INC	9H-NIMITZ MDP1 12 FEDERAL	NMNM82896	5/23/2017
Eddy	RKI EXPLORATION & PRO	3H-TUCKER DRAW 9-4 FED COM	NMNM100558	5/30/2017
Eddy	RKI EXPLORATION & PRO	1H-TUCKER DRAW 9-4 FED COM	NMNM100558	5/30/2017
Eddy	RKI EXPLORATION & PRO	2H-TUCKER DRAW 9-4 FED COM	NMNM100558	5/30/2017
Eddy	Mack Energy Corp	2-RUDOLF FEDERAL	NMNM100844	5/30/2017
Eddy	OXY USA Inc.	1H-MESA VERDE 13 FEDERAL	NMNM114979	5/31/2017
Eddy	Mewbourne Oil Co	3H-FNR 17-20 W2IP FED COM	NMNM114355	5/31/2017
Eddy	WPX Energy	7H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	Mack Energy Corp	4-RUDOLF FEDERAL	NMNM100844	6/1/2017
Eddy	RKI EXPLORATION & PRO	4H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	RKI EXPLORATION & PRO	5H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	RKI EXPLORATION & PRO	6H-TUCKER DRAW 9-4 FED COM	NMNM100558	6/1/2017
Eddy	OXY USA Inc.	2H-MESA VERDE 13 FEDERAL	NMNM114979	6/1/2017
Eddy	Mewbourne Oil Co	1H-FNR 17-20 B2IP FED COM	NMNM114355	6/2/2017
Eddy	Mewbourne Oil Co	2H-FNR 17-20 B3IP FED COM	NMNM114355	6/2/2017
Eddy	Mewbourne Oil Co	1H-WOLFMAN 5-4 W0LI FED COM	NMNM105208	6/2/2017
Eddy	OXY USA Inc.	3H-MESA VERDE 13 FEDERAL	NMNM114979	6/5/2017
Eddy	OXY USA Inc.	6H-MESA VERDE 13 FEDERAL	NMNM114979	6/6/2017
Eddy	OXY USA INC	4H-MESA VERDE 13 FEDERAL	NMNM114979	6/6/2017

Eddy	OXY USA INC	5H-MESA VERDE 13 FEDERAL	NMNM114979	6/7/2017
Eddy	Devon Energy Production	234H-LUSITANO 27-15 FED COM	NMNM16131	6/21/2017
Eddy	OXY USA INC	6H-NIMITZ MDP1 12 FEDERAL COM	NMNM82896	6/21/2017
Eddy	OXY USA INC	7H-NIMITZ MDP1 12 FEDERAL COM	NMNM82896	6/21/2017
Eddy	OXY USA INC	2H-NIMITZ MDP1 13 FEDERAL COM	NMNM	6/22/2017
Eddy	OXY USA INC	3H-NIMITZ MDP1 13 FEDERAL COM	NMNM82896	6/22/2017
Lea	COG Operating LLC	26H-BASEBALL CAP FEDERAL COM	NMNM123530	1/17/2017
Lea	EOG Resources Inc	705H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	EOG Resources Inc	706H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	EOG Resources Inc	707H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	EOG Resources Inc	708H-Orrtanna 20 Fed	NMNM118727	1/19/2017
Lea	COG Operating LLC	4H-Tenderloin Federal Com	NMN17440M	1/24/2017
Lea	EOG Resources Inc	5H-AUDACIOUS BTL 19 FED COM	NMNM110838	1/25/2017
Lea	EOG Resources Inc	4H-AUDACIOUS BTL 19 FED COM	NMNM110838	1/25/2017
Lea	EOG Resources Inc	3H-AUDACIOUS BTL 19 FED COM	NMNM110838	1/25/2017
Lea	BC Operating Inc	1H-CAVE LION 5 FEDERAL BC	NMNM13647	1/26/2017
Lea	BC Operating Inc	5H-CAVE LION 5 FEDERAL WC	NMNM13647	1/27/2017
Lea	Devon Energy Production	102H-SEAWOLF 1-12 FED	NMNM114988	1/30/2017
Lea	EOG Resources Inc	702H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	EOG Resources Inc	703H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	EOG Resources Inc	704H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	EOG Resources Inc	705H-RUBY 2 FED COM	NMNM66927	1/31/2017
Lea	McElvain Energy Inc.	2H-EK 30 BS2 FEDERAL COM	NMNM0245247	2/3/2017
Lea	McElvain Energy Inc.	1H-EK 31 BS2 FEDERAL COM	NMNM0245247	2/3/2017
Lea	Apache Corporation	301H-BLACK & TAN 27 FEDERAL COM	NMNM060393	2/7/2017
Lea	Apache Corporation	303H-BLACK & TAN 27 FEDERAL COM	NMLC029519B	2/7/2017
Lea	Apache Corporation	305H-BLACK & TAN 27 FEDERAL COM	NMNM060393	2/7/2017
Lea	Apache Corporation	307H-BLACK & TAN 27 FEDERAL COM	NMNM0897	2/7/2017
Lea	EOG Resources Inc	704H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	701H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	703H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	702H-FOX 30 FED COM	NMNM112279	2/15/2017
Lea	EOG Resources Inc	701H-CABALLO 23 FED COM	NMNM108503	2/15/2017
Lea	EOG Resources Inc	702H-CABALLO 23 FED COM	NMNM108503	2/15/2017
Lea	EOG Resources Inc	703H-CABALLO 23 FED	NMNM108503	2/15/2017
Lea	EOG Resources Inc	704H-CABALLO 23 FED	NMNM108503	2/15/2017
Lea	COG Operating LLC	6H-AZORES FEDERAL	NMNM120908	2/20/2017
Lea	Apache Corporation	183-WEST BLINEBRY DRINKARD UNIT	NMNM90161	2/20/2017
Lea	OXY USA INC	43H-MESA VERDE 17 FEDERAL COM	NMNM66925	2/22/2017
Lea	OXY USA INC	73H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	2/22/2017
Lea	Apache Corporation	184-WEST BLINEBRY DRINKARD UNIT	NMNM90161	2/23/2017
Lea	Devon Energy Production	3H-FIGHTING OKRA 18-19 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	82H-FIGHTING OKRA 18-19 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	81H-JAYHAWK 7-6 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	82H-JAYHAWK 7-6 FED	NMNM114992	2/27/2017
Lea	Devon Energy Production	83H-JAYHAWK 7-6 FED	NMNM114992	2/27/2017
Lea	OXY USA INC	5H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/7/2017

Lea	COG Operating LLC	25H-BRANEX-COG FEDERAL COM	NMNM0315712	3/7/2017
Lea	EOG Resources Inc	701H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	702H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	703H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	704H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	705H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	706H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	707H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	708H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	709H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	EOG Resources Inc	710H-DOGWOOD 23 FED COM	NMNM122622	3/7/2017
Lea	OXY USA Inc.	14H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/8/2017
Lea	OXY USA Inc.	3H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/8/2017
Lea	OXY USA Inc.	4H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	3/9/2017
Lea	Cimarex Energy Co.	7H-Hallertau 5 Federal	NMNM0392082A	3/10/2017
Lea	EOG Resources Inc	702H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	EOG Resources Inc	704H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	EOG Resources Inc	705H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	EOG Resources Inc	706H-BARLOW 34 FED COM	NMNM02965A	3/14/2017
Lea	COG Operating LLC	21H-Square Bill Federal Com	NMNM119280	3/16/2017
Lea	COG Operating LLC	22H-Square Bill Federal Com	NMNM119280	3/20/2017
Lea	COG Operating LLC	23H-Square Bill Federal Com	NMNM119280	3/20/2017
Lea	Devon Energy Production	84H-JAYHAWK 7-6 FED COM	NMNM114992	3/20/2017
Lea	Devon Energy Production	84H-FIGHTING OKRA 18-19 FED	NMNM114992	3/20/2017
Lea	Devon Energy Production	85H-FIGHTING OKRA 18-19 FED	NMNM114992	3/20/2017
Lea	Devon Energy Production	86H-FIGHTING OKRA 18-19 FED	NMNM114992	3/20/2017
Lea	Devon Energy Production	85H-JAYHAWK 7-6 FED COM	NMNM114992	3/21/2017
Lea	Devon Energy Production	86H-JAYHAWK 7-6 FED COM	NMNM114992	3/21/2017
Lea	Cimarex Energy Co.	11H-Hallertau 5 Federal	NMNM0392082A	3/22/2017
Lea	EOG Resources Inc	701H-TOPAZ 11 FED	NMNM66927	3/22/2017
Lea	Cimarex Energy Co.	16H-Hallertau 5 Federal	NMNM0392082A	3/23/2017
Lea	Mewbourne Oil Co	18H-RED HILLS WEST UNIT	NMNM105560	3/23/2017
Lea	EOG Resources Inc	701H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	702H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	705H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	706H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	707H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	EOG Resources Inc	708H-NAUTILUS 16 FED COM	NMNM66927	3/24/2017
Lea	COG Operating LLC	15H-ZEPPO 5 FEDERAL COM	NMLC029406B	3/27/2017
Lea	COG Operating LLC	1H-Square Bill Federal Com	NMNM119280	3/28/2017
Lea	EOG Resources Inc	704H-OPHELIA 22 FED COM	NMNM122622	3/28/2017
Lea	EOG Resources Inc	705H-OPHELIA 22 FED COM	NMNM122622	3/28/2017
Lea	EOG Resources Inc	706H-OPHELIA 22 FED COM	NMNM122622	3/28/2017
Lea	COG Operating LLC	11H-WHITE FALCON 16 FEDERAL COM	NMNM112942	3/28/2017
Lea	COG Operating LLC	21H-WHITE FALCON 16 FEDERAL COM	NMNM112942	3/28/2017
Lea	COG Operating LLC	22H-WHITE FALCON 16 FEDERAL COM	NMNM112942	3/28/2017
Lea	Cimarex Energy Co.	11H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	3/30/2017

Lea	Cimarex Energy Co.	14H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	3/31/2017
Lea	Cimarex Energy Co.	13H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	3/31/2017
Lea	Cimarex Energy Co.	12H-TRISTE DRAW 25 FEDERAL COM	NMLC06228	3/31/2017
Lea	COG Operating LLC	25H-ZEPPO 5 FEDERAL COM	NMLC029406B	3/31/2017
Lea	EOG Resources Inc	707H-OPHELIA 22 FED COM	NMNM122622	4/3/2017
Lea	EOG Resources Inc	709H-NAUTILUS 16 FED COM	NMNM66927	4/3/2017
Lea	Cimarex Energy Co.	15H-TRISTE DRAW 25 FEDERAL COM	NMLC063228	4/3/2017
Lea	COG Operating LLC	26H-FLAT HEAD FEDERAL COM	NMLC061842	4/6/2017
Lea	Cimarex Energy Co.	1H-VACA DRAW 20-17 FEDERAL	NMNM26394	4/12/2017
Lea	Apache Corporation	302H-BLACK & TAN 27 FEDERAL COM	NMNM60393	4/13/2017
Lea	Apache Corporation	304H-Black and Tan 27 Federal Com	NMLC029519B	4/13/2017
Lea	Apache Corporation	306H-BLACK & TAN 27 FEDERAL COM	NMNM60393	4/17/2017
Lea	Devon Energy Production	508H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Lea	Devon Energy Production	509H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Lea	Devon Energy Production	506H-COTTON DRAW UNIT	NMLC61873B	4/17/2017
Lea	Apache Corporation	308H-BLACK & TAN 27 FEDERAL COM	NMNM0897	4/18/2017
Lea	LEGACY RESOURCES OPE	55H-LEA UNIT	NMNM006531A	4/20/2017
Lea	Cimarex Energy Co.	3H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/2/2017
Lea	Cimarex Energy Co.	2H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/2/2017
Lea	Cimarex Energy Co.	5H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/3/2017
Lea	Cimarex Energy Co.	6H-VACA DRAW 20-17 FEDERAL	NMNM26394	5/3/2017
Lea	LEGACY RESOURCES OPE	56H-LEA UNIT	NM006531A	5/5/2017
Lea	OXY USA INC	2H-MESA VERDE 17-8 FEDERAL COM	NM66925	5/16/2017
Lea	OXY USA INC	1H-MESA VERDE 17-8 FEDERAL COM	NMNM66925	5/16/2017
Lea	LEGACY RESOURCES OPE	58H-LEA UNIT	NM0006531	5/19/2017
Lea	OXY USA INC	1H-MESA VERDE 18 FEDERAL COM	NMNM66925	5/24/2017
Lea	OXY USA INC	2H-MESA VERDE 18 FEDERAL COM	NMNM66925	5/24/2017
Lea	Chevron USA Inc	17H-SD EA 18 19 FED COM P15	NMNM132070	5/26/2017
Lea	Chevron USA Inc	18H-SD EA 18 19 FED COM P15	NMNM132070	5/26/2017
Lea	Chevron USA Inc	19H-SD EA 18 19 FED COM P15	NMNM132070	5/26/2017
Lea	Chevron USA Inc	16H-SD EA 18 19 FED COM P15	NMNM27506	5/26/2017
Lea	BTA Oil Producers	8H-VACA DRAW 9418 10 FED	NMNM97153	6/1/2017
Lea	Matador Production Com	124H-FEDERAL 30	NMNM073240	6/2/2017
Lea	Chevron USA Inc	20H-SD EA 18 19 FED COM P15	NMNM132070	6/6/2017
Lea	Chevron USA Inc	8H-SD EA 18 19 FED COM P13	NMNM27506	6/21/2017
Lea	Chevron USA Inc	9H-SD EA 18 19 FED COM P13	NMNM27506	6/22/2017
Lea	Chevron USA Inc	10H-SD EA 18 19 FED COM P13	NMNM27506	6/22/2017
Lea	Chevron USA Inc	11H-SD EA 18 19 FED COM P13	NMNM27506	6/22/2017
Lea	COG Operating LLC	2H-MAS FEDERAL COM	NMLC029519A	6/22/2017
Lea	Chevron USA Inc	12H-SD EA 18 19 FED P14	NMNM27506	6/23/2017

Action Decision	Days Pending
Approved	319
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Approved	106
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Approved	13
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Approved	183
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Approved	162
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Approved	250
Approved	204
Approved	4
Approved	246
Approved	212
Approved	14
Approved	14
Approved	14
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Approved	199
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Approved	199
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Approved	121
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Approved	52
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Approved	51
Approved	66
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Approved	41
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Approved	22
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Approved	10
Approved	14
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Approved	42
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Approved	9
Approved	159
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Approved	35
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Approved	28
Approved	11
Approved	21
Approved	27
Approved	26
Approved	26
Approved	148
Approved	27

Tracking	County	Operator	Well Name and Number	Received Date
ATS-F010-17-07	San Juan	WPX Energy Production LLC	710H-W Lybrook UT	11/8/2016
ATS-F010-16-79	San Juan	WPX Energy Production LLC	712H-W Lybrook UT	6/16/2016
ATS-F010-17-06	San Juan	WPX Energy Production LLC	714H-W Lybrook UT	11/7/2016
ATS-F010-17-14	San Juan	WPX Energy Production LLC	716H-W Lybrook UT	11/3/2016
ATS-F010-17-15	San Juan	WPX Energy Production LLC	719H-W Lybrook UT	11/3/2016
ATS-F010-17-08	San Juan	WPX Energy Production LLC	750H-W Lybrook UT	11/8/2016
ATS-F010-17-09	San Juan	WPX Energy Production LLC	752H-W Lybrook UT	11/8/2016
ATS-F010-16-46	San Juan	WPX Energy Production LLC	753H-W Lybrook UT	11/3/2016
ATS-F010-17-17	San Juan	WPX Energy Production LLC	754H-W Lybrook UT	11/3/2016
ATS-F010-16-44	San Juan	WPX Energy Production LLC	755H-W Lybrook UT	11/3/2016
ATS-F010-16-40	San Juan	WPX Energy Production LLC	718H-W Lybrook UT	5/25/2016
ATS-F010-17-10	San Juan	WPX Energy Production LLC	751H-W Lybrook UT	11/9/2016
ATS-F010-16-157	San Juan	WPX Energy Production LLC	500H-Rodeo UT	8/29/2016
ATS-F010-17-01	San Juan	WPX Energy Production LLC	501H-Rodeo UT	10/21/2016
ATS-F010-17-53	San Juan	BP America	3H-NEBU 604 Com	1/30/2017
ATS-F010-16-178	Sandoval	WPX Energy Production LLC	311H-N ESCAVADA UT	1/26/2017
ATS-F010-15-337	Sandoval	WPX Energy Production LLC	312H-N Escavada UT	9/30/2016
ATS-F010-17-51	Sandoval	WPX Energy Production LLC	316H-N ESCAVADA UT	1/17/2017
ATS-F010-17-49	Sandoval	WPX Energy Production LLC	330H-N ESCAVADA UT	1/17/2017
ATS-F010-17-48	Sandoval	WPX Energy Production LLC	331H-N ESCAVADA UT	1/17/2017
ATS-F010-16-136	Sandoval	Encana Oil & Gas	203H-Venado Canyon Unit	9/20/2016
ATS-F010-16-137	Sandoval	Encana Oil & Gas	204H-Venado Canyon Unit	9/20/2016
ATS-F010-16-138	Sandoval	Encana Oil & Gas (Usa) Inc	205H-Venado Canyon Unit	9/20/2016
ATS-F010-16-139	Sandoval	Encana Oil & Gas	206H-Venado Canyon Unit	9/20/2016
ATS-F010-16-140	Sandoval	Encana Oil & Gas	207H-Venado Canyon Unit	9/20/2016
ATS-F010-16-227	San Juan	Encana Oil & Gas	405H-Nageezi Unit	12/12/2016
ATS-F010-16-228	San Juan	Encana Oil & Gas	406H-Nageezi Unit	12/9/2016
ATS-F010-17-56	San Juan	WPX Energy Production LLC	773H-Kimbeto Wash Unit	2/1/2017
ATS-F010-17-69	San Juan	WPX Energy Production LLC	781H-Kimbeto Wash Unit	3/6/2017
ATS-F010-16-216	San Juan	WPX Energy Production LLC	783H-Kimbeto Wash Unit	8/3/2016
ATS-F010-17-67	San Juan	WPX Energy Production LLC	785H-Kimbeto Wash Unit	3/6/2017
ATS-F010-17-68	San Juan	WPX Energy Production LLC	786H-Kimbeto Wash Unit	3/6/2017
ATS-F010-16-104	San Juan	WPX Energy Production LLC	775H-KWU	7/6/2016
ATS-F010-16-159	San Juan	WPX Energy Production LLC	730H-W Lybrook UT	11/3/2016
ATS-F010-16-160	San Juan	WPX Energy Production LLC	732H-W Lybrook UT	11/3/2016
ATS-F010-16-161	San Juan	WPX Energy Production LLC	762H-W Lybrook UT	11/3/2016
ATS-F010-16-214	Rio Arriba	Logos Operating LLC	13-Logos 2406 29H	10/21/2016
ATS-F010-16-105	San Juan	WPX Energy Production LLC	778H-Kimbeto Wash Unit	2/7/2017
ATS-F010-16-239	San Juan	Logos Operating LLC	15-Logos 2508 20D	1/19/2017
ATS-F010-16-236	San Juan	Dugan Production	1-Coffee	9/29/2016
ATS-F010-17-39	San Juan	WPX Energy Production LLC	772H-Kimbeto Wash Unit	12/20/2016
ATS-F010-17-38	San Juan	WPX Energy Production LLC	774H-Kimbeto Wash Unit	12/20/2016
ATS-F010-17-50	San Juan	WPX Energy Production LLC	777H-Kimbeto Wash Unit	1/16/2017

ATS-F010-17-52	San Juan	WPX Energy Production LLC	780H-Kimbeto Wash Unit	1/18/2017
ATS-F010-17-55	San Juan	WPX Energy Production LLC	782H-Kimbeto Wash Unit	2/1/2017
ATS-F010-16-100	San Juan	WPX Energy Production LLC	784H-Kimbeto Wash Unit	2/7/2017
ATS-F010-15-200	San Juan	WPX Energy Production LLC	344H-S Chaco UT	11/5/2015
ATS-F010-15-201	San Juan	WPX Energy Production LLC	345H-S Chaco UT	11/5/2015
ATS-F010-17-35	San Juan	WPX Energy Production LLC	736H-W LYBROOK UT	12/20/2016
ATS-F010-15-348	San Juan	WPX Energy Production LLC	737H-W LYBROOK UT	12/20/2016
ATS-F010-17-54	San Juan	WPX Energy Production LLC	741H-W LYBROOK UT	2/1/2017
ATS-F010-16-06	Sandoval	WPX Energy Production LLC	908H-S Chaco UT	11/9/2015
ATS-F010-17-86	Rio Arriba	WPX Energy Production LLC	880H-Rosa Unit	5/5/2017
ATS-F010-17-88	Rio Arriba	WPX Energy Production LLC	884H-Rosa Unit	5/9/2017
ATS-F010-17-76	Sandoval	WPX Energy Production LLC	302H-W ESCAVADA UNIT	4/17/2017
ATS-F010-17-75	Sandoval	WPX Energy Production LLC	303H-W ESCAVADA UNIT	4/17/2017
ATS-F010-17-77	Sandoval	WPX Energy Production LLC	304H-W ESCAVADA UNIT	4/17/2017
ATS-F010-15-345	Sandoval	WPX Energy Production LLC	317H-N Escavada UT	9/30/2016
ATS-F010-15-346	Sandoval	WPX Energy Production LLC	318H-N Escavada UT	1/26/2017
ATS-F010-17-70	Sandoval	WPX Energy Production LLC	300H-W ESCAVADA UNIT	3/15/2017
ATS-F010-17-72	Sandoval	WPX Energy Production LLC	301H-W ESCAVADA UNIT	3/23/2017
ATS-F010-17-100	Sandoval	WPX Energy Production LLC	305H-W ESCAVADA UNIT	6/5/2017
ATS-F010-17-101	Sandoval	WPX Energy Production LLC	306H-W ESCAVADA UNIT	6/6/2017
ATS-F010-16-230	San Juan	Dugan Production	1-Clay	9/29/2016
ATS-F010-17-112	Rio Arriba	Southland Royalty Co LLC	24-1-CARRACAS 32-5	7/18/2017
ATS-F010-17-62	San Juan	WPX Energy Production LLC	788H-Kimbeto Wash Unit	2/13/2017
ATS-F010-17-60	San Juan	WPX Energy Production LLC	790H-Kimbeto Wash Unit	2/14/2017
ATS-F010-17-61	San Juan	WPX Energy Production LLC	792H-Kimbeto Wash Unit	2/14/2017
ATS-F010-17-105	Sandoval	WPX Energy Production LLC	362H-S ESCAVADA UNIT	6/19/2017
ATS-F010-17-104	Sandoval	WPX Energy Production LLC	363H-S ESCAVADA UNIT	6/19/2017
ATS-F010-17-47	Sandoval	WPX Energy Production LLC	361H-S Escavada UT	6/19/2017
ATS-F010-16-195	Rio Arriba	WPX Energy Production LLC	740H-Rosa Unit	8/30/2017
ATS-F010-17-130	Rio Arriba	WPX Energy Production LLC	830H-ROSA UNIT	8/25/2017
ATS-F010-17-125	San Juan	Logos Operating LLC	3H-HEROS 2308 09L	8/9/2017
ATS-F010-17-126	San Juan	Logos Operating LLC	4H-HEROS 2308 09L COM	8/15/2017
ATS-F010-17-84	San Juan	BP America	1H-NEBU 605 COM	8/3/2017
ATS-F010-17-119	San Juan	BP America Production Co	1H-NEBU 607 COM	8/2/2017
ATS-F010-17-118	San Juan	BP America Production Co	1H-NEBU 606 COM	8/3/2017
ATS-F010-17-59	San Juan	Dugan Production	1-Flats	5/30/2017
ATS-F010-18-10	Rio Arriba	Robert L Bayless Producer LLC	1-LA JARA 26-3H	10/26/2017
ATS-F010-18-19	San Juan	BP America Production Co	2H-NEBU 605 COM	11/8/2017

Action Date	Action Decision	Days Pending
1/27/2017	Approved	80
1/27/2017	Approved	225
1/27/2017	Approved	81
1/27/2017	Approved	85
1/27/2017	Approved	85
1/27/2017	Approved	80
1/27/2017	Approved	80
1/27/2017	Approved	85
1/27/2017	Approved	85
1/27/2017	Approved	85
2/1/2017	Approved	252
2/1/2017	Approved	84
2/23/2017	Approved	178
2/23/2017	Approved	125
3/1/2017	Approved	30
3/1/2017	Approved	34
3/1/2017	Approved	152
3/1/2017	Approved	43
3/1/2017	Approved	43
3/3/2017	Approved	45
3/16/2017	Approved	177
3/16/2017	Approved	177
3/16/2017	Approved	177
3/16/2017	Approved	177
3/16/2017	Approved	177
4/7/2017	Approved	108
4/7/2017	Approved	108
4/10/2017	Approved	68
4/10/2017	Approved	35
4/10/2017	Approved	250
4/10/2017	Approved	35
4/10/2017	Approved	35
4/10/2017	Approved	278
4/10/2017	Approved	158
4/10/2017	Approved	104
4/10/2017	Approved	158
4/12/2017	Approved	173
4/14/2017	Approved	66
5/8/2017	Approved	38
5/11/2017	Approved	111
6/1/2017	Approved	104
6/1/2017	Approved	104
6/1/2017	Approved	136

6/1/2017	Approved	134
6/1/2017	Approved	120
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6/1/2017	Approved	163
6/1/2017	Approved	104
6/1/2017	Approved	120
6/1/2017	Approved	570
6/16/2017	Approved	15
6/16/2017	Approved	38
7/31/2017	Approved	105
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7/31/2017	Approved	105
8/1/2017	Approved	305
8/1/2017	Approved	187
8/1/2017	Approved	139
8/1/2017	Approved	131
8/1/2017	Approved	57
8/1/2017	Approved	56
8/2/2017	Approved	175
8/3/2017	Approved	16
8/3/2017	Approved	171
8/3/2017	Approved	170
8/3/2017	Approved	170
9/7/2017	Approved	80
9/7/2017	Approved	80
9/7/2017	Approved	80
9/15/2017	Approved	16
9/15/2017	Approved	21
10/13/2017	Approved	10
10/13/2017	Approved	10
10/17/2017	Approved	75
10/17/2017	Approved	76
10/30/2017	Approved	88
11/1/2017	Approved	134
12/7/2017	Approved	42
12/12/2017	Approved	34

County	Operator	Well Name and Number	Lease Number	Received Date
Chavez	Jalapeno Corporation	Duncan Federal # 12	NM NM 12557	1/23/2017
Chavez	Armstrong Energy Corporation	Liza Jane Federal # 1	NM NM 118119	4/24/2017

Action Decision	APD Complete Date	Days Pending
4/11/2017	3/13/2017	28
6/1/2017	5/8/2017	22

Liza Jane Federal #1
Section 19 T5S R34E
1630' FSL & 1220' FEL
Roosevelt County, NM

Waste Minimization Plan

(1) The anticipated completion date of the proposed well will be July 10, 2017.

(2) The description of anticipated production is oil, gas, and water.
- (i) The anticipated date of first production is July 10, 2017.
- (ii) The expected initial oil production rate from the well is 120 BOPD. The expected initial gas production rate from the well is 500 MCFD.
- (iii) The expected production decline curve is shown in attachment (2.iii):
- (iv) The expected BTU value of the gas production for this well is 1200.

(3) Certification that the operator has provided one or more midstream companies of our plans is shown in attachment (3):

(4) The gas pipeline to which we plan to connect is the northern end of Targa's Vada system which already gathers gas from our existing producers in the area.
- (i) The maximum current daily capacity of the pipeline is understood to be around 4 MMCFD.
- (ii) The current throughput of the line is approximately 1750 MCFD.
- (iii) The anticipated daily capacity of the pipeline at the anticipated date of first gas sales from the proposed well is 4 MMCFD.
- (iv) The anticipated throughput of the pipeline at the anticipated date of first gas sales from the proposed well is 1750 MCFD.
- (v) We are unaware of any plans for expansion of pipeline capacity for this area, other than possibly building a new flowline dedicated to our proposed well, which is not anticipated to increase capacity of the trunkline but may help to avoid surface commingling of gas from separate wells.

(5) We are able to identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well.
- (i) We are able to identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well.
  - (A) The name and location of the gas processing plant closest to the proposed well, and also the intended destination processing plant for the proposed well, is Targa's Saunders Gas Plant located in Section 34 of Township 14 South, Range 33 East.
  - (B) The location and name of the operator of each gas known trunkline within 20 miles of the proposed well is as follows:

    Targa Midstream Services
    10 W. Adams Ave.
    Lovington, NM 88260

(C) The proposed route and tie-in point that connects or could connect the subject well to an existing gas trunkline can be seen in attachment (5.i.C)

(ii) Armstrong Energy is not currently venting or flaring any gas from wells in the same field or any wells within a 20 mile radius of this field.

(iii) At this time there is no need for alternative on-site gas capture approaches such as compression or liquefaction, removal of NGL, or electrical generation. The gas produced from our wells is all captured and sold.

JALAPENO CORPORATION
P.O.BOX 1608
ALBUQUERQUE, NM 87103
PHONE: 505-242-2050
FAX: 505-242-8501

FEBRUARY 15, 2017

Dear Ms. Sanchez,

Attached to this letter you will find Jalapeno Corporations Methane Waste Minimization Plan for the Duncan Federal#12 located in 9S 27E of Chaves County, NM. We have tried to answer the questions as best we could and tried to explain our thinking for the ones that didn't seem to apply for this shallow oil project.

Please call if you have any questions or concerns.

Sincerely,

H. Emmons Yates III

ROSWELL OFFICE
BUREAU OF LAND MGMT
2017 FEB 17 P 3:15
RECEIVED

METHANE WASTE MINIMIZATION PLAN

1) Jalapeno intends to drill and complete the Duncan Federal#12 as an oil well ASAP after its APD approval.
2) If the Duncan#12 is a successful oil well, Jalapeno anticipates initially having somewhere between 20-40 MCF of sour gas per day which will likely decline to 5-20 MCF/day after the first few months of oil production. This gas will be just enough to run the pump jack. Thus, there will be no excess gas.
3) 3a: Attached map showing the nearest pipeline, The El Paso Natural Gas Pipeline. 3b: Map showing the closest sour gas processing plant, Artesia Gas Plant(sour super), located approximately 54 miles to the south in section 7 of 18s-28e. This plant is operated by DCP Midstream.

4) Jalapeno does not intend to connect to a pipeline in order to market any gas. The Duncan Federal#12 is a shallow San Andres oil well in an old oil field. These 2000' oil wells do not produce enough gas to justify the construction of a gas pipeline for the following reasons. A: Usually, all the produced gas is used to run the pump jack. B: The little gas that these wells do produce is very sour and would require a gas treatment facility to be built before the gas could enter the closest pipeline system. C: Building our own gas treatment facility is not a realistic option D: The little amount of gas that these wells produce, even if cleaned up, would not have enough volume to enter the closest pipeline, the El Paso Pipeline. E: Because there is not enough gas to enter the El Paso Pipeline 1 mile away, Jalapeno Corporation would have to build a pipeline that connects to the closest gathering facility that can process the sour gas produced from these shallow San Andres wells, approximately 54 miles away. F) Any one of these steps would make the entire project completely uneconomic.
5) (i)The anticipated date of the first production will be 2 months following the approval of the Dunacn#12 APD. (ii)We hope to hit a 40 bbl/day, 20mcf/day initial production well.(iii) We expect the well's oil and gas production to decline at an average rate of somewhere between 24-35% for the first few years and then hold steady at an annual decline rate between 5-10% thereafter. (Please see attached decline curve projection) (iv) The well is projected to have an EUR of 29,200 MCF of gas over a 20 year period. However, because the gas is sour and there is no realistic way to get it to market the real Btu value is $0. However, if one looks at it from the prospective of what it would take us to pay for the propane to run the pump jack versus using the sour gas, I estimate that the 20 year Btu value is $72,000.
6) Jalapeno Corporation currently has two other wells that are still producing in the, Wolflake field. These wells have been producing for many years and currently produce just enough gas to operate their pump jacks. We estimate they are producing about 5-10 MCF/day. We do not flare or vent any gas as all the gas is consumed by the pump jacks.
7) There are no other realistic opportunities for alternative capture approaches and we believe that running the pump jacks from the little gas these wells produce is the most efficient method possible.

RECEIVED

From: Boyd, David
To: David Boyd
Subject: News Release: BLM seeks public comment on oil and gas development proposal west of Rifle
Date: Tuesday, January 9, 2018 12:10:34 PM
Attachments: Balzac II MDP nr 1-9-18.pdf

News Release
Colorado River Valley Field Office, Colorado

Jan. 9, 2018

Contact: David Boyd, Public Affairs Specialist, (970) 876-9008

BLM seeks public comment on oil and gas development proposal west of Rifle

SILT, Colo. – As part of the Administration's priority to make America safe through energy independence, the Bureau of Land Management is seeking public comment on an oil and gas development plan about nine miles west of Rifle.

Under its Balzac Gulch Phase 2 Master Development Plan, Terra Rocky Mountain LLC proposes to drill up to 63 new oil and gas wells directionally from four new well pads over the next two years. Terra estimates the project would allow for production of nearly 120 billion cubic feet of natural gas over 40 years.

Before the Colorado River Valley Field Office begins developing an environmental assessment (EA) for the proposal, it wants to hear any issues or concerns the public wants to see addressed in the EA.

"The BLM supports working landscapes that create jobs and help Western Slope communities grow. We manage public lands for the benefit of current and future generations, and we welcome diverse views," said Acting BLM Colorado River Valley Field Manager Gloria Tibbetts.

Oil and gas development on BLM-managed lands and minerals in Colorado contributed $2.9 billion to the economy and supported 13,620 jobs in fiscal year 2016.

The Master Development Plan and associated maps are available at https://go.usa.gov/xnp44.

"Master Development Plans allow us to take a broad, multi-year look at proposed oil and gas development to better understand and mitigate potential impacts as well as streamline drilling permit approval," Tibbetts said.

Comments need to be received by Feb. 8, 2018. Written comments and questions should be directed to the Bureau of Land Management, Attn: Balzac MDP Phase 2, 2300 River Frontage Road, Silt, CO 81652 or via email to blm_co_si_mail@blm.gov.

The phase 2 project area is contained within the same boundaries as the Balzac Gulch Phase 1 MDP, which was approved in September 2017 and includes 66 federal wells to be drilled from three existing well pads.

Before including your address, phone number, email address or other personal identifying information in your comment, be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

###

--

David Boyd

Bureau of Land Management

Public Affairs Specialist

NW Colorado District

2300 River Frontage Road
Silt, CO 81652

(970) 876-9008
(970) 319-4130 (cell)

U.S. Department of the Interior
Bureau of Land Management

News Release

Colorado River Valley Field Office, Colorado

Jan. 9, 2018

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###

From:	Mike McGrady
To:	Rugwell, Mary
Subject:	Fwd: Citizen Complaint and Request for Cessation Under SMCRA: Jim Bridger Mine
Date:	Tuesday, January 16, 2018 1:49:23 PM
Attachments:	Exhibit 1.pdf Exhibit 2 .pdf Exhibit 3 .pdf Exhibit 4 .pdf Right of Entry Citizen Complaint- Jim Bridger 1.12.2018.pdf

---

Mary Jo,

FYI on the attached citizen complaint to OSMRE regarding the Jim Bridger coal mine. This complaint is substantially similar to the one made by WildEarth Guardians and the Sierra Club for the North Antelope Rochelle mine this past November.

Mike McGrady

Policy Advisor
Office of Governor Matt Mead

2323 Carey Avenue
Cheyenne, WY 82002
307-777-2083

---------- Forwarded message ----------
From: Todd Parfitt <todd.parfitt@wyo.gov>
Date: Tue, Jan 16, 2018 at 10:33 AM
Subject: Fwd: Citizen Complaint and Request for Cessation Under SMCRA: Jim Bridger Mine
To: Mike McGrady <mike mcgrady1@wyo.gov>

fyi
---------- Forwarded message ----------
From: Shannon Hughes <shughes@wildearthguardians.org <mailto:shughes@wildearthguardians.org> >
Date: Fri, Jan 12, 2018 at 12:15 PM
Subject: Citizen Complaint and Request for Cessation Under SMCRA: Jim Bridger Mine
To: "Berry, David" <dberry@osmre.gov>
Cc: todd.parfitt@wyo.gov, kyle.wendtland@wyo.gov

Dear Director Berry:

Attached to this email, please find a Citizen Complaint and Request for Cessation Order under the Surface Mining Control and Reclamation Act over right of entry violations at Jim Bridger Mine in Wyoming.

Please note that there are 8 related exhibits. Due to the size of some of these exhibits, I will have to send three total emails.

Attached to this first email, please find the Citizen Complaint and Exhibits 1-4. The second email will contain Exhibit 5, and the third and final email will contain Exhibits 6-8. Please feel free to contact the undersigned should you have any questions. To reiterate, two additional emails will follow shortly.

Please also note that the same will be sent via certified US mail today.

Sincerely,

<https://twitter.com/shannonhughes77>
"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." ~Aldo Leopold

--

Todd Parfitt

Director

Department of Environmental Quality NOTE NEW ADDRESS

200 W. 17th St. 4th Floor
Cheyenne, WY 82002

307-777-7937 <tel:(307)%20777-7937>

todd.parfitt@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

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United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
801 N. Quincy St., Suite 300
Arlington, VA 22203

703-235-3750 703-235-8349 (fax)

August 25, 2016

IBLA 2016-79	)	WYW-154595
	)	
WILDEARTH GUARDIANS	)	Coal Lease
	)	
	)	Motion to Supplement
	)	Administrative Record Denied;
	)	Set Aside and Remanded

ORDER

Appellant has appealed from a December 29, 2015, decision record (DR) issued by the field manager for the Rock Springs Field Office (Wyoming) Bureau of Land Management (BLM). The field manager approved Bridger Coal Company's application to modify Federal coal lease WYW-154595 to include 120.02 acres of unleased contiguous Federal coal lands.

Appellant filed a statement of reasons in support of its appeal. Appellant's main argument is that the bureau violated the National Environmental Policy Act (NEPA)[1] by failing to prepare an environmental impact statement. Bridger Coal Company and the State of Wyoming are intervenors in this appeal.[2] The intervenors and BLM have filed respective answers and the matter is ripe for final disposition.

BLM's Motion for Leave to Submit Ratification

BLM has filed with the Board a Motion for Leave to Submit Ratification (Motion). BLM moves the Board to accept documentation into the administrative record, which shows that on May 25, 2016 -- after WildEarth Guardians appealed the field manager's DR -- BLM Wyoming's Acting Deputy State Director for Minerals and Lands ratified the DR. BLM asks to supplement the administrative record with the ratification document in response to *WildEarth Guardians*.[3] In that case, appellant appealed from a BLM Colorado field manager's decision to approve a coal lease. We

[1] 42 U.S.C. §§ 4321-4370h (2012).
[2] *See* Order dated Feb. 29, 2016.
[3] 187 IBLA 349 (2016).

found that the field manager was not authorized to approve the coal lease, and therefore we set aside the DR and remanded the matter back to BLM.

Although BLM states that, in this case, the field manager did not actually approve the coal lease modification, which has not yet been issued or signed by the Deputy State Director, BLM considers it appropriate to submit the ratification for acceptance into the administrative record to alleviate the need to address any issues that may be raised by *WildEarth Guardians*.[4] BLM states that record supplementation is appropriate since the ratification "in no way changes the substance of the decision on appeal."[5]

BLM Did Not Have Jurisdiction to Ratify the DR

BLM's ratification document purports to ratify a decision that was on appeal to the Board and therefore over which BLM had lost jurisdiction.[6] We reject BLM's argument that it could ratify a decision that was no longer before it. The validity of a decision goes directly to the "substance of the decision on appeal." Because BLM did not have jurisdiction to ratify or otherwise modify a decision on appeal, we find that the ratification document has no legal effect, and we deny BLM's Motion.

The DR is Set Aside and Remanded

BLM states in its Motion that the field manager was "authorized to sign decision records and findings of no significant impact for NEPA analyses, and the Deputy State Director is authorized to sign the lease modification itself."[7] BLM's position implies that a DR is part of the bureau's NEPA compliance process. This characterization is incorrect. The purpose of the NEPA process is to gather and analyze information to support decision making. A decision occurs at the end of the NEPA process; it is not part of it. As the Council on Environmental Quality stated in its regulations implementing NEPA, "NEPA procedures must insure that environmental information is available to public officials and citizens *before decisions are made* and before actions are taken."[8]

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[4] Motion at 2.
[5] *See id.*
[6] *See Chipmunk Grazing Association, Inc.*, 188 IBLA 35, 43 (2016); *McMurry Oil Co.*, 153 IBLA 391, 393 (2000).
[7] Motion at 2.
[8] 40 C.F.R. § 1500.1(b) (emphasis added).

BLM's NEPA Handbook recognizes this distinction between NEPA documents and decisions and explains that a DR is the document that authorizes an action.[9] In fact, the field manager expressly authorized Bridger Coal Company's coal lease modification in the DR, stating, "[I]t is my decision to approve the Proposed Action to modify the existing federal coal lease WYW-154595 . . . ."[10] Once the decision is made, execution of the approved document becomes ministerial.

But BLM has not demonstrated that the field manager possessed the requisite authority to authorize coal lease modifications. If a decision is not issued by an employee with delegated authority to issue it, then the action does not bind the Department and is not properly considered a decision of the BLM.[11] Because the DR is not a BLM decision, it cannot be appealed to the Board.[12]

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior,[13] we set aside and remand BLM's DR.

I concur:

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[9] BLM NEPA Handbook H-1790-1 at 83 (Jan. 2008).
[10] DR at 1; *WildEarth Guardians*, 187 IBLA at 353
[11] *WildEarth Guardians*, 187 IBLA at 353; *Gateway Coal Co. v. Office of Surface Mining Reclamation and Enforcement*, 84 IBLA 371, 374-75 (1985).
[12] 43 C.F.R. §§ 4.1(b)(2), 4.410(a).
[13] 43 C.F.R. § 4.1.

WILDEARTH GUARDIANS

187 IBLA 349 Decided May 6, 2016

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
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WILDEARTH GUARDIANS

IBLA 2014-155 Decided May 6, 2016

Appeal from a decision by the Field Manager for the Uncompahgre Field Office of the Colorado Bureau of Land Management authorizing the lease of coal. COC-75916.

Set aside and remanded.

1. Administrative Procedure: Decisions;
Bureau of Land Management: Delegation of Authority

If a decision is not issued by a BLM employee with delegated authority to issue it, then the action does not bind the Department. The purported decision has no legal effect, and the Board properly sets it aside and remands it for further action. Opining on the merits of an unauthorized BLM decision would constitute an advisory opinion, which the Board will not issue.

APPEARANCES: Samantha Ruscavage-Barz, Esq., Santa Fe, New Mexico, for WildEarth Guardians; Michael Drysdale, Esq., and William Prince, Esq., Dorsey & Whitney LLP, Minneapolis, Minnesota, for Bowie Resources, LLC; Kristen C. Guerriero, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Lakewood, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE RIECHEL

WildEarth Guardians appeals a Decision Record (DR) issued by the Field Manager for the Uncompahgre Field Office of the Colorado Bureau of Land Management (BLM) authorizing the lease of coal in the Spruce Stomp Lease by Application (LBA) tract. Because we find that the Field Manager was not authorized to approve the coal lease sale, the DR has no legal effect. We set aside the DR and remand for further action consistent with this decision.

Background

Bowie Resources, LLC (Bowie), submitted the LBA on October 12, 2012.[1] The application area contains nearly 1,800 acres of land managed by the U.S. Forest Service and BLM and private land with federal minerals.[2] The application area is adjacent to the Bowie No. 2 Mine, an underground coal mine northeast of Paonia, Colorado.[3] If approved, the LBA might supplement the Bowie No. 2 Mine's reserves.[4]

BLM and the Forest Service prepared an Environmental Assessment (EA) to identify potential environmental impacts related to the LBA.[5] On February 4, 2014, the Field Manager for BLM's Uncompahgre Field Office issued a Finding of No Significant Impact (FONSI) and a DR documenting her "decision to offer for lease the B seam in the Spruce Stomp LBA tract COC-75916 as described in [the EA]."[6]

WildEarth Guardians appealed the DR, arguing that the BLM Field Manager lacked authority to approve the proposed lease and that the EA supporting the DR is inadequate.[7] Because we resolve this appeal based on the absence of authority for the Field Manager to approve the LBA, we do not address the arguments about the adequacy of the EA.

Authority to Approve Coal Lease Sales

The Mineral Leasing Act authorizes the Secretary of the Interior to issue coal leases, in her discretion, upon request by any qualified applicant.[8] The regulations implementing the Mineral Leasing Act empower an "authorized officer" to act for the Secretary.[9] "Authorized officer" is defined as "any employee of the [BLM] delegated the authority to perform the duty described in the section in which the term is used."[10]

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[1] Administrative Record (AR) 2.01-1.
[2] AR 2.01-1 at 4, 6.
[3] AR 6.02-2 at 4.
[4] AR 1.01-6 at 1 (Notice of Availability of the EA and Notice of Public Hearing).
[5] AR 6.02-2 at 7 (DOI-BLM-CO-S050-2013-0010 EA).
[6] AR 6.03-3 at 4, 6.03-4 at 1, 12.
[7] Notice of Appeal; Statement of Reasons (SOR) at 2.
[8] 30 U.S.C. § 201(a)(1) (2012). *See also* 43 C.F.R. Subpart 3425 (Leasing on Application).
[9] *See, e.g.*, 43 C.F.R. §§ 3425.1-8, 3425.3(a).
[10] 43 C.F.R. § 3400.0-5(b).

To determine which BLM employee has authority to approve LBAs, we consult the Department's and BLM's written delegations of authority.[11]

The Secretary has delegated her authority to implement the Mineral Leasing Act to the Assistant Secretary – Land and Minerals Management.[12] The Assistant Secretary, in turn, delegated her authority to the Director of BLM.[13]

Delegations from the Director of BLM to other BLM employees are documented in the BLM Manual, which reflects that the BLM Director delegated his authority to grant LBAs to the State Directors.[14] Delegations from the State Director are documented in State Office supplements to the BLM Manual.[15]

In the Colorado State Office Supplement to the BLM Manual, the Colorado State Director and Associate State Director delegated the authority to approve applications for coal lease sales outside of coal production regions under 43 C.F.R. § 3425.1-5 (LBAs) to the Deputy State Director and the Solid Minerals Branch Chief, Colorado State Office.[16] Because the Colorado State Director delegated authority to "approve" National Environmental Policy Act (NEPA)[17] compliance documents "to the level of the specific delegation of authority for approving the proposed action," the Deputy State Director and Solid Minerals Branch Chief also have delegated authority to approve NEPA documents for LBAs.[18]

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[11] *See* 200 Departmental Manual (DM) 1.3 (delegations from the Secretary are issued in the Delegation Series of the DM), 2.3 ("Redelegations of authority within a bureau or office will be issued as part of the bureau or office directives system."); BLM Manual Section 1203, Delegation of Authority (Internal) (Nov. 16, 2006).

[12] 209 DM 7.1.

[13] 235 DM 1.1K.

[14] BLM Manual Section 1203, App. 1 at 66-67.

[15] BLM Manual Section 1203 at .22.

[16] Colorado State Office Supplement to the BLM Manual, Section 1203 (Colo. Supp.), at .04H (the Associate State Director "has the full delegated authority" of the State Director); *id.*, App. 1 at 80 (authority to approve LBAs delegated to the Deputy State Director and Solid Minerals Branch Chief) (Feb. 4, 2011).

[17] 42 U.S.C. §§ 4231-4370h (2012).

[18] Colo. Supp., App. 1 at 40.

Discussion

The FONSI and DR for the Spruce Stomp LBA were signed by the Field Manager for the Uncompahgre Field Office of BLM.[19] The FONSI is based in part on the Spruce Stomp Coal LBA EA, which is the NEPA compliance document for the Spruce Stomp LBA.[20] The Field Manager also signed the DR, in which she states, "It is my decision to offer for lease the B seam in the Spruce Stomp LBA tract COC-75916 as described in [the Spruce Stomp LBA EA]."[21] The Field Manager's signature is identified as the "signature of authorized official."[22] The DR describes the right to appeal the "BLM decision to offer the coal LBA," which must be filed within "30 days from this decision."[23]

While these facts appear to show that the Field Manager acted without appropriate delegations of authority when she issued the FONSI and DR, BLM asserts that "the Field Manager's approval of the NEPA document and issuance of the FONSI and Decision are appropriately delegated and constitute a recommendation to the Colorado State Office."[24] BLM first argues that the Field Manager could approve the EA by issuing the FONSI because she is authorized to approve NEPA documents.[25] But the Colorado State Director delegated approval of NEPA compliance documents only "to the level of the specific delegation of authority for approving the proposed action," which, in the case of LBAs, is the Deputy State Director and Solid Minerals Branch Chief.[26] Although there is an "X" in the column for the Field Manager under "Authority Delegated To," we read this as indicating only that Field Managers can approve NEPA documents if they also have authority to approve the proposed action. Here, only the Deputy State Director and Solid Minerals Branch Chief have delegated authority to approve LBAs, so only those officials have delegated authority to approve a NEPA document supporting approval of an LBA.

In any event, the FONSI is not the document on appeal in this case, nor could it be, because only agency decisions may be appealed.[27] WildEarth Guardians properly

[19] AR 6.03-3 at 5; 6.03-4 at 12.
[20] AR 6.03-3 at 5 (the Field Manager signed her name after "Approved:").
[21] AR 6.03-4 at 1.
[22] *Id.* at 12.
[23] *Id.*
[24] Answer at 5 (citing the Colo. Supp.).
[25] Answer at 5-6.
[26] Colo. Supp., App. 1 at 40.
[27] *See* 43 C.F.R. §§ 4.1(b)(2), 4.410(a).

appeals the DR, which authorizes the lease of coal in the Spruce Stomp LBA tract. In this regard, BLM claims that because only the State Director, Deputy State Director, or Solid Minerals Branch Chief can issue a lease, it necessarily follows that the DR and FONSI can only be a "recommendation to the Colorado State Office" where these individuals are located.[28] BLM's argument is contrary to the plain language of the DR, however, which documents the Field Manager's "decision to offer" the LBA.[29] Moreover, the word "recommendation" does not appear in the DR.

The BLM NEPA Handbook explains BLM's decision-making process: "BLM has chosen to use the 'decision record' (DR) to document the decision regarding the action for which the EA was completed."[30] The decision-maker signs and dates the DR, and the action must be implemented in accordance with the DR.[31] This is exactly what BLM purported to do here: the Field Manager signed and dated the DR, declaring her "decision to offer" the LBA.

[1] Based on BLM delegations of authority, we find that the Field Manager was not authorized to approve the LBA in the DR. If a decision is not issued by an employee with delegated authority to issue it, then the action does not bind the Department and is not properly considered a decision of the BLM.[32] The purported decision therefore has no legal effect, and the Board properly sets it aside and remands it for further action.

We recognize that remanding this case to BLM could delay the ultimate resolution of this case, but opining on the merits of an unauthorized BLM decision would be an advisory opinion, which the Board will not issue. *See, e.g., Uintah County*, 182 IBLA 191, 197 (2012); *Robert L. Bayless Producer*, 177 IBLA 83, 85 (2009); *Robert C. Lewis v. BLM*, 173 IBLA 284, 294 (2008).

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[28] Answer at 5-6.
[29] AR 6.03-4 at 1, 12.
[30] BLM NEPA Handbook H-1790-1 at 84 (Jan. 2008). *See also id.* at 83 ("The FONSI is not the authorizing document for the action: the decision record is the authorizing document.").
[31] *Id.* at 85, 86.
[32] *See* BLM Manual Section 1203, Glossary of Terms (defining "authority" as "[t]he ability to make the final, binding decision or to take specific action, or both, as an official representing the United States Government. Such authorities have a legal basis in statute or regulation.").

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 C.F.R. § 4.1, we set aside and remand BLM's decision for further action consistent with this opinion.

/s/
Silvia M. Riechel
Administrative Judge

I concur:

/s/
James K. Jackson
Administrative Judge

Editor's note: 98 I.D. 231

PAUL F. KUHN

IBLA 89-539 Decided July 3, 1991

Appeal from the decision of the Director, Office of Surface Mining Reclamation and Reinforcement, declining to conduct a Federal inspection pertaining to 10-day Notice No. 89-07-117-003 in response to appellant's citizen complaint.

Reversed and remanded.

1. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   If a citizen files a complaint with the Office of Surface Mining Reclamation and Enforcement alleging that a permittee has no right to enter and mine upon his land and that state program action has not been appropriate, pursuant to sec. 521(a)(1) of the Surface Mining Control and Reclamation Act of 1977, the Office of Surface Mining Reclamation and Enforcement has authority to issue a 10-day notice to the state, and to review resulting state program action to determine whether the state has taken "appropriate action to cause said violation to be corrected or has shown good cause for such failure" under 30 U.S.C. § 1271(a)(1) (1988).

2. Surface Mining Control and Reclamation Act of 1977: Permits: Generally -- Surface Mining Control and Reclamation Act of 1977: Words and Phrases

A permit is a written license or warrant, issued by a person in authority, empowering the grantee to do some act not forbidden by law, but not allowable without such authority. Under the Surface Mining Control and Reclamation Act of 1977, the issuance of a surface mining permit by a regulatory authority empowers the permittee to surface mine a designated area under the conditions specified in the permit, without which permit such mining would not be allowable.

3. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: Enforcement Procedures: Generally

Pursuant to the Surface Mining Control and Reclamation Act of 1977, this Board has no authority to award damages for trespass. While sec. 520 of the Act permits a damage action by "[a]ny person who is injured in his person or property through the violation by any operator of any rule, regulation, order, or permit issued pursuant to this chapter," the Act provides that, in the event of operator error, malfeasance, or damage to a citizen's private property, the citizen's remedy is with the courts. 30 U.S.C. § 1270(f) (1988).

4. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: Permits: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

Under the Surface Mining Control and Reclamation Act of 1977, a permit applicant is required to file legal documentation of a right to mine an area under consideration, and maps which accurately depict the area within which the applicant possesses the legal right to mine. 30 U.S.C. § 1257(b)(9) (1988). These requirements come within sec. 521(a)(1) of the Act (30 U.S.C. § 1271(a)(1) (1988)), providing that, "[w]henever, on the basis of any information available to him, including receipt of information from

any person, the Secretary has reason to believe that any person is in violation of any requirement of this chapter or any permit condition required by this chapter, the Secretary shall notify the State regulatory authority," and the state authority shall take "appropriate action."

5. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: Permits: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   If a citizen alleges and provides evidence that a state program has granted a permit to enter and mine where the permittee has not obtained a legal right to enter and mine, a state is required by sec. 521(a)(1) (30 U.S.C. § 1271(a)(1) (1988)) and sec. 507(b)(9) (30 U.S.C. § 1257(b)(9) (1988)) of the Surface Mining Control and Reclamation Act of 1977 to take any "appropriate action" short of adjudication of property title disputes.

6. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Generally -- Surface Mining Control and Reclamation Act of 1977: Citizen Complaints: Generally -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   Where a landowner provides evidence that an initial decision that an operator has a right to enter and mine an area that has been permitted may be in error, state authorities must assure that the operator has the right to enter and mine before the area is mined, and state action which fails to do so will be deemed inappropriate action pursuant to sec. 521(a)(1) of the Act. 30 U.S.C. § 1257(b)(9) (1988); 30 U.S.C. § 1271(a)(1) (1988). So long as the operator retains full authority to mine the disputed area under a validly issued permit, the intent and purpose of the Act as stated in sec. 102(b) (30 U.S.C. § 1202(b) (1988)) to "assure that the rights of surface landowners and other persons with a legal interest in the land or appurtenances thereto are fully protected from such operations" is jeopardized.

7. Surface Mining Control and Reclamation Act of 1977: Enforcement Procedures: Generally -- Surface Mining Control and Reclamation Act of 1977: Inspections: 10-Day Notice to State -- Surface Mining Control and Reclamation Act of 1977: State Program: 10-Day Notice to State

   The Office of Surface Mining Reclamation and Enforcement is authorized to issue a 10-day notice when it has reason to believe that a person is conducting surface mining activity causing a surface disturbance in an area not covered by a permit in violation of the requirements of the Surface Mining Control and Reclamation Act of 1977. When, in response to this notice, the state agency refuses to take action because it does not consider the activity to be surface mining or a related activity, and thus finds a permit is not required, but the interpretation of the statute advanced by the state is contrary to both the intent of the Act and a reasonable interpretation of state law, it is proper for the Office of Surface Mining Reclamation and Enforcement to order a Federal inspection. If, after Federal inspection, the Office of Surface Mining Reclamation and Enforcement determines that the activity is in violation of any requirement of the Act, the Office of Surface Mining Reclamation and Enforcement may issue a notice of violation to the operator or cessation order, fixing a reasonable time for abatement.

8. Surface Mining Control and Reclamation Act of 1977: Notices of Violation: Permittees

   Under sec. 521(a) of the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. § 1271(a) (1988), a permittee of a minesite was properly cited for a violation of the Act notwithstanding the fact that the surface mining or related activity was performed by a third party.

APPEARANCES: Paul F. Kuhn, Harrison, Ohio, pro se..

OPINION BY ADMINISTRATIVE JUDGE ARNESS

Paul F. Kuhn appeals a letter decision dated June 21, 1989, issued by the Director, Office of Surface Mining Reclamation and Enforcement (OSM).

The decision notified Kuhn that OSM would not take enforcement action on his appeal, dated May 17, 1989, from a decision by the Columbus Field Office (CFO), OSM. CFO's decision declined to conduct a Federal inspection of a mining site under permit D-217-2 to Empire Coal Company (Empire), located adjacent to Kuhn's property in Clay and Salem Townships, Tuscarawas County, Ohio.

On March 23, 1989, Kuhn filed a citizen's complaint with CFO, pursuant to section 521(a)(1) of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), 30 U.S.C. § 1271(a)(1) (1988), 1/ alleging that Empire had committed four infractions against him. Kuhn alleged that in June 1988, Empire had committed a surface disturbance on his property when it bulldozed across a property line onto a strip of his property; that it had committed a mining encroachment and removed coal by auger from his property; that a gas pipeline had been laid across his property in furtherance of Empire's mining operations without his permission; and that trees

1/ 30 U.S.C. § 1271(a)(1) (1988) provides, in pertinent part:

"Whenever, on the basis of any information available to him, including receipt of information from any person, the Secretary has reason to believe that any person is in violation of any requirement of this chapter or any permit condition required by this chapter, the Secretary shall notify the State regulatory authority, if one exists, in the State in which such violation exists. If * * * the State regulatory authority fails within ten days after notification to take appropriate action to cause said violation to be corrected or to show good cause for such failure and transmit notification of its action to the Secretary, the Secretary shall immediately order Federal inspection of the surface coal mining operation at which the alleged violation is occurring * * *. The ten-day notification period shall be waived when the person informing the Secretary provides adequate proof that an imminent danger of significant environmental harm exists and that the State has failed to take appropriate action."

were cut and his property damaged as a result. 2/ He also alleged that the Ohio Department of Natural Resources, Division of Reclamation (DOR) had improperly approved permit D-217-2 to include part of his land within the permit boundaries.

On March 27, 1989, OSM issued a 10-day notice to DOR, informing DOR that citizen's complaint had been received alleging removal of overburden and coal by auguring beyond permit limits onto Kuhn's property. On March 29, 1989, DOR conducted an on-site investigation of the portion of Empire's permit D-217-2 abutting appellant's property. At that time DOR issued two notices of violation (NOV's) to Empire. Both NOV's alleged violations by Empire of Ohio Revised Code (ORC) 1513.16(a)(20) and 1513.17(a). NOV 18414 alleged that Empire had "removed vegetation beyond the western limits of the permit during construction of pond number 013, on the property of Franklin Horsfall and Wilma Kuhn"; NOV 18415 alleged that "the permittee has augered coal beyond the western limits of the permit on the Franklin Horsfall property and the Wilma Kuhn property." Both NOV's required Empire to "immediately cease all mining beyond the permit limits," and to reclaim the areas pursuant to standards in section 1513, ORC. DOR did not require Empire to suspend mining on the disputed

2/ The record establishes that "the stakes placed by [Empire's surveyor] * * * delineating the mining permit area in Salem Township were incorrect, encroaching onto Mr. Kuhn's property approximately 80 feet at the north-easterly corner and approximately 30 feet at the southeasterly corner of Mr. Kuhn's 36.25 acre tract in Salem Township" (Letter of David A. Miskimen, P.E., P.S., dated Mar. 27, 1989). Although somewhat ambiguous as to location, the record also establishes an encroachment upon Kuhn's property in an area not affected by the disputed survey.

land within the permit area, nor was relocation of the gas line across Kuhn's property determined to be violative of any Ohio statutory or regulatory provisions.

DOR reinspected the site on March 30, the day following the initial inspection. Finding the land to have been satisfactorily reclaimed, DOR terminated both NOV's owing to Empire's prompt reclamation efforts. While minor assessments were calculated for the two NOV's, they were deleted pursuant to provisions within the Ohio State plan which permit discretionary deletion of penalty assessments less than $ 500 per violation. On April 4, 1989, Kuhn visited CFO and objected to DOR's determination that assessments should not be levied and the NOV's terminated.

On April 5, CFO issued a notification of inappropriate response to DOR. CFO found that the issuance of NOV's 18414 and 18415 did not comply with the program requirements of Ohio Administrative Code (OAC) 1501:13-14-02(A)(2), which requires issuance of a cessation order (CO) where mining off the permit has occurred, as follows:

> Coal mining and reclamation operations conducted by any person without a valid permit issued pursuant to these rules constitute a condition or practice which causes or can reasonably be expected to cause significant environmental harm to land, air or water resources, unless such operations are an integral, uninterrupted extension of previously permitted operations, and the person conducting such operations has filed a timely and complete application for a permit to conduct such operations.

(Letter Decision (Apr. 5, 1989) at 1).

With respect to the permit boundary dispute, CFO stated that, while the information available to DOR at the time the permit was issued supported the initial decision, Kuhn's documentation provided DOR with reason to believe that the permit may have been issued in error. CFO found DOR's refusal to suspend mining in the disputed permit area pending resolution of the dispute to be arbitrary and capricious action, and therefore found DOR's failure to suspend mining on the disputed area within the permit boundaries to be inappropriate action.

CFO found DOR's resolution of the gas pipeline issue in favor of Empire to be appropriate, stating:

> [DOR's] * * * response to this allegation is considered appropriate since no surface area was affected, ie. [no] disturbance to the actual ground surface has occurred. It is our understanding that the gas line is a plastic line laid across the surface of the ground and could not be construed as a surface coal mining operation activity.

Id. at 2.

Pursuant to 30 CFR 842.11(b)(1)(iii), on April 10, 1989, DOR requested the Assistant Director, OSM, to conduct an informal review of CFO's determination. DOR alleged that it was reasonable to issue an NOV for "incidental off-permit affectment" and that its decision not to suspend mining within the disputed area of the permit was not arbitrary.

With respect to the disputed boundary, DOR stated:

> What is characterized in the field office's inappropriate determination as an "improper location of a permit boundary" based on a "property line error" essentially mischaracterizes what is clearly a property dispute. The Division has, in its investigation, ascertained that the basis of the Kuhn/Empire dispute is not simply due to a surveyor's measuring error, but is due to a disagreement on appropriate surveying reference points. The Division has requested that Empire review its original survey, and in that way may attempt to facilitate a voluntary resolution of this property dispute. However, unless one party or the other recognizes or agrees to an error, the Division is powerless to resolve this dispute. See attached Ohio Revised Code 1513.07(B)(2)(i) which clearly states that the Chief has no authority to adjudicate property title disputes.

Id. at 3. DOR disputed CFO's determination that mining operations should have been suspended, stating: "After careful review, it is the Division's opinion that it has no authority to [order the permittee to] cease operations in the disputed and unaffected area; further, the authority cited in the April 5, 1989 letter * * * does not support the contention that the Division does have such authority." Id. at 3-4. According to DOR, at the time of its inspection, "Empire * * * [was] not affecting any of the disputed area 80 feet east from its permit boundary running along the Paul and Jean Kuhn property; * * * [nor did] Empire * * * propose to affect such disputed area." Id. at 4.

On April 28, 1989, Brent Walquist, OSM Assistant Director for Program Policy, issued a decision upholding CFO's determination that DOR's response concerning the failure to issue imminent harm cessation orders for mining outside permit limits was inappropriate, and reversing CFO's determination

that DOR should have taken action to prohibit mining within areas of the permit allegedly encroaching upon appellant's property. Concerning DOR's responsibility to issue a CO for mining off the permit site, the Assistant Director stated pertinently:

> [ORC 1501.13-14-02(A)] clearly requires a cessation order for surface coal mining and reclamation operations conducted without a valid permit regardless of the extent of the disturbance unless such operations are an integral, uninterrupted extension of previously permitted operations and the person conducting such operations has filed a timely and complete application for a permit for such operations. * * * In this case, there is no practical difference between issuing a notice of violation and issuing a cessation order, except that a cessation order requires a mandatory assessment. [Emphasis in original.]

(Letter Decision (Apr. 28, 1989) at 2). As a result of this letter decision, and prior to any entry on the site by OSM, DOR issued CO's Nos. I-098 and I-099 on May 2, 1989. 3/ Concerning the disputed permit boundary, the Assistant Director stated:

3/ Despite the Assistant Director's finding in his Apr. 28 decision that, "a cessation order requires a mandatory assessment," DOR waived the assessments for CO I-098 and I-099 on May 9, 1989, because they were calculated at less than $ 500. Twenty days subsequent to DOR's issuance of the CO's, on May 22, 1989, CFO again informed DOR that the Ohio code does not permit waiver of assessments in the case of cessation orders. DOR agreed to revise the initial assessment and to reissue assessments on both CO's. On June 9, 1990, Kuhn called CFO to discuss his concerns about when civil penalty assessments would be issued (Telephone Record of Bob Mooney, June 9, 1989). CFO contacted DOR, and DOR issued assessments to Empire on June 12, 1989, 43 days after issuance of the imminent harm CO.

Under the Ohio plan, DOR was required to issue assessments within 30 days of issuance of the CO's. Our review of the record leads us to conclude that CFO had jurisdiction to issue a 10-day notice to DOR on June 2, 1989, and should have done so without prodding from Kuhn; indeed, CFO could have made DOR aware of the ramifications of dragging its feet in the matter. DOR was placed on notice twice of the assessment issue; certainly CFO had

> While I agree that * * * [DOR] does not adjudicate property disputes, it is appropriate for your agency under program provisions such as ORC 1513.09(B)(1)(e) to notify the permittee that his right to enter is subject to dispute and to require reasonable and necessary information to ensure that the permittees' basis for right of entry remains consistent with program requirements. In this regard, the record indicates that your agency has taken such action. Although the Ohio program may authorize a range of actions short of adjudicating a property dispute which could serve as a basis to restrict mining operations on the disputed area until there is a resolution, such actions are not mandatory.

(Letter Decision (Apr. 28, 1989) at 1). The Assistant Director therefore reversed the determination that DOR's failure to suspend mining was inappropriate action.

On May 9, 1989, CFO notified Kuhn of the Assistant Director's decision of April 28, 1989, and of the finding that the gas pipeline relocation onto Kuhn's property was not within the purview of SMCRA. Pursuant to 30 CFR 842.15, Kuhn then appealed OSM's decision not to take Federal action by letter dated May 17, 1989. On June 21, 1989, the Director issued a letter

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fn. 3 (continued)
continuing jurisdiction to see that appropriate action was taken on Kuhn's complaint, which encompassed the breadth of appropriate enforcement, including assessments. Be that as it may, DOR did eventually take appropriate action by issuing assessments, and the issue is not now before this Board.

OSM's file does not contain documentation of the assessments issued to or paid by Empire for CO I-098 and I-099. In his Nov. 26, 1990, response to Empire's answer, Kuhn has provided the Board with copies of DOR's assessment worksheets for CO I-098 (removing vegetation without a permit) and I-099 (auguring without a permit). These worksheets indicate that on June 12, 1989, Empire was assessed $ 620 for CO I-098, and was granted a 25-percent reduction in penalty for the good faith demonstrated by its prompt abatement, which reduced the assessment for Co. No. I-098 to $ 465. An assessment of $ 1,020 was issued on June 12, 1989, for CO I-099; no good faith reductions were granted.

decision in response to Kuhn's appeal, upholding OSM's decision not to inspect or enforce. Kuhn's appeal of the Director's June 21, 1989, decision was filed with this Board on July 13, 1989.

In his statement of reasons on appeal (SOR), 4/ Kuhn alleges that two issues concerning the response of DOR to 10-day notice No. 89-07-117-003 remain unresolved to his satisfaction. With regard to Walquist's findings concerning the disputed permit boundary, Kuhn alleges that DOR should have investigated and confirmed that the "right of entry" information submitted by Empire was correct, and that DOR's failure to verify Empire's documentation of permit boundaries "improperly shifts the burden of demonstrating right-of-entry from the permit applicant to the public" (SOR at 2). Kuhn further contends that, once DOR was aware of his complaint, the appropriate procedure for the State regulatory agency to follow was to suspend mining in the disputed area until the matter was resolved. Id. According to Kuhn, "[i]n this case, the coal company obtained a 'negative' incidental boundary revision to delete the acreage that my land surveyor had shown to be within the boundaries of my property, indicating that there was no 'dispute' but rather a trespass on my lands." 5/ Kuhn states that "[t]he damage done to my land and removal of coal from beneath my land has not been fully remediated," and demands that this Board "reverse the Ohio Field Office and require appropriate action by the state of Ohio" (SOR at 2-3).

4/ Kuhn filed his SOR by letter dated Sept. 26, 1989.

5/ On Apr. 17, 1989, Empire filed an application with DOR for a Negative Incidental Boundary Revision, which conceded the boundary error alleged by Kuhn. On Apr. 19, DOR approved the boundary revision (see letter, May 1, 1989, from Robert Mooney to Sally Rickert).

Second, Kuhn alleges that Empire relocated a gas line onto his land, and that such activity was a "surface coal mining activity" within the meaning of section 701(28) of the Act, and should have initially been found to be so by the DOR, and by OSM (SOR at 3). Kuhn requested a hearing and expedited consideration of his appeal. These requests were denied by order dated January 24, reaffirmed on March 14, 1990.

On September 26, 1990, appellant filed additional evidence supporting his appeal in the form of a supplemental SOR. Kuhn alleged that Empire's permit map D-0398, submitted to DOR on September 6, 1989, indicated that the plan for the natural gas line to be removed from the mining pit onto Kuhn's property was submitted by Empire to DOR and approved without Kuhn's notice or approval. Kuhn alleged that "[t]he same map by Empire and approved by the State of Ohio indicated my boundary therefore it was the full intention of Empire Coal Company to steal my land, my coal and my forest." On October 5, 1990, this Board issued an order giving notice to Empire of the new evidence submitted by Kuhn, and granting Empire opportunity to respond. Empire filed a response on November 15, 1990; Kuhn responded to Empire on November 26, 1990. 6/

6/ In his Nov. 26, 1990, response, Kuhn reiterated his plea to this Board to require OSM and DOR "to issue cessation orders to Empire Coal Co. and assess penalties in the amount of $ 750. per day per cessation order from the date of Empire action to the present" for (1) "[t]respassing on my land with a bulldozer destroying my forest"; (2) "[l]aying of gas line through my forest destroying my trees"; (3) "[f]or the auguring of my coal and require Empire to uncover the auger holes on vein number five"; (4) "[f]or trespassing on my property to set stakes with full intention of stealing my land and coal"; and (5) "[r]eclaim all mined areas by Empire Coal Co. in Tuscarawas County State of Ohio."

Empire has admitted that "[i]n June of 1988 Empire's contractor's dozer * * * [trespassed] onto the Kuhn property and disturbed 0.03 acres of brush on the Kuhn side of the Horsfall/Kuhn Property line." According to Empire, "[t]he area was repaired by seeding and mulching the next day." Empire has averred that "[a]n automatic Civil Penalty Assessment of $ 750.00 was paid to the state as a result of the CESSATION ORDER." Empire has admitted that a second trespass occurred between February 18 and February 23, 1989, and that "[b]etween the dates of Feb. 18 to Feb. 23, 1989 Empire augered the #6 seam along the Kuhn property line." Empire explained that:

> [D]ue to a lack of detail on an engineering sketch showing the toe of the #6 highwall in relation to the Kuhn property line our auger penetrated a maximum of 8 feet into Kuhn's coal. The sketch showed the highwall as a straight line when in fact the wall bowed toward the Kuhn line.

Empire has conceded that it augered 46.6 tons of appellant's coal and that a second NOV and CO were issued against it by DOR. For the second infringement, Empire states that it paid $ 750.

Concerning relocation of the Horsfall gas pipeline on Kuhn's property, Empire explained:

> On August 28, 1988 Empire Coal Company provided David Horsfall a map showing the needed relocation of a gas line on his mother's property * * *. The purpose of the line was to supply gas for heating from a gas well on the Horsfall property to the new location of the Horsfall house. The Horsfall house was moved from its original location inside the mining area to a new location outside the mining area. The map showed a location for the line to remove it from the area to be affected by mining. The actual relocation

> of the gas line was the responsibility of the Horsfalls and the work was performed by the Horsfalls. When the auger mining encroachment was determined it was discovered that the gas line cut across the corner of the Kuhn property.

(Empire Response at 1).

Section 521(a)(1) of SMCRA, 30 U.S.C. § 1271(a)(1) (1988), provides that the Secretary of the Interior shall order a Federal inspection of a surface coal mining operation where the Secretary has reason to believe a violation of any requirement of SMCRA or any permit condition has occurred and the State, acting as the regulatory authority, "fails within ten days after notification to take appropriate action to cause said violation to be corrected or to show good cause for such failure." OSM is required to conduct the inspection and "if the violation continues to exist, shall issue a notice of violation or cessation order, as appropriate." 30 CFR 843.12(a)(2).

When a state program is approved, the state concerned assumes responsibility for issuing mining permits and enforcing its regulatory program. In re Surface Mining Regulation Litigation, 627 F.2d 1346 (D.C. Cir. 1980). A state's jurisdiction for enforcement of an approved program is primary, but not exclusive. Turner Brothers, Inc. v. Office of Surface Mining Reclamation & Enforcement, 92 IBLA 320 (1986), appeal denied, Turner Brothers, Inc. v. Office of Surface Mining Reclamation & Enforcement, No. 86-380-C (E.D. Okla. Oct. 5, 1987); Shamrock Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 81 IBLA 374, 376 (1984), appeal

dismissed, Civ. No. 84-238 (E.D. Ky. May 13, 1987). Effective August 16, 1982, the Ohio State program was conditionally approved by the Secretary of the Interior. See 30 CFR 935.10. On that date, DOR became the regulatory authority in Ohio for all surface coal mining and reclamation operations. Id. Thus, at the time OSM issued the 10-day notice, the State of Ohio was operating under an approved State program, and the question presented by this appeal is, therefore, whether DOR's response was "appropriate action" within the meaning of section 521(a)(1).

While no definition of the phrase "appropriate action" has been provided by OSM, the preamble to 30 CFR 843.12 states: "The crucial response of a State is to take whatever enforcement action is necessary to secure abatement of the violation" (47 FR 35627-28 (Aug. 16, 1982)). Later rulemaking has delineated a "standard of review" for "appropriate action" as a "response by a State regulatory authority that is not arbitrary, capricious, or an abuse of discretion." 30 CFR 842.11(b)(1)(ii)(B)(2). 53 FR 26730 (July 14, 1988). As a practical matter, this standard has been implicit in Board rulings under section 521(a)(1). See W. E. Carter, 116 IBLA 262, 267 n.3 (1990).

A state's failure to affirmatively enforce statutory and regulatory requirements under SMCRA by issuance of an NOV or CO subsequent to receipt of a 10-day notice is "inappropriate." Dora Mining Co. v. Office of Surface Mining Reclamation & Enforcement, 100 IBLA 300 (1987); Office of Surface Mining Reclamation & Enforcement v. Calvert & Marsh Coal Co., 95 IBLA 182

(1987); Bannock Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 93 IBLA 225 (1986). If a state issues an NOV or a CO, but does not enforce abatement or reclamation requirements, OSM may, without notice to the state, reinspect and issue Federal enforcement sanctions. Turner Brothers, Inc., 92 IBLA at 320. Further, a primacy state may not extend an abatement time beyond that allowed by law or regulation, nor may it vacate NOV's or CO's, thus circumventing abatement. Peabody Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 95 IBLA 204, 94 I.D. 12 (1987).

Often, however, scrutiny of state actions leads to the conclusion that the state has acted appropriately, and that, therefore, OSM has no jurisdiction to assume enforcement authority. When evidence in a record shows an "ongoing effort" on the part of the state agency to rectify a violation, and that enforcement activities are proceeding "apace," Federal enforcement efforts will be deemed to be unjustified. Turner Brothers v. Office of Surface Mining Reclamation & Enforcement, 99 IBLA 87, 93 (1987). Where the record does not bear out allegations by a citizen that his land has not been restored to its approximate original contour, and that reclamation efforts left "excessive gullying and inadequate revegetation," a decision by Federal officials not to take enforcement action will be upheld. Kenneth Marsh, 82 IBLA 3 (1984).

Kuhn has not challenged the reclamation efforts of Empire insofar as Empire's encroachment upon his property is concerned, although he continues to challenge Empire's failure to reclaim his land in connection with placement of the Horsfall gas pipeline across his property. Kuhn's quarrel with

DOR is not that DOR failed to enforce reclamation requirements, but that it did not diligently investigate Empire's permit application, thereby leaving his property at risk from encroachment by permit D-217-2. Kuhn further alleges that even when DOR was put on notice of possible infractions on his property by permit
D-217-2, DOR refused to take appropriate action.

Kuhn alleges that DOR should have investigated and confirmed that the "right of entry" information submitted by Empire was correct, and that DOR's failure to verify Empire's documentation of permit boundaries "improperly shifts the burden of demonstrating right-of-entry from the permit applicant to the public" (SOR at 2). Kuhn further contends that, once DOR was aware of his complaint, the appropriate procedure for the state regulatory agency to follow was to suspend mining in the disputed area until the matter was resolved. Id. Last, Kuhn requests that this Board order DOR to "remediate" the damage done to his land and his coal by Empire's trespass. Thus, Kuhn alleges that SMCRA imposes the following duties upon DOR: (1) the duty to ensure accurate permit boundaries prior to permit issuance and to prevent trespass; and (2) the duty to suspend permission to mine where permit boundaries are called into question.

[1, 2] Generally, a permit is "[a] written license or warrant, issued by a person in authority, empowering the grantee to do some act not forbidden by law, but not allowable without such authority." Black's Law Dictionary 1298 (4th ed. 1968). Particularizing this general definition to permits issued under SMCRA, the issuance of a surface mining permit by a regulatory authority empowers the permittee to surface mine a designated

area under the conditions specified in the permit, without which permit such mining would not be allowable. While many decisions of this Board have addressed allegations that the permittee has expanded surface mining operations beyond permit limits, few cases have addressed allegations that the regulatory authority has issued a permit which erroneously expands upon the legal right to mine; that is, that the boundaries described in the permit encompass more land than the operator has legal authority to mine. While the distinction may seem minute, it is significant. In the first instance, an operator may have obtained legal right to conduct surface coal mining operations from adjacent landowners, but the activity is not allowed because he has not obtained regulatory permission. In the second instance, the regulatory agency has bestowed authority to mine upon the operator, but it allegedly lacks the legal right to do so. Compare Willowbrook Mining Co. v. Office of Surface Mining Reclamation & Enforcement, 108 IBLA 303 (1989), and Firchau Mining, Inc. v. Office of Surface Mining Reclamation & Enforcement, 101 IBLA 144 (1988), and Thomas J. Fitzgerald, 88 IBLA 24 (1985), with Samuel M. Mullinax, 96 IBLA 52 (1987), and W. E. Carter, supra.

In Samuel M. Mullinax, this Board upheld a decision by OSM finding state action to be appropriate where irregularities with respect to the issuance of surface mining permits were alleged, but it was established that the operator and state had complied with relevant provisions of the state's surface mining statute. Of particular relevance to this appeal is the Board's analysis distinguishing permitting issues from reclamation issues under section 521(a)(1):

> It is clear that section 521(a)(1) is primarily designed to address violations of performance standards or permit conditions that would be ascertainable by inspection of the surface coal mining operation. Thus, in Turner Brothers * * *

> [92 IBLA at 320], OSM conducted an investigation of a minesite pursuant to a citizen's complaint and issued a 10-day notice to Oklahoma's regulatory authority citing violations of the State's program. OSM determined, and this Board affirmed, that the State's issuance of a notice of violation (NOV), given that the State had issued an NOV a year before for the same violation, did not amount to "appropriate action" under section 521(a)(1).
>
> On the other hand, a citizen's complaint which sets forth allegations of irregularities in the issuance of permits by the State regulatory authority may involve different considerations and consequences than one which alleges violation of a performance standard, such as in Turner Brothers. * * * [I]n this case the State reviewed the permits * * * and uncovered none of the alleged irregularities. Under the circumstances, OSM acted properly in referring the complaint to the State. Our only other inquiry is whether the State's response was "appropriate * * *."

Id. at 58-59.

In that case at footnote 4, this Board noted that the legislative history of SMCRA indicates an intent by Congress to place primary control of permit issuance within state jurisdiction, even during interim Federal enforcement. Even so, where it is evident that a permit has been issued in violation of state regulatory requirements, this Board has declared such action inappropriate, and has ordered Federal enforcement. See W. E. Carter, supra.

Both Federal and state regulators issue permits within procedures set forth in the Act and accompanying regulations. An operator has a duty to prepare permit applications that are legally sound. See 30 CFR 778.15. Opportunity for public scrutiny of permit applications must be provided

prior to approval by appropriate state or Federal authorities. See 30 CFR 773.13. Under 30 CFR 773.13(a), a permit applicant must "place an advertisement in a local newspaper of general circulation in the locality of the proposed surface coal mining and reclamation operation at least once a week for four consecutive weeks." The advertisement must contain, among other information, "[a] map or description which clearly shows or describes the precise location and boundaries of the proposed permit area and is sufficient to enable local residents to readily identify the proposed permit area." Any citizen having an interest which is or may be adversely affected by the decision on the application may request an informal conference, which, unless otherwise agreed, shall be preserved on electronic or stenographic record. 30 CFR 773.13(c). Pursuant to section 503(a)(4) of SMCRA, Ohio law must provide citizens with similar safeguards. See 30 U.S.C. § 1253(a)(4) (1988).

Kuhn has not alleged that these procedural safeguards were not made available to him prior to issuance of permit D-217-2 to Empire. While this Board has jurisdiction under section 521(a)(1) to hear appeals where state action pertaining to permit issuance is inappropriate, no facts are brought before us here to establish that DOR did not follow appropriate procedures in issuing Empire's permit. See Samuel M. Mullinax, supra at 59. Kuhn would have us rule, however, that DOR alone is responsible to insure that mining permits correctly describe the area on which the applicant is authorized to mine. We find no authority for this proposition. Not only does the permitting scheme place significant responsibility on adjacent landowners to diligently defend their boundaries, DOR's position that it is

powerless to adjudicate property title or rights disputes is well-taken. See 30 U.S.C. § 1257(b)(9) (1988); 30 CFR 778.15(c). 7/

[3] Kuhn would further have us penalize Empire for actions taken in trespass (see note 6). This Board has no authority under SMCRA to award damages for any purpose. While section 520 of the Act permits a damage action by "[a]ny person who is injured in his person or property through the violation by any operator of any rule, regulation, order, or permit issued pursuant to this chapter" (30 U.S.C. § 1270(f) (1988)), those actions are to be brought in either the state or Federal courts in the jurisdiction in which the "surface coal mining operation complained of is located." Id. See Haydo v. Amerikohl Mining, Inc., 830 F.2d 494, 495-98 (3rd Cir. 1987). SMCRA provides that, in the event of operator error, malfeasance, or damage to a citizen's private property, the citizen's remedy is with the courts. 30 U.S.C. § 1270(f) (1988). Indeed, Kuhn has brought an action before the Ohio Court of Common Pleas. 8/

7/ 30 CFR 778.15(c), stating regulatory requirements for right-of-entry information, provides: "Nothing in this section shall be construed to provide the regulatory authority with the authority to adjudicate property rights disputes."
Section 507(b)(9) of the Act, 30 U.S.C. § 1257(b)(9) (1988) provides:
"[T]he applicant shall file with the regulatory authority on an accurate map or plan, to an appropriate scale, clearly showing the land to be affected as of the date of the application, the area of land within the permit area upon which the applicant has the legal right to enter and commence surface mining operations and shall provide to the regulatory authority a statement of those documents upon which the applicant bases his legal right to enter and commence surface mining operations on the area affected, and whether that right is the subject of pending court litigation: Provided, That nothing in this chapter shall be construed as vesting in the regulatory authority the jurisdiction to adjudicate property title disputes." (footnote omitted).
8/ According to Empire's response dated Nov. 15, 1990, this action was then still pending in the Court of Common Pleas.

[4-6] Nonetheless, we find that the Assistant Director erred when he reversed CFO's decision that DOR's failure to suspend mining in the disputed area was arbitrary and

capricious and therefore was "inappropriate action." 9/ Specifically, CFO had ruled that:

> OAC 1501:13-4-03(C) requires that the Chief [of DOR] review information to determine if the operator has the right to enter and to conduct surface mining operations. In this case a landowner has provided evidence * * * that * * * [the Chief's] initial decision may be in error as to whether the operator has the right to enter and mine an area that has been permitted. While the rule expressly states that the Chief does not have the authority to adjudicate property disputes, the Chief has to assure that the right to enter and mine is valid before an area is mined. [DOR's] * * * position that it will not assure that the operator has the right to enter has the de facto effect of adjudicating the dispute. The Division must take action to prevent surface coal mining operations from occurring on the questioned area until it is assured that the permit is correct or that the permit is corrected if necessary.

(CFO Decision dated Apr. 5, 1989, at 3).

CFO further supported the conclusion that DOR should have suspended mining on disputed land within the permit boundaries by citing two additional provisions of the Ohio Codes. CFO quoted OAC 1501:13-5-01(F)(1), which provides that "except to the extent that the Chief otherwise directs in the permit that specific actions be taken, the permittee shall conduct

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9/ Although neither OSM nor Empire has raised the question, it might be argued that the issue whether OSM should have suspended mining in the disputed permit area pending resolution of the boundary dispute is now moot, because Empire has conceded that its permit boundaries were in error and DOR has approved Empire's request for Negative Incidental Boundary Revision. We decline to dismiss this issue as moot, however, because we find it presents an issue "which is capable of repetition, yet evading review." See Southern Utah Wilderness Alliance, 114 IBLA 326, 329-30 (1990); Southern Utah Wilderness Alliance, 111 IBLA 207, 208-10 (1989).

all coal mining and reclamation operations as described in the complete application (emphasis added)"; and ORC 1513.09(B)(1)(e), which provides:

> For the purpose of administration and enforcement of any requirement of this chapter or in the administration and enforcement of any permit under this chapter or of determining whether any person is in violation of any requirement of this chapter. (1) The Chief shall require any permittee or operator to: . . . (e) Provide such other information relative to coal mining and reclamation operations as the chief considers reasonable and necessary.

Id. CFO concluded that

> These program requirements give the Chief authority to specifically direct that the permit be conditioned or suspended so that surface coal mining operations do not occur on the area in question until the Chief is assured that the operator has the right to enter and operate. It also gives the Chief authority to require the permittee to provide information to demonstrate that the permit map is accurate.
>
> The Division's rationale used in the response to this issue abuses the discretion provided to the Chief by the program and its interpretation of the program requirements is arbitrary and capricious as it applies to the concerns of the complainant. OSM[RE], therefore, has determined that the response to the TDN is inappropriate.

Id. at 3, 4. Reversing CFO, the Assistant Director, OSM, stated:

> While I agree that your agency does not adjudicate property disputes, it is appropriate for your agency under program provisions such as ORC 1513.09(B)(1)(e) to notify the permittee that his right to enter is subject to dispute and to require reasonable and necessary information to ensure that the permittees' basis for right of entry remains consistent with program requirements. In this regard, the record indicates that your agency has taken such action. Although the Ohio program may authorize a range of actions short of adjudicating a property dispute which

> could serve as a basis to restrict mining operations on the disputed area until there is a resolution, such actions are not mandatory. Therefore, I find that your agency's response does not constitute an abuse of discretion under the approved program and I hereby reverse the written determination of the Columbus Field Office Director.
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(Decision at 1).

The decision of the Assistant Director was sustained by the Director on appeal by Kuhn. We are not able to uphold this determination. Under SMCRA, a permit applicant is required to file legal documentation of the right to mine an area under consideration and maps which accurately depict the area within which the applicant possesses the legal right to mine. 30 U.S.C. § 1257(b)(9) (1988). These requirements come within section 521(a)(1) of the Act, which provides that,

> [w]henever, on the basis of any information available to him, including receipt of information from any person, the Secretary has reason to believe that any person is in violation of any requirement of this chapter or any permit condition required by this chapter, the Secretary shall notify the State regulatory authority * * * [emphasis in original] [,]

and the State authority shall take "appropriate action." When a citizen alleges that the boundaries of an adjacent permit are inaccurate, a state is required by section 521(a)(1) to take any "appropriate action" short of adjudication of property rights disputes. See W. E. Carter, supra.

DOR eventually approved Empire's application for a Negative Incidental Boundary Revision which conceded the boundary error alleged by Kuhn. Consequently, DOR's failure to suspend mining in the disputed area within

the permit boundaries until resolution of the matter was arbitrary, and fell short of "appropriate action." While DOR alleged that, at the time of its inspection, "Empire * * * [was] not affecting any of the disputed area 80 feet east from its permit boundary running along the Paul and Jean Kuhn property; * * * [nor did] Empire propose to affect such disputed area," CFO correctly determined that "where a landowner provides evidence that an initial decision that an operator has a right to enter and mine an area that has been permitted may be in error, state authorities must assure that the right to enter and mine is valid before the area is mined." See 30 U.S.C. § 1257(b)(9) (1988); 30 U.S.C. § 1271(a)(1) (1988).

Of particular interest here is CFO's written summary of a telephone conference held on April 4, 1989, between CFO and DOR officials regarding DOR's 10-day notice response, in which CFO stated:

> It is the CFO's position that the DOR must require that all mining on the disputed area be postponed until it can be accurately determined whether the permit has or has not been approved to include a portion of Mr. Kuhn's property. The DOR disagreed with the CFO's position and opted not to initiate any action to prevent mining on the area in question. DOR felt they have no authority to do so. [C]FO suggested possible suspension or permit condition be imposed on the area in question. DOR indicated that there is no immediate threat to the questioned area since mining is not expected to progress into the area at least for a couple weeks. [C]FO indicated that Kuhn had indicated otherwise and he felt they in the area at this time [sic]. DOR felt he is protected by the court order he obtained, [C]FO indicated that the order according to Kuhn only required that he have a representative present during augering and did not prevent mining on the area. [C]FO has requested a copy of the order from Kuhn[.]

Under the circumstances, it was reasonable that CFO would question DOR's assumption that a 2-week hiatus in Empire's mining schedule would not

constitute an "immediate threat to the questioned area," and would determine DOR's conduct to be inappropriate. So long as the operator retained full authority to mine the disputed area under a validly issued permit, the intent and purpose of the Act stated in section 102(b) (30 U.S.C. § 1202(b) (1988)) to "assure that the rights of surface landowners and other persons with a legal interest in the land or appurtenances thereto are fully protected from such operations" was jeopardized.

[7, 8] Kuhn's allegations regarding a natural gas pipeline allegedly laid across his land in furtherance of Empire's surface coal mining operations remains to be considered. In his complaint filed with CFO on March 23, 1989, Kuhn alleged:

> During the time from 6/6/88 to the present Empire had the adjacent home and out-building relocated from the mining area to a bottom adjacent field. They relocated the natural gas line through my woods and out of their mining area. No request was made to me to go on my property by Empire nor was any permission granted.

DOR declined to investigate Kuhn's complaint regarding the gas pipeline, finding that "[t]he Division does not regulate private gas line relocation by a neighboring landowner. This is a private contractual matter between the parties involved" ([DOR] Addendum to 10-day Notice 89-07-117-003 Response). In an April 4, 1989, visit to CFO, Kuhn disputed the finding by DOR, claiming that "the gas line had been removed from the area of the permit and placed on his property to facilitate the mining operation" (CFO Telephone Record dated Apr. 4, 1989). Nevertheless, CFO

found DOR's response to this allegation appropriate, "since no surface area was affected, ie. disturbance to the actual ground surface" (Apr. 5 Decision at 2). CFO further stated: "It is our understanding that the gas line is a plastic line laid across the surface of the ground and could not be construed as a surface coal mining operation activity." Id.

In a personal communication with CFO officials on April 12, 1989, Kuhn "noted that the gas line placed on his property had resulted in the company cutting trees on his land in order to route the line around the mining operation" (CFO Telephone Record dated Apr. 12, 1989). According to this record, "[p]ictures were taken by Mr. Kuhn of the cut trees. Because of this disturbance he believes routing the gas line through his property is an operation to facilitate the mining and warrants a violation." The record notes, parenthetically: "(This information had not previously been provided to the CFO)." According to an OSM call-visit record dated April 14, 1989,

> Kuhn said the the company's representative had testified that they had moved the gas line to * * * mine the coal. He [Kuhn] was going to send the transcript so that we could see that the movement of the gas line was part of the mining operation. I told him that I would review it.

The record indicates that the transcript of the preliminary injunction proceeding was probably received by CFO on or about April 17, 1989, 10/ but

10/ On Mar. 27, 1989, at the hearing on Kuhn's motion for preliminary injunction in the Tuscarawas County Court of Common Pleas, Empire's chief engineer admitted that the relocation of the natural gas pipeline onto the Kuhn property furthered its coal mining activity. OSM's copy of this partial transcript of proceedings is not date-stamped as to receipt; it is

no follow-up on Kuhn's allegations occurred until CFO's May 9, 1989, letter to Kuhn, which stated:

> The relocation of a gas line is not considered as a surface coal mining operation, even though the line was moved to facilitate the removal of coal on the permit. The definition of a coal mining operation (Ohio regulation OAC 1501:13-1-01 S) specifies the activities which are to be regulated. The placement or relocation of a gas line is not specified as an activity to be regulated.
>
> Your concerns about a gas line being placed on your property without your permission, and the resultant loss of trees, are appreciated. However, this is an issue that is not within our purview, regardless of who the responsible party may be.

Id. at 2.

Pursuant to 30 CFR 842.15, Kuhn appealed this decision to the Assistant Director by letter dated May 17, 1989. On June 21, 1989, the Director issued a letter decision in response to Kuhn's allegation in his appeal that "Empire Coal Company in November of 1988 removed a natural gas line from their pit and ran it through my wood * * * destroying my forest" (emphasis in original), stating the following:

> OSMRE shared this information with DOR. DOR determined that relocation of this pipeline by a neighboring landowner was not incidental to a surface mining operation. This is neither an arbitrary or capricious decision nor an abuse of discretion under the Ohio State program. The evidence attached to your May 5, 1989 letter to Tim Dieringer, Chief of DOR, indicates

fn.10 (continued)
therefore hard to tell when this transcript was received, or the source of its transmittal. The copy of the transcript appears to have been attached with a copy of the Miskimen letter, noted as received by CFO on Apr. 17, 1989.

that the pipeline was relocated onto your property by your neighbor, Frank Horsfall, not relocated by Empire Coal. Therefore, I have no reason to order a Federal inspection.

Id. at 2.

In response, Kuhn alleged that Empire's permit map D-0398, submitted to DOR on September 6, 1989, indicated that the plan for the natural gas line to be removed from the mining pit onto Kuhn's property was submitted by Empire to DOR and approved without Kuhn's notice or approval. On November 9, 1990, Empire responded in pertinent part to Kuhn's allegations as follows:

> On August 28, 1988 Empire Coal Company provided David Horsfall a map showing the needed relocation of a gas line on his mother's property * * *. The purpose of the line was to supply gas for heating from a gas well on the Horsfall property to the new location of the Horsfall house. The Horsfall house was moved from its original location inside the mining area to a new location outside the mining area. The map showed a location for the line to remove it from the area to be affected by mining. The actual relocation of the gas line was the responsibility of the Horsfalls and the work was performed by the Horsfalls. When the auger mining encroachment was determined it was discovered that the gas line cut across the corner of the Kuhn property. I informed David Horsfall of their error in locating the line and he had the line moved shortly thereafter. [Emphasis supplied.]

Section 701(28) of SMCRA, 30 U.S.C. § 1291(28) (1988), provides, in pertinent part:

> "[S]urface coal mining operations" means --
>
> (A) activities conducted on the surface of lands in connection with a surface coal mine * * *

> (B) the areas upon which such activities occur * * *. Such areas shall also include any adjacent land the use of which is incidental to any such activities, * * * and other areas upon which are sited structures, facilities, or other property or materials on the surface, resulting from or incident to such activities * * *. [Emphasis supplied.]

Pursuant to section 503(a)(1) of SMCRA, Ohio law must provide "a State law which provides for the * * * regulations of surface coal mining and reclamation operations in accordance with the requirements of this chapter." 30 U.S.C. § 1253(a)(4) (1988). Indeed, the pertinent language in the Ohio statute is nearly identical. See ORC 1513.01(G); see also OAC 1501:13-1-01 S, which states pertinently:

> (S) Coal mining operation means: (1) [a]ctivities conducted on the surface of lands in connection with a coal mine, * * * and (2) [t]he areas upon which such activities occur or where such activities disturb the natural land surface. Such areas include any adjacent land, the use of which is incidental to any such activities * * *. [Emphasis supplied.]

OSM is authorized to issue a 10-day notice when it has reason to believe that a person is conducting surface mining activity causing a surface disturbance in an area not covered by a permit in violation of the requirements of SMCRA. When, in response to this notice, the state agency refuses to take action because it does not consider the activity to be surface mining or a related activity and therefore finds no permit is required, and the interpretation of the statute advanced by the state is contrary to both the intent of SMCRA and a reasonable interpretation of state law, it is proper for OSM to order a Federal inspection. When,

after inspection, OSM determines that the activity is in violation of any requirement of SMCRA, OSM may issue a notice of violation or cessation order, as appropriate, to the operator, fixing a reasonable time for abatement. See Willowbrook Mining Co. v. Office of Surface Mining Reclamation & Enforcement, supra at 310-11.

Empire has admitted that "[t]he Horsfall house was moved from its original location inside the mining area to a new location outside the mining area"; and that "[t]he map showed a location for the line to remove it from the area to be affected by mining." There is no question but that this activity falls within the definition of "surface coal mining operations" set forth in section 701(28) of SMCRA, and companion Ohio law and regulations. The crucial factor is not who agreed to move the pipeline, but that the pipeline was ultimately moved onto Kuhn's property incidental to and in furtherance of Empire's surface coal mining activities. Under section 521(a) of SMCRA, a permittee of a minesite is a proper party to be cited for a violation of the Act notwithstanding the fact that the surface mining activity is conducted by a third party. See Clark Coal Co. v. Office of Surface Mining Reclamation & Enforcement, 102 IBLA 93 (1988); Wilson Farms Coal Co., 2 IBSMA 118, 87 I.D. 245 (1980).

Ultimately, OSM's review of DOR's course of action pertaining to Kuhn's allegation that a gas pipeline was relocated upon his property in furtherance of Empire's surface mining activities and without a valid permit should have proceeded in the same course as the review of DOR's action

with respect to Kuhn's allegations that Empire was encroaching on his property. Appropriate action by DOR should have encompassed an inspection to determine whether there was a nexus between removal of the gas pipeline onto Kuhn's property and Empire's surface mining activities, whether Empire had obtained a valid permit to conduct such activities upon Kuhn's property and "whether the areas upon which such activities occurred disturbed the natural land surface," and, if so, whether the affected lands were reclaimed. We therefore reverse OSM's determination that DOR acted appropriately with respect to its refusal to inspect the relocation of the gas pipeline, and remand this issue to OSM for further action consistent with this opinion and the requirements of section 521(a)(1) of the Act.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision of the Assistant Director, OSM, is reversed and remanded.

Franklin D. Arness
Admininstrative Judge

I concur:

C. Randall Grant, Jr.
Administrative Judge

DECISION RECORD
FOR
Bridger Coal Lease Modification: WYW2727
Case #: WYW2727 and WYW167727
EA #: WY-040-EA10-30

Summary
The proposed action is to modify federal coal lease WYW2727 to include 560 acres of contiguous coal lands in Sections 12 and 24 and to be granted a right-of-way to conduct surface operations in Section 36, Township 20 North, Range 100 West. The lands in section 36 are split estate, with the State of Wyoming owning the subsurface estate and the surface estate federally owned and managed by the BLM.

Decision
Based upon the analysis of the potential environmental impacts described in the 'Bridger Coal Lease Modification: WYW2727' Environmental Assessment and supporting documents in the case file, it is my decision to approve the Proposed Action to modify the existing coal lease for the identified portions of Sections 12 and 24 and to grant the right-of-way to conduct surface mining operations in Section 36.

1. **Compliance with applicable laws**: The coal lease modification application was submitted and evaluated under the following authorities: Mineral Leasing Act of 1920 as amended; Multiple-Use Sustained Yield Act of 1960; National Environmental Policy Act; Federal Coal Leasing Amendments Act of 1976; Federal Land Policy and Management Act of 1976; and the Surface Mining Control and Reclamation Act of 1977. The right-of-way grant will be made under the authority of Title V of the Federal Land Policy and Management Act of 1976 (43 CFR U.S.C. 1761) and be subject to the terms and conditions in 43 CFR 2801 and rental payments as determined by 43 CFR 2806.10. The grant will be subject to the mitigation set forth in the application/plan of development.

2. **Selected Alternative**: The proposed action is to modify federal coal lease WYW2727 to include 560 acres of contiguous coal lands in the SW ¼, S ½ NW ¼ of Section 12 (240 acres), the W ½ of Section 24 (320 acres) and to be granted a right-of-way to conduct surface operations in the W ½, NW ¼, NW ¼ SW ¼ of Section 36, Township 20 North, Range 100 West. The lands in section 36 are split estate, with the State of Wyoming owning the subsurface estate and the surface estate federally owned and managed by the BLM.

3. **FONSI**: I have determined that the proposed project is in conformance with the approved land use plan. I have reviewed this environmental assessment including the analysis of potentially significant environmental impacts. I have determined that the proposed action with the mitigation measures as identified in the EA will not have any significant impacts

on the human environment and that an EIS is not required. It is my decision to implement the proposed action.

4. **Public Involvement**. The BLM Rock Springs Field Office issued a news release on November 17, 2009, requesting public comment on the Proposed Action; a scoping notice was published on November 18, 2009, on the RSFO website. The 30-day comment period ended on December 16, 2009. During this period, the BLM received four comment letters: three from state governmental agencies and one from a Wyoming citizen. A Summary of Scoping Comments is included as Appendix A of the EA.

5. **Rationale for Alternative Selected**. The Proposed Action with the mitigation measures as described in the EA was selected because it is in compliance with the Green River RMP and the BLM has determined it will not have any significant impacts on the human environment. Additionally, there is no logical competitive interest based upon utilization of the lands or mining of the deposits because:
    - The applicant is the lessee of record holding the private, state and federal leases adjacent to the modification area.
    - This lease modification would allow a continuum of an existing mining block and would not represent an economic venture based on a stand alone development of the property.
    - There is no other nearby coal operation which could economically mine this area.
    - The only logical access is from the applicant's surface mine and adjacent leases.

6. **Appeal Procedures**.
This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) or 43 CFR 2804.1 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied,

2. The likelihood of the appellant's success on the merits,

3. The likelihood of immediate and irreparable harm if the stay is not granted, and

4. Whether the public interest favors granting the stay.

Lance C. Porter

Lance Porter
Field Manager
Rock Springs Field Office

28 July 2010
Date

January 12, 2018

BY ELECTRONIC MAIL AND
CERTIFIED U.S. MAIL RETURN RECEIPT REQUESTED

David Berry, Director
Western Regional Office
U.S. Office of Surface Mining Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, CO 80202-3050
dberry@osmre.gov

Re: Citizen Complaint and Request for Cessation Order Under the Surface Mining Control and Reclamation Act Over Right of Entry Violation at Jim Bridger Mine in Rock Springs, Wyoming, Permit No. PT-0338.

Pursuant to the Surface Mining Control and Reclamation Act ("SMCRA"), 30 U.S.C. §§ 1267(h)(1) and 1271(a)(1), and SMCRA implementing regulations, 30 C.F.R. § 842.12(a), WildEarth Guardians ("Guardians") hereby submits the following citizen complaint to inform the Office of Surface Mining Reclamation and Enforcement ("OSMRE") that violations of SMCRA appear to be occurring in Wyoming at Jim Bridger Coal Mine, owned by Bridger Coal Company, a subsidiary of PacifiCorp ("PacifiCorp"), Wyoming permit number PT-0338. We request that OSMRE inspect and take appropriate action to address these violations pursuant to 30 C.F.R. § 842.11. Furthermore, because it appears that PacifiCorp was not issued a valid surface coal mining permit, we request that OSMRE issue a cessation order pursuant to 30 C.F.R. § 843.11(a)(2).

At issue is the fact that PacifiCorp was improperly permitted by the Wyoming Department of Environmental Quality ("DEQ") to mine a portion of federal coal lease, WYW-2727. Through a permit renewal approved on November 28, 2014 (numbered 338-T7), DEQ claims to have authorized mining of coal from a 560-acre modification to the lease that was purportedly approved in 2010. This lease modification, however, was not approved by a U.S. Bureau of Land Management ("BLM") employee who had delegated authority to make such an approval. Consequently, the lease has no legal effect and PacifiCorp did not have the legal right to enter and commence mining of this lease modification.

At issue is that the 2010 modification to federal coal lease WYW-2727 was approved by a BLM Field Manager who lacked delegated authority to actually approve the lease modification. As the U.S. Department of the Interior has held, BLM Field Managers do not have delegated authority to approve federal coal leases and federal coal lease modifications. In fact, in a 2016

ruling, the Interior Board of Land Appeals specifically overturned a BLM modification to a federal coal lease at the Jim Bridger Mine because a Field Manager illegally attempted to approve it. *See* Exhibit 1, Order in IBLA 2016-79 (Aug. 25, 2016). According to the IBLA, because the lease modification was approved by a Field Manager who lacked delegated authority, the modification "[did] not bind the Department and [was] not properly considered a decision of the BLM." Exhibit 1 at 3. The IBLA ultimately set aside the BLM's purported decision.

Because the 2010 modification to federal coal lease WYW-2727 was approved by a BLM Field Manager, the lease has "no legal effect." Exhibit 2, *WildEarth Guardians*, 187 IBLA 349, 353 (May 6, 2016) (holding that a coal leasing decision issued by a BLM employee without delegated authority has no legal effect). Consequently, PacifiCorp inaccurately represented that it had the legal right to enter and commence mining of this lease modification in its application. Further, DEQ improperly approved PacifiCorp's application for a permit revision by failing to appropriately scrutinize whether PacifiCorp had a valid legal right to enter and commence mining. Consequently, both PacifiCorp and DEQ violated and continue to violate SMCRA and SMCRA regulations.

I. LEGAL BACKGROUND

Before an entity can conduct surface coal mining operations, a permit must be obtained. *See* 30 U.S.C. § 1256(a). To obtain a permit, an entity must submit an application to conduct surface coal mining operations and obtain approval from the permitting authority. *See* 30 U.S.C. § 1257. A permit application must contain specific information demonstrating the applicant qualifies for permit issuance under SMCRA. Among other requirements:

> [A permit application must contain information] clearly showing the land to be affected as of the date of the application, the area of land within the permit area upon which the applicant has the legal right to enter and commence surface mining operations and shall provide the regulatory authority a statement of those documents upon which the applicant bases his legal right to enter and commence surface mining operations on the area affected[.]

30 U.S.C. § 1257(b)(9); *see also* 30 C.F.R. § 778.15(a). If an entity does not properly demonstrate a legal right to enter and commence surface mining operations, its application for a permit cannot be approved. *See* 30 U.S.C. § 1260(b)(1) and C.F.R. § 773.15(a).

To this end, a failure to demonstrate a legal right to enter and commence surface mining operations is subject to inspection and enforcement under SMCRA, even if a permit has been issued. *See* Exhibit 3, *Paul F. Kuhn*, 120 IBLA 1 (July 3, 1991). Although permitting authorities are not authorized to adjudicate property rights, they must take "appropriate action" to resolve any error in permitting and inform the permitted entity of inadequacies. *Id*. at 25.

Accordingly, if a person files a complaint with OSMRE that a permittee has failed to demonstrate a right to enter lands and conduct surface mining in violation of SMCRA, the agency has a duty to ensure that "appropriate" action be taken to cause the violation to be

corrected. 30 U.S.C. § 1271(a) and 30 C.F.R. § 842.11(b)(1)(ii)(B); *see also Paul F. Kuhn*, 120 IBLA 15. If a violation continues, a cessation order and/or notice of violation shall be issued. *See* 30 C.F.R. §§ 843.11(a)(2) and 843.12(a)(2).

II. FACTUAL BACKGROUND

The Jim Bridger Coal Mine lease modification was purportedly approved in 2010. In a Decision Record, Lance Porter, signing as the "Field Manager," claims to have approved the lease modification. On July 28, 2010, Mr. Porter stated in the Decision Record, "it is my decision to approve the Proposed Action to modify the existing coal lease [...]." Exhibit 4, BLM, Decision Record for Bridger Coal Lease Modification: WYW2727, p. 1, (July 28, 2010).

However, as the BLM Rock Springs Field Office Field Manager, Mr. Porter was not delegated the authority to approve the modification to federal coal lease WYW-2727. Indeed, pursuant to the BLM's applicable delegation of authority manuals and applicable regulations, the authority to approve federal coal lease modifications was (and still is) delegated only to officials within BLM State Offices, not to subordinate Field Managers. *See* Exhibit 5, BLM Washington Office's Manual Section, MS-1203, Delegation of Authority (internal) at Appendix 1, p. 67, Subject Code or Regulation 3432 (displaying checked boxes for BLM employees that have authority to approve coal lease modifications; the only checked is the State Director, or "SD") and Exhibit 6, Wyoming Supplement to the BLM Delegation of Authority at Appendix 1, p. 89, Subject Function Code 3432 (delegating authority to approve coal lease modifications to State Director and Deputy State Director for Minerals and Lands, as noted by the mark under "SD" and "920 DSD"); *see also* 43 C.F.R. § 3432.2(a) (stating that only "authorized officer[s]," which are defined under 43 C.F.R. § 3400.0-5(b) as BLM employees with delegated authority, may modify federal coal leases).

As the U.S. Department of the Interior has held, because Mr. Porter, a BLM Field Manager, was not delegated authority to approve the 2010 modification to federal coal lease WYW-2727, his decision was "not properly considered decision of the BLM" and had "no legal effect." 187 IBLA 353.[1] Consequently, the BLM never approved a valid modification to federal coal lease WYW-2727. This means PacifiCorp was not properly vested with the right to enter the purported lease modification and commence surface mining activities.

In order to comply with SMCRA, PacifiCorp requested a permit revision from the DEQ to include the coal from the purportedly modified federal lease WYW-2727. In 2014, DEQ approved the revision, allowing PacifiCorp to enter the purported Jim Bridger coal lease area WYW-2727 and commence mining under permit revision 338-T7. It is now clear, however, that this approval was in error.

Because the 2010 decision to modify federal coal lease WYW-2727 was not properly approved by the BLM, it had no legal effect. PacifiCorp therefore had no valid right to enter the purported coal lease modification area and commence surface mining. The company therefore

[1] The IBLA has consistently held that federal coal leasing decisions made by BLM employees without delegated authority are not properly considered decisions of the BLM and have no legal effect. *See also* Exhibit 7, Order in IBLA 2016-80 (Aug. 25, 2016) and Exhibit 8, *WildEarth Guardians*, 189 IBLA 274 (February 7, 2017).

failed to provide proper documentation demonstrating a right to enter and commence surface mining operations. DEQ further failed to verify the accuracy of PacifiCorp's submissions and further failed to demonstrate that the approval for the permit revision, which became final on November 28, 2014, was supported pursuant to SMCRA and SMCRA regulations.

III. COMPLAINT, REQUEST FOR INSPECTION, AND APPROPRIATE ACTION

Where there is reason to believe that a violation of SMCRA or SMCRA regulations exists, OSMRE is required to notify the state regulatory authority pursuant to 30 C.F.R. § 842.11(b)(1)(ii)(B). Where a state fails to respond within 10 days, or otherwise fails to take appropriate action, OSMRE must conduct an inspection of mining operations. If a violation is found as a result of an inspection, OSMRE must issue a "cessation order" and/or "notice of violation" pursuant to 30 C.F.R. §§ 843.11 and/or 843.12 to remedy the violations.

Based on the aforementioned information, there is reason to believe that PacifiCorp has not accurately disclosed whether it has the legal right to enter the purported modification to federal coal lease WYW-2727 and conduct surface mining. This is a violation of, among other requirements, 30 U.S.C. § 1257(b)(9) and 30 C.F.R. § 778.15(a). Further, there is reason to believe that DEQ has failed to properly scrutinize PacifiCorp's application to mine the purported federal coal lease WYW-2727 and whether the application to mine this purported lease was appropriately approved. This is a violation of, among other requirements, 30 U.S.C. § 1260(b)(1) and C.F.R. § 773.15(a).

Accordingly, OSMRE must notify Wyoming regulatory authorities, conduct any necessary inspections, and take appropriate action to rectify these violations. Given that it appears PacifiCorp is mining without a properly obtained permit, we request a cessation order be issued pursuant to 30 C.F.R. § 843.11.

We look forward to your prompt attention and action in this matter.

Sincerely,



Shannon Hughes, Climate Guardian
WildEarth Guardians
2590 Walnut Street
Denver, CO 80205
Shughes@wildearthguardians.org

cc: (by hard copy and electronic mail):

Todd Parfitt, Director
Kyle Wendtland, Administrator
Wyoming Department of Environmental Quality
Land Quality Division

200 West 17th Street, Suite 10
Cheyenne, WY 82002
todd.parfitt@wyo.gov
kyle.wendtland@wyo.gov

From:	mzaccherio@blm.gov
To:	BLM_ID GRSG_PEIS
Subject:	BLM Great Basin Ecosystem Strategy
Date:	Wednesday, January 17, 2018 2:05:07 PM
Attachments:	FuelBreaks_Bulletin_No1_Final.pdf

Dear Interested Party,

The BLM is proposing to develop two landscape scale Programmatic Environmental Impact Statements (EISs) to analyze potential effects of constructing fuel breaks, reducing fuel loading, and restoring rangeland productivity within the Great Basin Region (specifically Idaho, Oregon, Nevada, northern California, Utah, and eastern Washington) in order to protect and conserve the sagebrush-steppe ecosystem from loss as a result of wildfires.

During this initial step of the PEIS process, BLM would like to get your input on issues, concerns, or recommendations for the projects. As part of this scoping period, the BLM will host 14 scoping meetings across six states. Please see the attached bulletin for more information.

Dear Readers,

This is the first in a series of newsletters that you will receive from the BLM about its plans to protect and conserve the Great Basin sagebrush steppe ecosystem across the Western US. This newsletter provides an overview of the programmatic effort, how to get involved, including a schedule of public meetings, as well as where and how to submit comments.

How to Get Involved

Get on the mailing list by sending a request to GRSG_PEIS@blm.gov

Visit the Project Web site at: https://go.usa.gov/xnQcG

Attend public meetings: Public meetings will be held in 14 cities across the Great Basin Region. See website for schedule.

Submit comments at a public meeting or via one of the methods listed below. Comments will be considered as part of the scoping process until February 20, 2018 or 15 days after the last public meeting, whichever is later. You can submit comments even if you haven't attended a public meeting.

E-mail: GRSG_PEIS@blm.gov

Fax: 208-373-3805

US Mail: Jonathan Beck, BLM Idaho State Office
1387 S. Vinnell Way, Boise, ID 83709

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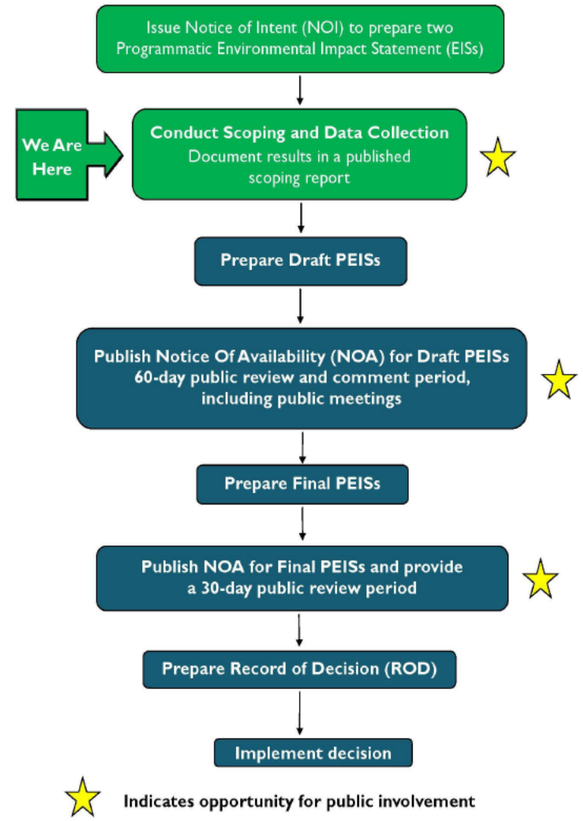
Great Basin Ecosystem Strategy

BLM Initiates Two Programmatic Efforts to Improve the Great Basin Sagebrush Steppe Ecosystem

Issue No. 1, January 2018

The BLM, as lead agency, is preparing two regionally focused, landscape-scale, programmatic environmental impact statements (PEISs) in accordance with the National Environmental Policy Act (NEPA). One PEIS will focus on the construction of fuel breaks and the other PEIS will focus on hazardous fuels reduction and rangeland restoration. The PEISs would evaluate conditions under which a comprehensive system of fuel breaks, hazardous fuels reductions, and rangeland restoration tools and techniques could be implemented within the Great Basin region to protect and restore the sagebrush steppe ecosystem, thereby, benefitting users of this ecosystem. The project area includes portions of Idaho, Nevada, California, Oregon, Washington, and Utah.



BLM is proposing to construct a system of fuel breaks across the Great Basin in order to further protect life and property, and to sustain its multiple-use public lands. These fuel breaks would provide a proactive approach by which the BLM could reduce the number of acres burned annually, and decrease loss of life and property, increase multiple-use opportunities, and protect habitat. BLM is also proposing hazardous fuels reduction and rangeland restoration to protect and conserve the sagebrush steppe ecosystem so that it is capable of delivering sustainable goods and services, such as healthy rangelands, clean water, and recreational opportunities, while at the same time conserving and protecting wildlife and their natural surroundings.

Large-scale wildfires, particularly in sagebrush steppe ecosystems, have increased exponentially throughout the Western US in recent years. These large-scale fires have resulted in increased costs, injuries and fatalities within the firefighting community, as well as destruction of private property, habitat loss for a variety of species, and subsequent loss of beneficial uses of those lands for many years post-fire. While fire is an important part of the ecology of sagebrush steppe habitats, frequent large-scale wildfires are a leading cause of sagebrush loss and increasing spread of annual invasive grasses, primarily cheatgrass. Additionally, encroachment of pinyon-juniper into sagebrush steppe habitats has further reduced the quality and functionality of the sagebrush steppe ecosystem. Appropriately installed and maintained fuel breaks and strategic hazardous fuels reduction would reduce vegetation continuity and aid in suppression opportunities, thereby reducing risks to firefighters, decreasing fire size and acres burned annually, improving or restoring the ecosystem, and protecting our rangeland restoration investments, leading to a sustained and economically viable ecosystem.

The PEISs would aid in meeting provisions of the Federal Land Policy and Management Act (FLPMA), and the objectives and goals as outlined in the relevant land use plans, the Greater Sage-Grouse Wildfire, Invasive Annual Grasses, and Conifer Expansion Assessments, as well as Secretarial Order 3336 (Rangeland Fire Prevention, Management and Restoration). In accordance with the National Environmental Policy Act (NEPA), the BLM will seek public and interagency input to identify issues to



Sagebrush ecosystem

address in the PEISs and coordinate with other federal, tribal, state, and local government agencies in preparing the PEISs.

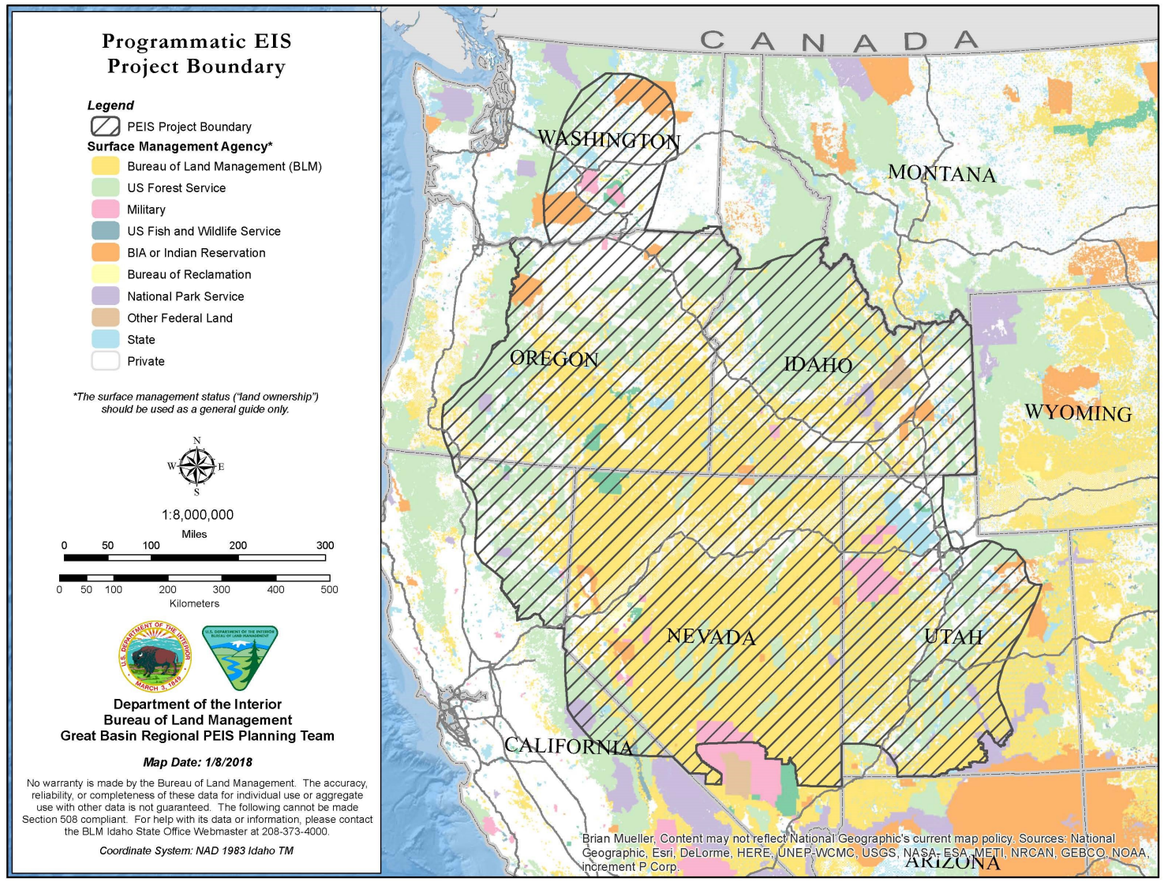
The BLM has assembled two Regional Support Teams based in Boise and Reno to assist with this endeavor. The teams are available to assist with project needs region-wide, though the closest resources or local expertise will generally be used to meet outreach needs.

The BLM is proposing this effort to protect and conserve the sagebrush steppe ecosystem, its values, and associated wildlife and their habitat. The intent of this newsletter is to provide background information and guidance on how to become involved and remain involved throughout the process.

To initiate this process, BLM published a Notice of Intent (NOI) in the Federal Register on December 22, 2017, announcing the beginning of a scoping period to solicit public comments and identify issues. A diagram of the process is located on the first page.

Next Steps

As a public Agency we rely on input concerning local issues, concerns, and values in order to develop flexible, relevant, and usable tools that can aid in a swifter implementation of future projects. The BLM greatly appreciates your interest, participation, and partnership in this process.



During this initial step of the PEIS process, BLM would like to get your input on issues, concerns, or recommendations for the projects. As part of this 60-day scoping period, the BLM will host 14 scoping meetings across six states.

You may submit comments at the meetings, via email or mail, or through the project website at any time during the scoping period. The project website will accept comments for both PEISs.

A Scoping Report will summarize all of the public input that was received for each PEIS and will be made available on the project website. The Regional Support Teams will then incorporate any public input, as appropriate under NEPA, into the PEISs. When BLM releases the Draft PEISs, you will have another opportunity to comment, along with being able to review the documents. With that feedback, BLM will then develop two Final PEISs.



Public Meetings Scheduled for Winter 2018

To participate in the process, please visit the project website (https://go.usa.gov/xnQcG) and attend the public scoping and informational meetings to learn more about the projects, speak with BLM staff, view maps, and submit comments. Meeting times and locations will be posted on the project website and announced through local media. All meetings will include informational materials and an opportunity to submit comments. Presentation materials will be on display throughout the meeting and available on the project website.

California
- Susanville

Idaho
- Boise
- Twin Falls
- Idaho Falls

Nevada
- Reno
- Elko
- Ely

Oregon
- Burns
- Lakeview

Utah
- Salt Lake City
- Snowville
- Cedar City
- Vernal

Washington
- Moses Lake

From: Bahr, Quincy
Subject: Information Conference Call for Two Rangeland Protection/Improvement Programmatic EISs
Date: Tuesday, January 23, 2018 7:01:26 PM
Attachments: NOI_2 Great Basin Fuels PEISs_Fed Reg 2017-12-22.pdf

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To Our Government Partners in Managing Healthy Rangelands:

Late last year you received an email from BLM State Director Edwin Roberson notifying you of a pending invitation to cooperate with the BLM in preparing two programmatic environmental impact statements (PEIS) for the Great Basin states of Idaho, Oregon, Nevada, California, Utah and Washington. The process to begin preparation of the PEISs formally began with publication of the Notice of Intent in the Federal Register on December 22, 2017 (attached), initiating the public scoping process.

In his email, Director Roberson informed you that the BLM Utah would hold a conference call to outline the intent and scope of the PEIS efforts before the public scoping meetings. That conference call will be held on Tuesday, January 30th, from 1:00 P.M. to 2:00 P.M.

To join the conference call, please use the following information:

* Call in number: (b) (5)

* Participant code: (b) (5)

I will send out an outline for the conference call on Monday, January 29th. Additional project information is available on the project website (https://go.usa.gov/xnQcG), including the dates and locations of scoping meetings throughout the Great Basin, including four in Utah.

If you have questions before the conference call, please contact me via email or using the contact numbers below.

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Quincy Bahr
Sage-Grouse Implementation Coordinator
BLM Utah State Office
440 West 200 South, Suite 500

Salt Lake City, UT 84101-1345
801-539-4122 (office)
801-518-1479 (cell)
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application for an incidental take permit (ITP) under the Endangered Species Act of 1973, as amended (ESA). Lennar Corporation (Applicant) is requesting a 15-year ITP for take of the sand skink. We request public comments on the permit application and accompanying proposed habitat conservation plan (HCP), as well as on our preliminary determination that the plan qualifies as low-effect under the National Environmental Policy Act (NEPA). To make this determination, we used our environmental action statement and low-effect screening form, which are also available for review.

DATES: To ensure consideration, please send your written comments by January 22, 2018.

ADDRESSES: You may submit written comments and request copies of the application, HCP, environmental action statement, or low-effect screening form by any one of the following methods:

Email: northflorida@fws.gov. Use ''Attn: Permit number TE50490C–0'' as your subject line.

Fax: Field Supervisor, (904) 731–3191, ''Attn: Permit number TE50490C–0.''

U.S. mail: Field Supervisor, Jacksonville Ecological Services Field Office Attn: Permit number TE50490C–0, U.S. Fish and Wildlife Service, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256.

In-person: You may deliver comments during regular business hours at the office address listed above under *U.S. Mail.* You may inspect the application, HCP, environmental action statement, or low-effect screening form by appointment during normal business hours at the same address.

FOR FURTHER INFORMATION CONTACT: Erin M. Gawera, telephone: (904) 731–3121; email: *erin_gawera@fws.gov.*

SUPPLEMENTARY INFORMATION:

Background

Section 9 of the ESA (16 U.S.C. 1531 *et seq.*) and our implementing Federal regulations in the Code of Federal Regulations (CFR) at 50 CFR part 17 prohibit the ''take'' of fish or wildlife species listed as endangered or threatened. Take of listed fish or wildlife is defined under the ESA as ''to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct'' (16 U.S.C. 1532(19)). However, under limited circumstances, we issue permits to authorize incidental take—*i.e.,* take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Regulations governing incidental take permits for endangered and threatened species are at 50 CFR 17.22 and 17.32, respectively. The ESA's take prohibitions do not apply to federally listed plants on private lands unless such take would violate State law. In addition to meeting other criteria, an incidental take permit's proposed actions must not jeopardize the existence of federally listed fish, wildlife, or plants.

Applicant's Proposal

Lennar Corporation is requesting to take of approximately .31 acres (ac) of occupied sand skink (*Neoseps reynoldsi*) foraging and sheltering habitat incidental to construction of a residential development. The 38.44-ac project site is identified with parcel identification number 05–24–27–0000–00–001 and located within section 5, Township 24 South, Range 27 East in Orange County, Florida. The project also includes the clearing, infrastructure building, and landscaping associated with constructing a residential development. The Applicant proposes to mitigate for the take of the threatened sand skink by purchasing 0.62 mitigation credits within The Backbone Conservation Bank or another Service-approved sand skink conservation bank.

Our Preliminary Determination

We have determined that the Applicant's proposal, including the proposed mitigation and minimization measures, would have minor or negligible effects on the species covered in the HCP. Therefore, we have determined that the ITP for this project is ''low effect'' and qualifies for categorical exclusion under NEPA, as provided by 43 CFR 46.205 and 46.210. A low-effect HCP is one involving (1) minor or negligible effects on federally listed or candidate species and their habitats, and (2) minor or negligible effects on other environmental values or resources.

Next Steps

We will evaluate the HCP and comments we receive to determine whether the ITP application meets the requirements of section 10(a) of the ESA. We will also evaluate whether issuance of the ITP complies with section 7 of the ESA by conducting an intra-Service consultation. We will use the results of this consultation, in combination with the above findings, in our final analysis to determine whether or not to issue the ITP. If the requirements are met, we will issue ITP number TE50490C–0 to the Applicant.

Public Comments

If you wish to comment on the permit application, HCP, or associated documents, you may submit comments by any one of the methods listed above in **ADDRESSES**.

Public Availability of Comments

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Authority

We provide this notice under section 10 of the ESA and NEPA regulation 40 CFR 1506.6.

Jay B. Herrington,

Field Supervisor, Jacksonville Field Office, Southeast Region.

[FR Doc. 2017–27601 Filed 12–21–17; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[17XL LLID930000 L11100000.DF0000 LXSGPL000000 4500103385]

Notice of Intent To Prepare Two Great-Basin-Wide Programmatic Environmental Impact Statements to Reduce the Threat of Wildfire and Support Rangeland Productivity

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: In compliance with the National Environmental Policy Act of 1969, as amended (NEPA), and the Federal Land Policy and Management Act of 1976, as amended (FLPMA), the Bureau of Land Management (BLM) intends to prepare two programmatic Environmental Impact Statements (EISs) for BLM Districts in the Great Basin region. By this Notice BLM is announcing the beginning of the scoping process to solicit public comments and identify issues to be addressed in the environmental analyses.

DATES: This Notice initiates the public scoping process for the two programmatic EISs. Comments on issues may be submitted in writing until February 20, 2018. The date(s) and

location(s) of any scoping meetings will be announced at least 15 days in advance through local media, newspapers and the BLM website at: *https://go.usa.gov/xnQcG.* In order for comments to be considered for the draft programmatic EISs, all comments must be received prior to the close of the 60-day scoping period or 15 days after the last public meeting, whichever is later. We will provide additional opportunities for public participation upon publication of the draft programmatic EISs.

ADDRESSES: You may submit comments related to the programmatic EISs by any of the following methods:

- Website: *https://go.usa.gov/xnQcG.*
- *Email: GRSG_PEIS@blm.gov.*
- *Fax*: 208–373–3805.
- *Mail*: Jonathan Beck, 1387 S. Vinnell Way, Boise, ID 83709.

FOR FURTHER INFORMATION CONTACT: Jonathan Beck, Project Manager Boise Support Team, telephone 208–373–3841; address 1387 S. Vinnell Way, Boise ID 83709; email *jmbeck@blm.gov.* Contact Mr. Beck to add your name to our mailing list. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1–800–877–8339 to contact the above individual. The FRS is available 24 hours a day, 7 days a week, to leave a message or question with Mr. Beck. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The BLM is proposing to develop two programmatic EISs: (1) Fuel Breaks Programmatic EIS and (2) Fuels Reduction and Rangeland Restoration Programmatic EIS. One EIS will analyze potential effects of constructing fuel breaks and the other EIS will analyze potential effects of reducing fuel loading, and restoring rangeland productivity within the Great Basin region, which includes portions of the states of Idaho, Oregon, Nevada, California, Utah, and Washington.

Both projects would protect and conserve natural habitats from loss resulting from wildfires and the spread of invasive species. Although these proposals are similar, they have different purposes. The purpose of the Fuel Breaks Programmatic EIS is the protection of life and property and to reduce the threat and size of wildfires on western rangelands. The purpose of the Fuels Reduction and Rangeland Restoration Programmatic EIS is to restore the rangelands habitat so they provide multiple use opportunities for all user groups and habitat for the hundreds of plants and animals that define this iconic landscape.

The BLM is proposing to prepare these analyses concurrently to gain efficiencies in scoping and effects analyses. The goal of these programmatic EISs is to analyze the region-wide and cumulative impacts of the proposed actions and to gain efficiencies in subsequent National Environmental Policy Act (NEPA) analyses required for individual projects.

Purpose

The programmatic EISs would expedite the development, enhancement, maintenance and utilization of fuel breaks, fuels reduction, and rangeland restoration for the protection, recovery, and conservation of natural western habitats in the Great Basin region. The projects would reduce the threat of habitat loss from fires and restore habitat to maintain the rangeland's productivity and support the western lifestyle. Fuel breaks act as fire-anchor points and firefighter staging areas; provide protection of ongoing and pending habitat restoration projects; and assist in quicker and earlier fire suppression response times, thereby reducing wildfire risk, aiding in the protection of human life and property, protecting taxpayer investment in habitat restoration projects, and improving western landscapes by offering multiple use opportunities. The restoration will replace invasive species with native habitat, decreasing the continuous cover of annual grasses that fuel large wildfires.

Need

Large-scale wildfires have increased significantly throughout the western United States in recent years, particularly in sagebrush-steppe ecosystems, resulting in the widespread loss of sagebrush-steppe vegetation. These wildfires are largely a result of continuous fuel loading, caused by widespread increases in invasive annual grasses and very large areas of continuous sagebrush cover. In the last decade, fires have exceeded 100,000 acres on a regular basis, and the number of areas that burn again before habitat can establish has increased. These large-scale wildfires, with very high to extreme burning conditions, have resulted in increased numbers of injuries and deaths among wildland firefighters and increased destruction of private property and habitat loss for a variety of species. Wildfires have resulted in widespread impacts to healthy sage-lands quality, and have hampered BLM's ability to maintain productive lands. These large-scale, repeated wildfires facilitate the spread of invasive annual grasses, further reducing rangeland quality and availability, thereby adversely affecting sagebrush-recovery rates or, in some instances, preventing recovery altogether. In warm, dry settings, sagebrush-steppe usually takes, at a minimum, many decades to recover, even where invasive annual grasses or other invasive plant species do not become dominant. Invasive species and conifer encroachment can be exacerbated as a result of wildfires in sagebrush ecosystems, resulting in an increased risk of wildfires (positive feedback loop). By compartmentalizing desirable vegetation and providing safer access for firefighters, fuel breaks aid in decreasing potential habitat loss from wildfires, protecting habitat restoration areas, and combatting the spread of invasive species, *i.e.,* decreasing or eliminating this positive feedback loop. By restoring native habitat, invasive species that are helping to fuel these unnaturally large fires will be reduced or removed, making the rangelands more resistant to future wildfires.

The programmatic EISs, once implemented, will provide for increased firefighter safety in the event of wildfires and faster response times to wildfires. They will also assist in the maintenance, protection and restoration of the iconic sagebrush western landscape.

The programmatic EISs will provide a mechanism for the BLM to streamline any future NEPA processes pertaining to fuel breaks, fuels reduction, and rangeland restoration proposals in the Great Basin region.

Scoping and Preliminary Issues

The public scoping process is conducted to determine relevant issues that will influence the scope of the environmental analysis, including alternatives, and guide the process for developing the programmatic EISs. At present, the BLM has identified the following preliminary issues:

1. Fuel break construction and associated road improvement for firefighter access could increase human activity in remote areas and introduce noxious and invasive weeds and increase the incidence of human-caused wildfires.

2. Fuel break construction could remove or alter sagebrush habitat, rendering it unusable for some species.

3. Fuel break construction on either side of existing roads may create movement barriers to small-sized wildlife species by reducing hiding cover.

4. Fuel break construction in highly resistant and resilient habitats may not be necessary because those sites are less likely to burn or will respond favorably to natural regeneration.

5. After habitat restoration treatments, historic uses such as livestock grazing and recreation activities may be temporarily halted until the treatment becomes established and objectives are met.

6. Fuel reduction treatments in pinyon/juniper could disrupt traditional tribal use of these sites.

7. The use of non-native species in fuel breaks could affect listed species and affect species composition in adjacent native plant communities.

Project design features would be used to minimize impacts to rangelands, sensitive species habitat, cultural sites and watersheds, and to limit introduction and spread of noxious and invasive weeds.

The BLM will use and coordinate the NEPA scoping process to help fulfill the public involvement requirements under the National Historic Preservation Act (54 U.S.C. 306108) as provided in 36 CFR 800.2(d)(3). The information about historic and cultural resources within the area potentially affected by the proposed action will assist the BLM in identifying and evaluating impacts to such resources.

The BLM will consult with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts on Indian trust assets and potential impacts to cultural resources, will be given due consideration. Federal, State, and local agencies, along with Tribes and other stakeholders that may be interested in or affected by the proposed fuel break, fuel reduction, and rangeland restoration programmatic proposals that the BLM is evaluating, are invited to participate in the scoping process and, if eligible, may request or be requested by the BLM to participate in the development of the environmental analysis as a cooperating agency.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Authority: 40 CFR 1501.7.

Timothy M. Murphy,

BLM Idaho State Director.

[FR Doc. 2017–27595 Filed 12–21–17; 8:45 am]

BILLING CODE 4310–AK–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 337–TA–1010]

Certain Semiconductor Devices, Semiconductor Device Packages, and Products Containing Same; Termination of Investigation on the Basis of Settlement

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined in the above-captioned investigation to grant a motion to terminate the investigation on the basis of settlement, resulting in termination of the investigation in its entirety.

FOR FURTHER INFORMATION CONTACT: Sidney A. Rosenzweig, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 708–2532. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205–2000. General information concerning the Commission may also be obtained by accessing its internet server at *https://www.usitc.gov.* The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *https://edis.usitc.gov.* Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205–1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on June 24, 2016, based on a complaint filed on behalf of Tessera Technologies, Inc.; Tessera, Inc.; and Invensas Corporation, all of San Jose, California (collectively, ''Tessera''). 81 FR 41344 (Jun. 24, 2016). The complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, by reason of infringement of certain claims of U.S. Patent No. 6,856,007 (''the '007 patent''); U.S. Patent No. 6,849,946 (''the '946 patent''); and U.S. Patent No. 6,133,136 (''the '136 patent''). The notice of investigation names 24 respondents. Those respondents are Broadcom Limited of Singapore, and Broadcom Corporation of Irvine, California (collectively, ''Broadcom''), as well 22 other manufacturers and importers of products containing Broadcom's semiconductor devices: Avago Technologies Limited of Singapore, and Avago Technologies U.S. Inc. of San Jose, California (collectively, ''Avago''); Arista Networks, Inc. of Santa Clara, California; ARRIS International plc, ARRIS Group, Inc., ARRIS Solutions, Inc., ARRIS Enterprises, and Pace Ltd., all of Suwanee, Georgia, as well as Pace Americas LLC and Pace USA LLC, both of Boca Raton, Florida, and ARRIS Technology, Inc. of Horsham, Pennsylvania (collectively ''ARRIS''); ASUSTek Computer, Inc. of Taipei, Taiwan, and ASUS Computer International of Fremont, California (collectively, ''ASUS''); Comcast Cable Communications, LLC, Comcast Cable Communications Management, LLC, and Comcast Business Communications, LLC, each of Philadelphia, Pennsylvania (collectively, ''Comcast''); HTC Corporation of Taoyuan, Taiwan, and HTC America Inc. of Bellevue, Washington (collectively, ''HTC''); NETGEAR, Inc. of San Jose, California; Technicolor S.A. of Issy-Les-Moulineaux, France, as well as Technicolor USA, Inc. and Technicolor Connected Home USA LLC, both of Indianapolis, Indiana (collectively, ''Technicolor''). The Office of Unfair Import Investigations is not participating in the investigation.

Earlier in Commission proceedings, Avago was terminated from the investigation. Order No. 70 (Feb. 27, 2017), *not reviewed,* Notice (Mar. 27, 2017). In addition, certain accused products were adjudicated not to infringe the '007 patent. Order No. 77 (Mar. 15, 2017), *reviewed and affirmed with modifications,* Notice (Apr. 14, 2017). Certain asserted claims have been withdrawn from the investigation. Order No. 82 (Mar. 22, 2017), *not reviewed,* Notice (Apr. 21, 2017).

On June 30, 2017, the ALJ issued the final initial determination (''final ID''). The final ID finds a violation of section 337 as to claims 16, 17, 20, and 22 of the '946 patent. Final ID at 262. The final ID finds that for claims 1, 2, 11, 12, 16, 24–26, and 34 of the '136 patent, the claims are infringed, and not invalid, but that the existence of a domestic industry was not shown. *Id.* at 262–63. For the '007 patent, the final ID finds that infringement was shown only as to

From: scrump@blm.gov
Subject: Farmington Mancos-Gallup RMPA/EIS Newsletter Issue 2
Date: Wednesday, January 24, 2018 7:34:51 PM
Attachments: Farmington Mancos-Gallup RMPA EIS Newsletter.pdf

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The United States Department of the Interior, Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA), have developed preliminary draft alternatives that will be further refined and analyzed in the Farmington Mancos-Gallup Resource Management Plan (RMP) Amendment/Environmental Impact Statement (EIS). The agencies have formulated these
alternatives in response to the issues and concerns identified during two rounds of public scoping: the first in 2014 and the second conducted from 2016 to 2017 after the BIA joined as a
co-lead agency. Per the National Environmental Policy Act, the agencies developed these alternatives because there were unresolved conflicts concerning different uses of available resources. These alternatives are reasonable and respond to the project purpose and need, are technically and economically feasible, and are consistent with the basic policy and management objectives for the BIA and BLM. Please see the attached newsletter for a further summary of the alternatives.

Want More Information?

While the BLM and BIA are not soliciting public comments at this time, we encourage you to stay informed on the process and future opportunities for submitting your comments. Visit www.blm.gov/nm/farmington for more information. Anyone wishing to be added to or deleted from the mailing list, wishing to change their contact information, or requesting further information may contact the BLM and BIA by any of the following methods:

Email: blm_nm_ffo_rmp@blm.gov

Mail:

BLM, Farmington Field Office, Attention: Jillian Aragon, RMPA Team Lead,
6251 North College Blvd., Suite A, Farmington, NM 87402

BIA, Navajo Region, Attention: Harrilene Yazzie, BIA Supervisory Environmental Protection Specialist,
P.O. Box 1060, Gallup, NM 87305

Phone:

BLM: 505-564-7670
BIA: 505-863-8287

Before providing your phone number, email address, or other personal identifying information, you should be aware that your information may be made publicly available at any time. While you can request that your personal identifying information be withheld from public review, we cannot guarantee that we will be able to do so.



Preliminary Draft Alternatives Developed for the Farmington Mancos-Gallup RMP Amendment/EIS

The United States Department of the Interior, Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA), have developed preliminary draft alternatives that will be further refined and analyzed in the Farmington Mancos-Gallup Resource Management Plan (RMP) Amendment/Environmental Impact Statement (EIS). The agencies have formulated these alternatives in response to the issues and concerns identified during two rounds of public scoping: the first in 2014 and the second conducted from 2016 to 2017 after the BIA joined as a co-lead agency. Per the National Environmental Policy Act, the agencies developed these alternatives because there were unresolved conflicts concerning different uses of available resources. These alternatives are reasonable and respond to the project purpose and need, are technically and economically feasible, and are consistent with the basic policy and management objectives for the BIA and BLM.

Between September 2014 and August 2017, the BLM and BIA planning teams met numerous times to develop management goals, objectives, and actions. They developed separate alternatives for the BLM RMPA/EIS and the BIA EIS concurrently. Cooperating agencies were invited to attend and participate in some of these meetings.

The BIA and BLM each have developed one no action alternative and four action alternatives. The action alternatives—A, B, C, and D—for both agencies offer a wide range of possible management approaches for responding to the planning issues. While the goals are often the same across alternatives, each alternative contains a discrete set of objectives and management actions, each constituting a separate BLM RMPA or BIA management program. Each alternative addresses resource program goals in varying degrees, with the potential for different long-range outcomes and conditions. The relative emphasis given to particular resources and resource uses also differs, including allowable uses, mitigation measures, and specific direction pertaining to individual resource programs.

The planning area for these alternatives encompasses 4,189,460 acres in San Juan, Rio Arriba, McKinley, and Sandoval Counties, about 75 percent of which is managed by the BLM or BIA. This includes communities such as Farmington, Aztec, and Bloomfield, along with the Navajo Chapters of Pueblo Pintado, Ojo Encino, Counselor, Nageezi, Lake Valley, Huerfano, Upper Fruitland, and San Juan, as well as portions of the Hogback, Burnham, Whiterock, Becenti, Whitehorse Lake, and Torreon Chapters. These BIA- and BLM -managed decision areas are varied and include a mixture of BLM and BIA (both Tribal trust lands and individual Indian allotments) surface land over mineral estate, as well as split estate, where the surface land ownership does not match the mineral estate ownership. On split estate, the BLM or BIA may manage only the minerals or only the surface. An example of where both BIA and BLM alternatives and management would apply is a scenario where the surface is Navajo Trust land and the mineral estate is federal, making the BIA responsible for decisions related to surface impacts from fluid mineral development while the BLM would manage the actual leasing of the fluid minerals.

The sections below summarize the preliminary draft alternatives that will be analyzed by each agency.

BLM No Action Alternative

This required alternative continues the current management direction and prevailing conditions derived from existing planning documents. Goals and objectives for resources and resource uses addressed in this RMPA/EIS are based on the applicable portions of the Farmington RMP (BLM 2003), along with associated amendments, activity and implementation level plans, and other management decision documents. Other relevant laws, regulations, and BLM policies would still apply.

The goals and objectives for BLM-administered surface lands and federal mineral estate would not change. Appropriate and allowable uses and restrictions pertaining to such activities as mineral leasing and development, vegetation management, lands with wilderness characteristics, and land use authorizations (LUAs) would also remain the same. The BLM would not modify existing or establish additional criteria to guide the identification of site-specific use levels for implementation.

BLM Alternative A

BLM Alternative A focuses on managing and enhancing habitats in the BLM decision area. This alternative emphasizes returning ecological systems to a healthy condition and maintaining and enhancing the resiliency of healthy ecosystems. To achieve this desired future condition, Alternative A integrates adaptive management and prioritizes natural and nonrenewable resource programs. Goals and objectives focus on environmental outcomes achieved by sustaining relatively unmodified physical landscapes and natural resource values. This alternative would establish the greatest number and extent of specific measures designed to support natural ecosystems. Vegetation communities would be managed to create a diverse and resilient ecosystem. The BLM would manage all lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Appropriate and allowable uses and restrictions placed on fluid mineral leasing and LUAs would focus on minimizing impacts on natural resources.

BLM Alternative B

BLM Alternative B emphasizes the preservation and protection of the Chacoan and cultural landscapes unique to northern New Mexico, including cultural and paleontological properties. Management direction would recognize and expand existing uses and would accommodate new uses, consistent with protecting the Chacoan and natural landscapes in the BLM decision area. The BLM would manage all lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Vegetation communities would be managed to enhance the unique landscapes while sustaining and increasing native vegetation communities.

The appropriate development scenarios for allowable uses (such as mineral leasing and ROWs) would emphasize protection of the natural and cultural landscape and associated viewshed and soundscape. Appropriate and allowable uses and restrictions would emphasize social and cultural resources, while mitigating impacts on land health.

A suite of measures that form portions of Alternative B, which maximize protection of the Chacoan landscape, are based on proposals from various groups between 2010 and 2015, including The Wilderness Society, the National Trust for Historic Preservation, the Chaco Alliance, and the San Juan Citizens Alliance. These proposals expressed concerns about impacts of oil and gas development on CCNHP, the Great North Road, and other Chacoan sites. Specific impact concerns relate to viewsheds and night skies, noise, recreation experience, air quality, water quality, lands with wilderness characteristics, and Traditional Cultural Properties (TCPs). Proposals requested that the BLM prepare a Master Leasing Plan (MLP) for the Greater Chaco Landscape. Because there is no clear definition of this landscape, the BLM is not preparing a MLP as part of the RMPA. However, many of the measures suggested by these groups are included in Alternative B.

BLM Alternative C

BLM Alternative C focuses on a strategy that balances community needs and development while enhancing land health. This alternative places a particular emphasis on the Tribal and local perspective of the landscape and prioritizes resource development while minimizing impacts on the traditional, historic, socioeconomic, and cultural lifeways of the planning area. Goals and objectives focus on socioeconomics, human health and environment, traditional communities, recreation opportunities, and tourism.

The BLM would manage a smaller portion of lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Vegetation communities would be managed to facilitate traditional and historic uses of the vegetation while allowing for resource development. The appropriate development scenarios for allowable uses would emphasize resource use without disrupting surrounding communities.

Next Steps

The preliminary schedule below outlines major steps in the RMPA/EIS process and what happens at each step.

Public Scoping and Resource Data Collection	Alternative Development and Draft RMPA/EIS Preparation **(We are here!)**	Draft RMPA/EIS Publication	Proposed RMPA/Final EIS Preparation and Publication	Records of Decision & Approved RMPA Preparation and Publication
Spring 2014—Summer 2017	***Summer 2014—Spring 2018***	***Spring—Fall 2018***	***Fall 2018—Spring 2019***	***Spring—Fall 2019***
Conduct special studies	Use comments from public scoping to develop alternatives	Publish draft RMPA/EIS	Review and incorporate public comments on draft RMPA/EIS	Write and publish records of decision
Host public scoping meetings	Analyze impacts of alternatives	Host public meetings	Publish proposed RMPA/final EIS	
Gather public comments over two scoping periods		Accept public comments on draft RMPA/EIS during 90-day comment period	30-day public review and protest period	
Publish scoping reports summarizing public comments				

BLM Alternative D

BLM Alternative D focuses on maximizing resources that target economic outcomes, while sustaining land health. Management direction would promote development of fluid mineral resources and would accommodate new uses to the greatest extent possible. The BLM would not manage any lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Vegetation communities would be managed to sustain healthy conditions and to promote responsible commercial development.

The appropriate development scenarios for allowable uses would emphasize maximizing resource production, while maintaining the basic protection needed to sustain resources. Appropriate and allowable uses and restrictions would emphasize social and economic outcomes, while mitigating impacts on land health. The BLM would accept that there could be adverse effects on historic properties associated with the Chacoan landscape that may or may not be mitigated under Section 106 of the National Historic Preservation Act.

BIA No Action Alternative

In accordance with the Indian Affairs National Environmental Policy Act Guidebook (59 IAM 3-H; BIA 2012), the BIA is required to consider a no action alternative, which would continue current management, or business as usual. The BIA no-action alternative would continue present management direction from practices contained in existing laws, regulations, policies, and standards.

BIA Alternative A

BIA Alternative A focuses on protecting and enhancing natural environments while emphasizing protection of sensitive wildlife areas and ecological resources. This alternative would establish the greatest number and extent of specific measures designed to protect or enhance natural resource values. Appropriate and allowable uses and restrictions would focus on minimizing impacts on natural resources.

BIA Alternative B

BIA Alternative B emphasizes the preservation and protection of the cultural and natural landscapes unique to northern New Mexico, including cultural resources such as CCNHP. The appropriate development scenarios for allowable uses (such as mineral leasing) would emphasize protection of the natural and cultural landscape and associated viewshed and soundscape. Appropriate and allowable uses and restrictions would emphasize minimizing and mitigating impacts on natural, social, and cultural resources.

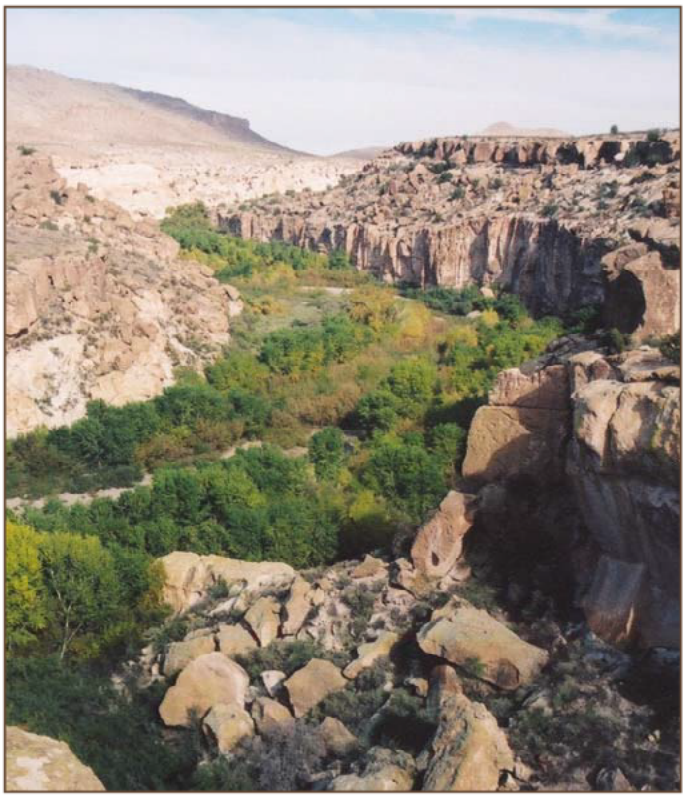
BIA Alternative C

BIA Alternative C focuses on allowing development to occur in harmony with the traditional, historic, socioeconomic, and cultural lifeways of the planning area. This alternative places a particular emphasis on the Tribal and local perspective of the landscape and traditional lifeways, while prioritizing management with the fewest impacts on human communities from oil and gas development, such as increased traffic and crime or decreased human health, air, and water quality.

BIA Alternative D

BIA Alternative D focuses on making the most of resources that target economic outcomes, while protecting land health. Management direction would promote development of fluid mineral resources and would accommodate new uses to the greatest extent possible. The appropriate development scenarios for allowable uses would emphasize maximizing resource production and royalty income for the landowners—both Navajo Nation and Individual Indian landowners or allottees—while minimizing and mitigating impacts in surrounding communities.





Want More Information?

While the BLM and BIA are not soliciting public comments at this time, we encourage you to stay informed on the process and future opportunities for submitting your comments. Visit **www.blm.gov/nm/farmington** for more information. Anyone wishing to be added to or deleted from the mailing list, wishing to change their contact information, or requesting further information may contact the BLM and BIA by any of the following methods:

Email: blm_nm_ffo_rmp@blm.gov

Mail:
BLM, Farmington Field Office, Attention: Jillian Aragon, RMPA Team Lead, 6251 North College Blvd., Suite A, Farmington, NM 87402

BIA, Navajo Region, Attention: Harrilene Yazzie, BIA Supervisory Environmental Protection Specialist, P.O. Box 1060, Gallup, NM 87305

Phone:
BLM: 505-564-7670
BIA: 505-863-8287

Before providing your phone number, email address, or other personal identifying information, you should be aware that your information may be made publicly available at any time. While you can request that your personal identifying information be withheld from public review, we cannot guarantee that we will be able to do so.

US Department of the Interior
Bureau of Land Management
Farmington Field Office
6251 College Blvd., Suite A
Farmington, NM 87402

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From: Laura King
To: "FOIA, BLM_WO"
Cc: "Jeremy Nichols"; singer@westernlaw.org
Subject: Freedom of Information Act Request
Date: Friday, February 2, 2018 6:55:30 PM
Attachments: CFO WMP FOIA 2.2.18.pdf

Dear Mr. Witt,

Please find attached a Freedom of Information Act request for information associated with BLM's management of oil and gas development on public lands. I make this request on behalf of WildEarth Guardians.

Please let me know if I can provide any clarification or assistance to you in fulfilling this request.

Best,

Laura

Laura King

Staff Attorney

Western Environmental Law Center

103 Reeder's Alley

Helena, MT 59601

(406) 204-4852 (tel.)

king@westernlaw.org

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Helena, Montana

Defending the West www.westernlaw.org

Western Environmental Law Center

February 2, 2018

Sent via email

Ryan Witt, FOIA Officer
Bureau of Land Management
IRM Governance Division
Attn: FOIA, Washington Office Coordinators
MS-WO-640
1849 C Street, NW
Washington, DC 20240
blm_wo_foia@blm.gov

FREEDOM OF INFORMATION ACT REQUEST

Dear Mr. Witt:

This is a request under the Freedom of Information Act (FOIA), 5 U.S.C. § 552, as amended. I make this request on behalf of WildEarth Guardians ("Guardians").

REQUESTED RECORDS

WildEarth Guardians requests the following "agency records":

1. All waste minimization plans accompanying Applications for Permit to Drill on federal lands submitted to the Bureau of Land Management's New Mexico State BLM Office for the Pecos District BLM Office, the Carlsbad Field Office, and the Roswell Field Office, or directly to the District and Field Offices, between January 17, 2017 and December 8, 2017, the effective date of the Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements Rule, 82 Fed, Reg. 58050 (Dec. 8. 2017) ("Waste Prevention Rule").[1]

[1] Waste minimization plans were required to accompany all Applications for Permit to Drill that were submitted to the BLM between January 17, 2017 and December 8, 2017 pursuant to 43 C.F.R. §3162.3-1, Drilling Applications and Plans. *See* Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule, 81 Fed. Reg. 83,008 (Nov. 18, 2016).

2. All Applications for Permit to Drill on federal lands submitted to the Bureau of Land Management's New Mexico State BLM Office for the Pecos District BLM Office, the Carlsbad Field Office, and the Roswell Field Office, or directly to the District and Field Offices, between January 17, 2017 and December 8, 2017. Please provide these APDs directly to us, rather than pointing us to the New Mexico state database where they may be found, as you did during a previous informal inquiry. We are interested in Applications for Permit to Drill for specific BLM Field Offices, and the state database does not sort APDs by BLM Field Office. To gather all APDs for a specific Field Office, our staff would need to click on each APD file within the state database and then scroll down to determine which Field Office the permit application is associated with—a time-consuming and cumbersome task.
3. All Conditions of Approval documents associated with Applications for Permit to Drill on federal lands submitted to the Bureau of Land Management's New Mexico State BLM Office for the Pecos District BLM Office, the Carlsbad Field Office, and the Roswell Field Office, or directly to the District and Field Offices, between January 17, 2017 and December 8, 2017. Again, please provide these Conditions of Approval documents directly to us.
4. All "agency records" related to applications to vent or flare gas from federal oil and gas leases or wells managed by the District and Field Offices submitted pursuant to Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases: Royalty or Compensation for Oil and Gas Loss ("NTL-4A"), Section IV.B., between December 8, 2017 and the date of this request. This includes:

    - Records—including Form 3160-5 Sundry Notices, "evaluation reports," and "action plans" required by NTL-4A Section IV.B—submitted in support of such applications.

    - Records of BLM approvals or denials of such applications.

    - Records regarding the duration or length of time flaring is approved for each Federal well, and records of any subsequent extensions of time allowed for flaring, re-applications to flare, or other records identifying the length of time flaring is or has been authorized.

Note that, in the publication of the final Waste Prevention Rule, BLM stated that "[T]he BLM already publicly posts APDs for a period prior to approval, and we plan to post the waste minimization plans accompanying the APDs in the same manner, subject to any protections for confidential business information." 81 Fed. Reg. at 83,043. Accordingly, please identify where BLM publicly posts APDs for the District and Field Offices referenced above and describe how to access waste minimization plans accompanying the APDs, if they are publicly available on a federal government website.

For purposes of this request, "agency records" is consistent with the meaning of the term under FOIA. This includes, but is not limited to, documents of any kind

including electronic as well as paper documents, emails, writings (handwritten, typed, electronic or otherwise produced, reproduced, or stored), correspondence, letters, memoranda, reports, consultations, notes, recordings, telephone conversation recordings, voice mails, telephone logs, messages, instant messages, G-chats, text messages, chats, telefaxes, photographs, videos, meeting notes or minutes, and electronic and magnetic recordings of meetings. All of the foregoing is included in this request if it is in BLM's possession and control. If such recordings are no longer under the control of BLM but were at any time, please refer this request to the relevant federal agency or agencies.

This request is not meant to exclude any other records that, although not specially requested, are reasonably related to the subject matter of this request. Please provide responsive records in digital format whenever possible.

*** * ***

Please identify and inform us of all responsive or potentially responsive records within 20 working days as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i), and the basis of any claimed exemptions or privilege, including the specific responsive or potentially responsive records(s) to which such exemption or privilege may apply. *See Citizens for Responsibility and Ethics in Washington v. Federal Election Com'n*, 711 F.3d 180, 182-183 (D.C. Cir. 2013) (holding that the agency must identify the exemptions it will claim with respect to any withheld documents within the time frame prescribed by FOIA). The Supreme Court has stated that FOIA establishes a "strong presumption in favor of disclosure" of requested information, and that the burden is on the government to substantiate why information may not be released under FOIA's limited exemptions. *Department of State v. Ray*, 502 U.S. 164, 173 (1991). Congress affirmed these tenets of FOIA in legislation as recently as December 2007, stating that government remains accessible to the American people and "is always based not upon the 'need to know' but upon the fundamental 'right to know.'" Public Law 110-175, 121 Stat. 2524, 2525 (Dec. 31, 2007).

If your office takes the position that any portion of the requested records is exempt from disclosure, we request that you provide us with an index of those records as required under *Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973), with sufficient specificity "to permit a reasoned judgment as to whether the material is actually exempt under FOIA." *Founding Church of Scientology v. Bell*, 603 F.2d 945, 959 (D.C. Cir. 1979). A *Vaughn* index must (1) identify each document or portion of document withheld; (2) state the statutory exemption claimed; and (3) explain how disclosure of the document or portion of document would damage the interests protected by the claimed exemption. *See Citizens Comm'n on Human Rights v. FDA*, 45 F.3d 1325, 1326 n.1 (9th Cir. 1995). "The description and explanation the agency offers should reveal as much detail as possible as to the nature of the document," in order to provide "the requestor with a realistic opportunity to challenge the agency's decision." *Oglesby v. U.S. Dept. of Army*, 79 F.3d 1172, 1176 (D.C. Cir. 1996). Such explanation will be helpful in deciding whether to appeal a decision to withhold documents and may help to avoid unnecessary litigation.

In the event that some portions of the requested records are properly exempt from disclosure, please disclose any reasonably segregable, non-exempt portions of the requested records. *See* 5 U.S.C. §552(b). If it is your position that a document contains non-exempt segments and that those non-exempt segments are so dispersed throughout the documents as to make segregation impossible, please state what portion of the document is non-exempt and how the material is dispersed through the document. *See Mead Data Central v. U.S. Department of the Air Force*, 455 F.2d 242, 261 (D.C. Cir. 1977). Claims of non-segregability must be made with the same detail as required for claims of exemption in a *Vaughn* index. If a request is denied in whole, please state specifically that it is not reasonable to segregate portions of the record for release.

FOIA requires federal agencies to make their records "promptly available" to any person who makes a proper request for them. 5 U.S.C. § 552(a)(3)(A) (as amended by OPEN Government Act of 2007, Pub. L. No. 110-175, 121 Stat. 2524).

Presumption of Openness and "Foreseeable Harm" Standard

On his first full day in office President Obama demonstrated his commitment to the ideals of transparency and openness by issuing a Memorandum to the heads of all Executive Branch Departments and agencies by calling on them to "renew their commitment to the principles embodied in FOIA." *See* Presidential Memorandum for Heads of Executive Departments and Agencies Concerning the FOIA, 74 Fed. Reg. 4683 (Jan. 21, 2009). The President directed all agencies to administer the FOIA with a clear presumption in favor of disclosure, to resolve doubts in favor of openness, and to not withhold information based on "speculative or abstract fears." *Id.* In addition, the President called on agencies to ensure that requests are responded to in "a spirit of cooperation," that disclosures are timely made, and that modern technology is used to make information available to the public even before a request is made. *Id.*

In accordance with the President's directives, on March 19, 2009, Attorney General Holder issued new FOIA guidelines, calling on all agencies to reaffirm the government's "commitment to accountability and transparency." Memorandum from Att'y Gen. Eric Holder for Heads of Executive Departments and Agencies (Mar. 19, 2009), *available at* http://www.justice.gov/ag/foia-memo-march2009.pdf. The Guidelines stress that the FOIA is to be administered with the presumption of openness called for by the President. *Id*. at p. 1.

The Attorney General "strongly encourage[d] agencies to make discretionary disclosures of information." *Id*. He specifically directed agencies not to withhold information simply because they may do so legally and to consider making partial disclosures when full disclosures are not possible. *Id*. He also comprehensively addressed the need for each agency to establish effective systems for improving transparency. *Id*. at p. 2. In doing so he emphasized that "[e]ach agency must be fully accountable for its administration of the FOIA." *Id.*

In issuing these new guidelines, Attorney General Holder established a new

"foreseeable harm" standard for defending agency decisions to withhold information. Under this new standard, the U.S. Department of Justice will defend an agency's denial of a FOIA request "only if (1) the agency reasonably foresees that disclosure would harm an interest protected by one of the statutory exemptions, or (2) disclosure is prohibited by law." *Id*. As a result, "agencies must now include the 'foreseeable harm' standard as part of the FOIA analysis at the initial request stage and the administrative appeal stage." Department of Justice Guide to the FOIA (2009), p. 25, available at http://www.justice.gov/oip/foia_guide09.htm.

Request for Fee Waiver

FOIA was designed to grant a broad right of access to government information, with a focus on the public's "right to be informed about what their government is up to," thereby "open[ing] agency action to the light of public scrutiny." *U.S. Dep't of Justice v. Reporters Comm. for Freedom of Press*, 489 U.S. 749, 773-74 (1989) (internal quotation and citations omitted). A key component of providing public access to those records is FOIA's fee waiver provision, 5 U.S.C. § 552(a)(4)(A)(iii), which provides that "[d]ocuments shall be furnished without any charge or at a [reduced] charge . . . if disclosure of the information is in the public interest because it is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester."

FOIA's fee waiver requirement is to be "liberally construed." *Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003); *Forest Guardians v. U.S. Dept. of Interior*, 416 F.3d 1173, 1178 (10th Cir. 2005). The fee waiver amendments of 1986 were designed specifically to provide organizations such as Guardians access to government documents without the payment of fees. As one Senator stated, "[a]gencies should not be allowed to use fees as an offensive weapon against requesters seeking access to Government information . . ." 132 Cong. Rec. S. 14298 (statement of Senator Leahy). Indeed, FOIA's waiver provision was intended "to prevent government agencies from using high fees to discourage certain types of requesters and requests, in clear reference to requests from journalists, scholars, and . . . non-profit public interest groups." *Better Gov't Ass'n v. Dep't of State*, 780 F.2d 86, 93-94 (D.C. Cir. 1986) (quoting *Ettlinger v. FBI*, 596 F. Supp. 867, 876 (D. Mass. 1984)).

Guardians, a non-commercial and public-interest requester, hereby requests a waiver of all fees associated with this request because disclosure "is likely to contribute significantly to public understanding of the operations or activities of the government and is not primarily in the commercial interest of the requester." 5 U.S.C. § 552(a)(4)(A)(iii); *see also* 43 C.F.R § 2.45. This request satisfies both statutory and regulatory requirements for granting a fee waiver, including fees for search, review, and duplication.[2] Below, stated first in bold, are the criteria the BLM considers in assessing

[2] Pursuant to FOIA, 5 U.S.C. § 552(a)(4)(A)(iv), no fee may be charged for the first two hours of search time or for the first one hundred pages of duplication.

requests for fee waivers, followed by an explanation of Guardians' satisfaction of those requirements. *See* 43 C.F.R § 2.48.[3] Fee waiver requests must be evaluated based on the face of the request. *See Citizens for Responsibility & Ethics in Washington v. U.S. Dep't of Justice*, 602 F. Supp. 2d 121, 125 (D.D.C. 2009).

(1) The subject of Guardians' request concerns identifiable operations or activities of the Federal Government:

The subject matter of the requested records directly and specifically concerns identifiable operations or activities of the federal government, with a connection that is direct and clear, not remote. Guardians requests information about documents submitted to or generated by the federal government pursuant to federal regulation.

The Department of Justice Freedom of Information Act Guide expressly concedes that "in most cases records possessed by a federal agency will meet this threshold" of identifiable operations or activities of the government. *See* Department of Justice Guide to the FOIA (2009), p. 25. This requirement is clearly met in this case.

(2) How disclosure is likely to contribute to public understanding of those operations or activities:

Disclosure of these records is likely to contribute to public understanding of the operations and activities of the federal government. BLM "must not make value judgments about whether the information at issue is 'important' enough to be made public; it is not the bureau's role to attempt to determine the level of public interest in requested information." 43 C.F.R. § 2.45(f).

(i) How the contents of the records are meaningfully informative:

The requested records are meaningfully informative about government operations or activities and are likely to contribute to an increased public understanding of those operations or activities. The records requested will provide Guardians with the ability to communicate to the public about the activities of the BLM, and, more broadly, of the federal government. The documents will give Guardians, and therefore the public, crucial insight into the way the federal government is managing energy development on public lands, including whether BLM is enforcing relevant federal regulations. Disclosure of the requested records will enhance the public's knowledge of this issue and support public oversight of federal agency operations.

These documents are not easily accessible to the public. Their release is "likely to contribute" to better public understanding of federal government's management of public

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[3] *See also* Department of Justice Fee Waiver Guidance to Agency Heads From Stephan Markman, Assistant Att'y Gen. (Apr. 2, 1987) (advising agencies of factors to consider when construing fee waivers), *available at* http://www.justice.gov/oip/foia_updates/Vol_VIII_1/viii1page2.htm.

lands. The public is always well served when it knows how government activities, particularly matters touching on legal and ethical questions, have been conducted. *See Judicial Watch*, 326 F.3d at 1314 ("[T]he American people have as much interest in knowing that key [agency] decisions are free from the taint of conflict of interest as they have in discovering that they are not.").

(ii) The logical connection between the content of the records and the operations or activities:

The requested records concern the operations or activities of the federal government—specifically, whether and to what extent the Bureau of Land Management's regulations concerning of oil and gas development on federal public lands is being carried out and enforced.

(iii) How disclosure will contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

The public currently does not have the ability to fully evaluate the actions or inactions of the federal government regarding the management of public lands. Disclosure of these records will contribute to the understanding of a reasonably broad audience of persons interested in the subject because we will disseminate the information we receive to a large audience of interested persons. Once the information is made available, it will be analyzed and presented to the public in a manner that will meaningfully enhance the public's understanding of this issue.

(iv) Your identity, vocation, qualifications, and expertise regarding the requested information and information that explains how you plan to disclose the information in a manner that will be informative to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

WildEarth Guardians is a nonprofit organization dedicated to environmental protection. WildEarth Guardians protects and restores wild places, wildlife, and wild rivers in the American West. Through its Climate and Energy Program, Guardians works to sustain a transition from fossil fuels to clean energy in order to safeguard the American West.

WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding BLM actions and policy. For example, WildEarth Guardians has utilized FOIA to obtain records related to BLM's federal coal leasing activities in Wyoming and has disseminated this information through the media, its own website, and through other forms of public commentary. Guardians most recently utilized FOIA to obtain and disseminate information regarding BLM management of oil and gas resources in New Mexico. This information was related to the agency's decision to

abruptly change the location of a planned oil and gas lease sale. The responsive FOIA documents have been shared with the media and have been reported on in various news stories.

Further, WildEarth Guardians regularly utilizes FOIA to obtain, analyze, and disseminate information and data regarding other federal agency actions and is consistently granted fee waivers from these agencies. Just in the last five years, Guardians has been granted fee waivers in conjunction with FOIA requests to the U.S. Environmental Protection Agency, U.S. Office of Surface Mining Reclamation and Enforcement, U.S. Forest Service, U.S. Fish and Wildlife Service, and U.S. Bureau of Reclamation. In granting WildEarth Guardians' requests for fee waivers, these agencies have acknowledged Guardians' ability to obtain, analyze, and disseminate information to a reasonably broad audience.

(v) Your ability and intent to disseminate the information to a reasonably broad audience of persons interested in the subject (for example, how and to whom do you intend to disseminate the information):

Guardians has the ability and intention to disseminate the information requested to the public and its many members and supporters. Therefore, the disclosure of the requested documents will contribute to the understanding of a reasonably broad audience of persons interested in the subject.

Guardians plans to disseminate the information it obtains pursuant to this FOIA request in various effective ways, including through its website, newsletter, press releases, Facebook page, public education events, comments on proposed agency actions, and other public interest advocacy. Guardians' staff will first analyze and digest the documents. The information will then be disseminated to Guardians' members and supporters, members of other conservation organizations, as well as other interested members of the public.

(3) How disclosure is likely to significantly contribute to the understanding of a reasonably broad audience of persons interested in the subject, as opposed to your individual understanding:

(i) Whether the information being requested is new:

Although the full contents of the requested records are currently unknown to us, Guardians does not request any records previously provided to us by the Government.

(ii) Whether the information would confirm or clarify data that has been released previously:

The information Guardians requests has not, to our knowledge, been released previously.

(iii) How disclosure will increase the level of public understanding of the operations or activities of the Department or a bureau that existed prior to disclosure:

Because this information is not easily accessible to the public, disclosure of these records will increase the level of public understanding of the operations or activities of BLM that existed prior to disclosure. Guardians will disseminate the information obtained from this FOIA request to a large public audience, as explained above, and will help the public understand the information in a simple and informative way.

(iv) Whether the information is already publicly available:

The information Guardians requests is not, to our knowledge, publicly available in a form that is easily accessible. We are aware that some of the requested records—specifically, the Applications for Permit to Drill—are available in a New Mexico state database, but that database is not organized by BLM Field Office, and therefore we would need to cull through hundreds of files to determine which records are responsive to our request for APDs. Simply because some of the requested records may be publicly available in some regard does not mean WildEarth Guardians does not qualify for a fee waiver. While the public availability of information may be a factor for BLM to consider when assessing whether a fee waiver requestor will contribute significantly to public understanding of the operations or activities of the government, it cannot serve as the sole basis for denying a fee waiver request. *See Campbell v. United States Dep't of Justice*, 164 F.3d 20, 36 (D.C.Cir.1999) ("[T]he mere fact that material is in the public domain does not justify denying a fee waiver; only material that has met a threshold level of public dissemination will not further 'public understanding' within the meaning of the fee waiver provisions."); *see also Fitzgibbon v. Agency for International Development*, 724 F.Supp. 1048, 1050–51 (D.D.C.1989) ("The availability of FOIA material in an agency's public reading room does not thrust the material into the public domain."); *United States Department of Justice v. Reporters Committee for Freedom of the Press,* 489 U.S. 749, 109 S.Ct. 1468, 1477 (1989) ("Plainly there is a vast difference between the public records that might be found after a diligent search of courthouse files . . . and a computerized summary located in a single clearinghouse of information."); *Prison Legal News v. Lappin*, 436 F. Supp. 2d 17, 24 (D.D.C. 2006) ("[T]o the extent that the remaining documents are available to the public, they are not available in a manner which would further public understanding.").

Here, because we intend to obtain, synthesize, and disseminate the requested records to the public via online sources, the media, and other sources, we will be able to reach a broader segment of the American public and proactively educate the public on the issue of BLM land and resource management. The BLM is not currently undertaking such extensive outreach and proactive education efforts.

(4) How the public's understanding of the subject in question will be enhanced to a significant extent by the disclosure:

The public's understanding of the federal government's management of oil and gas on public lands will be enhanced to a significant extent by the disclosure of these records. The public currently does not have the ability to evaluate whether the BLM is enforcing federal regulations related to methane mitigation from oil and gas development.

Guardians' dissemination of the information obtained pursuant to this FOIA request will enhance the public's understanding of this issue because this information is not currently available to the public. *See Federal CURE*, 602 F. Supp. 2d at 205 (the existing public availability of the information is weighed when determining the degree of significance that will be derived from the disclosure of the information) (citing *Forest Guardians*, 416 F.3d at 1181). As described above, Guardians will disseminate the information it obtains pursuant to this FOIA in various effective ways, including through its website, newsletter, press releases, Facebook page, and public education events. Furthermore, the information obtained through this FOIA request will be used to contribute to one or more of the following: public interest litigation, petitions, newsletters, public presentations, e-mail and postal mail publications, press releases, and local and national news stories.

Given Guardians' positions and abilities, disclosure will lead to a significant enhancement of the public's understanding of the Government operations and activities at issue.

(5) Any commercial interest that would be furthered by the requested disclosure:

Guardians has no commercial, trade, or profit interest that would be furthered by the requested disclosure. Guardians is a tax-exempt organizations under section 501(c)(3) of the Internal Revenue Code. As such, Guardians has no commercial interests. The requested records will be used in the furtherance of Guardians' mission as an education and advocacy group to protect and restore the natural environment.

Guardians, a non-profit organization, has no commercial interests and will realize no commercial benefit from the release of the requested information. Therefore, no assessment of the magnitude of the interest is required. *See* 43 C.F.R. § 2.48(b)(2)-(3).

Conclusion

Given Guardians' demonstrably successful efforts at educating the public on environmental issues, and the fact that their education programs have significantly contributed to an understanding of Government operations and activities, it is clear that Guardians is entitled to a fee waiver. *See* 43 C.F.R § 2.48. In the event that your agency denies Guardians a fee waiver, please send a written explanation for the denial along with a cost estimate. Please contact us for authorization before incurring any costs in excess of $50.

I look forward to your determination on this FOIA request within twenty days, as required by FOIA, 5 U.S.C. § 552(a)(6)(A)(i). The twenty-day statutory deadline is also applicable to Guardians' fee waiver request. *See, e.g., Judicial Watch, Inc. v. Rossotti*, 326 F.3d 1309, 1310 (D.C. Cir. 2003) (finding where an agency "fails to answer the [fee waiver] request within twenty days," judicial review is appropriate).

Please direct all correspondence and responsive records to counsel for WildEarth Guardians:

Laura King, Staff Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
king@westernlaw.org

Thank you for your attention to this request. If you have any questions about the requested documents or the requested fee waiver, please do not hesitate to contact me at the phone number or email address below.

Sincerely,



Laura King, Attorney
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
Email: king@westernlaw.org
Phone: (406) 204-4852

Attorney for WildEarth Guardians

From: scrump@blm.gov
Subject: Farmington Mancos-Gallup RMPA/EIS Newsletter Issue 2 Reissue
Date: Friday, February 2, 2018 7:40:41 PM
Attachments: Farmington Mancos Gallup RMPA EIS Newsletter Issue 2.pdf

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Technical difficulties with the previously emailed newsletter attachment made it unable to be read by some; the Farmington Mancos-Gallup RMPA/EIS Newsletter Issue 2 is therefore being reissued.

The United States Department of the Interior, Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA), have developed preliminary draft alternatives that will be further refined and analyzed in the Farmington Mancos-Gallup Resource Management Plan (RMP) Amendment/Environmental Impact Statement (EIS). The agencies have formulated these alternatives in response to the issues and concerns identified during two rounds of public scoping: the first in 2014 and the second conducted from 2016 to 2017 after the BIA joined as a co-lead agency. Per the National Environmental Policy Act, the agencies developed these alternatives because there were unresolved conflicts concerning different uses of available resources. These alternatives are reasonable and respond to the project purpose and need, are technically and economically feasible, and are consistent with the basic policy and management objectives for the BIA and BLM. Please see the attached newsletter for a further summary of the alternatives.

Want More Information?

While the BLM and BIA are not soliciting public comments at this time, we encourage you to stay informed on the process and future opportunities for submitting your comments. Visit www.blm.gov/nm/farmington for more information. Anyone wishing to be added to or deleted from the mailing list, wishing to change their contact information, or requesting further information may contact the BLM and BIA by any of the following methods:

Email: blm_nm_ffo_rmp@blm.gov

Mail:

BLM, Farmington Field Office, Attention: Jillian Aragon, RMPA Team Lead,
6251 North College Blvd., Suite A, Farmington, NM 87402

BIA, Navajo Region, Attention: Harrilene Yazzie, BIA Supervisory Environmental Protection Specialist,
P.O. Box 1060, Gallup, NM 87305

Phone:

BLM: 505-564-7670
BIA: 505-863-8287

Before providing your phone number, email address, or other personal identifying information, you should be aware that your information may be made publicly available at any time. While you can request that your personal identifying information be withheld from public review, we cannot guarantee that we will be able to do so.



Preliminary Draft Alternatives Developed for the Farmington Mancos-Gallup RMP Amendment/EIS

The United States Department of the Interior, Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA), have developed preliminary draft alternatives that will be further refined and analyzed in the Farmington Mancos-Gallup Resource Management Plan (RMP) Amendment/Environmental Impact Statement (EIS). The agencies have formulated these alternatives in response to the issues and concerns identified during two rounds of public scoping: the first in 2014 and the second conducted from 2016 to 2017 after the BIA joined as a co-lead agency. Per the National Environmental Policy Act, the agencies developed these alternatives because there were unresolved conflicts concerning different uses of available resources. These alternatives are reasonable and respond to the project purpose and need, are technically and economically feasible, and are consistent with the basic policy and management objectives for the BIA and BLM.

Between September 2014 and August 2017, the BLM and BIA planning teams met numerous times to develop management goals, objectives, and actions. They developed separate alternatives for the BLM RMPA/EIS and the BIA EIS concurrently. Cooperating agencies were invited to attend and participate in some of these meetings.

The BIA and BLM each have developed one no action alternative and four action alternatives. The action alternatives—A, B, C, and D—for both agencies offer a wide range of possible management approaches for responding to the planning issues. While the goals are often the same across alternatives, each alternative contains a discrete set of objectives and management actions, each constituting a separate BLM RMPA or BIA management program. Each alternative addresses resource program goals in varying degrees, with the potential for different long-range outcomes and conditions. The relative emphasis given to particular resources and resource uses also differs, including allowable uses, mitigation measures, and specific direction pertaining to individual resource programs.

The planning area for these alternatives encompasses 4,189,460 acres in San Juan, Rio Arriba, McKinley, and Sandoval Counties, about 75 percent of which is managed by the BLM or BIA. This includes communities such as Farmington, Aztec, and Bloomfield, along with the Navajo Chapters of Pueblo Pintado, Ojo Encino, Counselor, Nageezi, Lake Valley, Huerfano, Upper Fruitland, and San Juan, as well as portions of the Hogback, Burnham, Whiterock, Becenti, Whitehorse Lake, and Torreon Chapters. These BIA- and BLM -managed decision areas are varied and include a mixture of BLM and BIA (both Tribal trust lands and individual Indian allotments) surface land over mineral estate, as well as split estate, where the surface land ownership does not match the mineral estate ownership. On split estate, the BLM or BIA may manage only the minerals or only the surface. An example of where both BIA and BLM alternatives and management would apply is a scenario where the surface is Navajo Trust land and the mineral estate is federal, making the BIA responsible for decisions related to surface impacts from fluid mineral development while the BLM would manage the actual leasing of the fluid minerals.

The sections below summarize the preliminary draft alternatives that will be analyzed by each agency.

BLM No Action Alternative

This required alternative continues the current management direction and prevailing conditions derived from existing planning documents. Goals and objectives for resources and resource uses addressed in this RMPA/EIS are based on the applicable portions of the Farmington RMP (BLM 2003), along with associated amendments, activity and implementation level plans, and other management decision documents. Other relevant laws, regulations, and BLM policies would still apply.

The goals and objectives for BLM-administered surface lands and federal mineral estate would not change. Appropriate and allowable uses and restrictions pertaining to such activities as mineral leasing and development, vegetation management, lands with wilderness characteristics, and land use authorizations (LUAs) would also remain the same. The BLM would not modify existing or establish additional criteria to guide the identification of site-specific use levels for implementation.

BLM Alternative A

BLM Alternative A focuses on managing and enhancing habitats in the BLM decision area. This alternative emphasizes returning ecological systems to a healthy condition and maintaining and enhancing the resiliency of healthy ecosystems. To achieve this desired future condition, Alternative A integrates adaptive management and prioritizes natural and nonrenewable resource programs. Goals and objectives focus on environmental outcomes achieved by sustaining relatively unmodified physical landscapes and natural resource values. This alternative would establish the greatest number and extent of specific measures designed to support natural ecosystems. Vegetation communities would be managed to create a diverse and resilient ecosystem. The BLM would manage all lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Appropriate and allowable uses and restrictions placed on fluid mineral leasing and LUAs would focus on minimizing impacts on natural resources.

BLM Alternative B

BLM Alternative B emphasizes the preservation and protection of the Chacoan and cultural landscapes unique to northern New Mexico, including cultural and paleontological properties. Management direction would recognize and expand existing uses and would accommodate new uses, consistent with protecting the Chacoan and natural landscapes in the BLM decision area. The BLM would manage all lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Vegetation communities would be managed to enhance the unique landscapes while sustaining and increasing native vegetation communities.

The appropriate development scenarios for allowable uses (such as mineral leasing and ROWs) would emphasize protection of the natural and cultural landscape and associated viewshed and soundscape. Appropriate and allowable uses and restrictions would emphasize social and cultural resources, while mitigating impacts on land health.

A suite of measures that form portions of Alternative B, which maximize protection of the Chacoan landscape, are based on proposals from various groups between 2010 and 2015, including The Wilderness Society, the National Trust for Historic Preservation, the Chaco Alliance, and the San Juan Citizens Alliance. These proposals expressed concerns about impacts of oil and gas development on CCNHP, the Great North Road, and other Chacoan sites. Specific impact concerns relate to viewsheds and night skies, noise, recreation experience, air quality, water quality, lands with wilderness characteristics, and Traditional Cultural Properties (TCPs). Proposals requested that the BLM prepare a Master Leasing Plan (MLP) for the Greater Chaco Landscape. Because there is no clear definition of this landscape, the BLM is not preparing a MLP as part of the RMPA. However, many of the measures suggested by these groups are included in Alternative B.

BLM Alternative C

BLM Alternative C focuses on a strategy that balances community needs and development while enhancing land health. This alternative places a particular emphasis on the Tribal and local perspective of the landscape and prioritizes resource development while minimizing impacts on the traditional, historic, socioeconomic, and cultural lifeways of the planning area. Goals and objectives focus on socioeconomics, human health and environment, traditional communities, recreation opportunities, and tourism.

The BLM would manage a smaller portion of lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Vegetation communities would be managed to facilitate traditional and historic uses of the vegetation while allowing for resource development. The appropriate development scenarios for allowable uses would emphasize resource use without disrupting surrounding communities.

Next Steps

The preliminary schedule below outlines major steps in the RMPA/EIS process and what happens at each step.

Public Scoping and Resource Data Collection	Alternative Development and Draft RMPA/EIS Preparation **(We are here!)**	Draft RMPA/EIS Publication	Proposed RMPA/Final EIS Preparation and Publication	Records of Decision & Approved RMPA Preparation and Publication
Spring 2014—Summer 2017	***Summer 2014—Spring 2018***	***Spring—Fall 2018***	***Fall 2018—Spring 2019***	***Spring—Fall 2019***
Conduct special studies	Use comments from public scoping to develop alternatives	Publish draft RMPA/EIS	Review and incorporate public comments on draft RMPA/EIS	Write and publish records of decision
Host public scoping meetings	Analyze impacts of alternatives	Host public meetings	Publish proposed RMPA/final EIS	
Gather public comments over two scoping periods		Accept public comments on draft RMPA/EIS during 90-day comment period	30-day public review and protest period	
Publish scoping reports summarizing public comments				

BLM Alternative D

BLM Alternative D focuses on maximizing resources that target economic outcomes, while sustaining land health. Management direction would promote development of fluid mineral resources and would accommodate new uses to the greatest extent possible. The BLM would not manage any lands with wilderness characteristics to protect those characteristics as a priority over other multiple uses under this alternative. Vegetation communities would be managed to sustain healthy conditions and to promote responsible commercial development.

The appropriate development scenarios for allowable uses would emphasize maximizing resource production, while maintaining the basic protection needed to sustain resources. Appropriate and allowable uses and restrictions would emphasize social and economic outcomes, while mitigating impacts on land health. The BLM would accept that there could be adverse effects on historic properties associated with the Chacoan landscape that may or may not be mitigated under Section 106 of the National Historic Preservation Act.

BIA No Action Alternative

In accordance with the Indian Affairs National Environmental Policy Act Guidebook (59 IAM 3-H; BIA 2012), the BIA is required to consider a no action alternative, which would continue current management, or business as usual. The BIA no-action alternative would continue present management direction from practices contained in existing laws, regulations, policies, and standards.

BIA Alternative A

BIA Alternative A focuses on protecting and enhancing natural environments while emphasizing protection of sensitive wildlife areas and ecological resources. This alternative would establish the greatest number and extent of specific measures designed to protect or enhance natural resource values. Appropriate and allowable uses and restrictions would focus on minimizing impacts on natural resources.

BIA Alternative B

BIA Alternative B emphasizes the preservation and protection of the cultural and natural landscapes unique to northern New Mexico, including cultural resources such as CCNHP. The appropriate development scenarios for allowable uses (such as mineral leasing) would emphasize protection of the natural and cultural landscape and associated viewshed and soundscape. Appropriate and allowable uses and restrictions would emphasize minimizing and mitigating impacts on natural, social, and cultural resources.

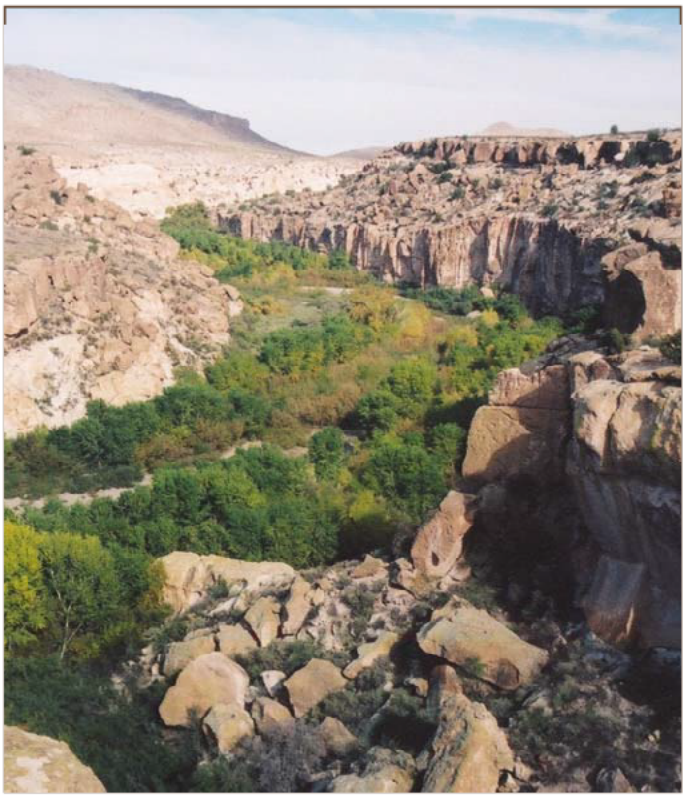
BIA Alternative C

BIA Alternative C focuses on allowing development to occur in harmony with the traditional, historic, socioeconomic, and cultural lifeways of the planning area. This alternative places a particular emphasis on the Tribal and local perspective of the landscape and traditional lifeways, while prioritizing management with the fewest impacts on human communities from oil and gas development, such as increased traffic and crime or decreased human health, air, and water quality.

BIA Alternative D

BIA Alternative D focuses on making the most of resources that target economic outcomes, while protecting land health. Management direction would promote development of fluid mineral resources and would accommodate new uses to the greatest extent possible. The appropriate development scenarios for allowable uses would emphasize maximizing resource production and royalty income for the landowners—both Navajo Nation and Individual Indian landowners or allottees—while minimizing and mitigating impacts in surrounding communities.





Want More Information?

While the BLM and BIA are not soliciting public comments at this time, we encourage you to stay informed on the process and future opportunities for submitting your comments. Visit **www.blm.gov/nm/farmington** for more information. Anyone wishing to be added to or deleted from the mailing list, wishing to change their contact information, or requesting further information may contact the BLM and BIA by any of the following methods:

Email: blm_nm_ffo_rmp@blm.gov

Mail:
BLM, Farmington Field Office, Attention: Jillian Aragon, RMPA Team Lead, 6251 North College Blvd., Suite A, Farmington, NM 87402

BIA, Navajo Region, Attention: Harrilene Yazzie, BIA Supervisory Environmental Protection Specialist, P.O. Box 1060, Gallup, NM 87305

Phone:
BLM: 505-564-7670
BIA: 505-863-8287

Before providing your phone number, email address, or other personal identifying information, you should be aware that your information may be made publicly available at any time. While you can request that your personal identifying information be withheld from public review, we cannot guarantee that we will be able to do so.

US Department of the Interior
Bureau of Land Management
Farmington Field Office
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From: Mike McGrady
To: Cally Younger
Subject: Solicitor memo
Date: Tuesday, February 6, 2018 6:19:12 PM
Attachments: EPAWR009733.pdf
Order Denying Petition for Rehearing.pdf

Per your request, attached is the solicitor memo. Also attached is the 10th Circuit's revised opinion that goes against the conclusions in the solicitor's memo. The Tribes have until March 7th to file a petition for writ of certiorari.

Mike McGrady

Policy Advisor
Office of Governor Matt Mead

2323 Carey Avenue
Cheyenne, WY 82002
307-777-2083

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

United States Department of the Interior

OFFICE OF THE SOLICITOR
Washington, D.C. 20240

IN REPLY REFER TO:

OCT 26 2011

Honorable Scott C. Fulton
General Counsel
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Fulton:

On April 13, 2009, your office requested an opinion on the boundary of the Wind River Indian Reservation (Reservation) in west-central Wyoming in connection with the Environmental Protection Agency's (EPA's) consideration of the Northern Arapaho and Eastern Shoshone's (Tribes') application for Treatment as a State (TAS) under the Clean Air Act. As part of the TAS application, the Tribes were required to identify the exterior boundaries of their Reservation. According to the Tribes, the exterior boundaries of their Reservation are those established by the 1868 Treaty of Fort Bridger,[1] less the areas ceded in the 1874 Lander Purchase and the 1897 Thermopolis Purchase. The State of Wyoming disagrees, contending that the Act of March 3, 1905, 33 Stat. 1016 (the 1905 Act), diminished and altered the exterior boundaries of the Reservation. Following additional research and analysis, the Department of the Interior (Department) concludes that neither the 1905 Act nor any other statute diminished and altered the exterior boundaries of the Reservation.

This letter first provides an overview of Supreme Court jurisprudence concerning diminishment or disestablishment of Indian reservations. Next is a summary of the factual history surrounding the Wind River Indian Reservation, followed by an analysis of the relevant Acts, legislative history, factual circumstances, and legal framework that provide the basis for my determination.

I. Supreme Court Jurisprudence on Reservation Diminishment

The Supreme Court has established a "fairly clean analytical structure" for determining whether a particular congressional act diminished or disestablished a reservation. *Solem v. Bartlett*, 465 U.S. 463, 470 (1984). Several governing principles instruct this analysis. First, "only Congress can divest a reservation of its land and diminish its boundaries." *Id.* at 470. "Once a block of land is set aside for an Indian reservation and no matter what happens to the title of individual plots within the area, the entire block retains its reservation status until Congress explicitly indicates otherwise." *Id.* (citing *United States v. Celestine*, 215 U.S. 278, 285 (1909)). Moreover, "there is a presumption in favor of the continued existence of a reservation," which requires that any contrary intent of Congress "must be clearly expressed." *See, e.g., South Dakota v. Yankton Sioux Tribe*, 522 U.S. 329, 343 (1998) (intent to diminish

[1] 15 Stat. 673 (1868).

must be "clear and plain") (citation omitted); *Solem,* 465 U.S. at 470 (intent to diminish must be "clearly evince[d]"); *DeCoteau v. District County Court*, 420 U.S. 425, 444 (1975) (intent to disestablish must be "clear"). Therefore, diminishment "will not lightly be inferred." *Solem*, 465 U.S. at 470. And any ambiguities in a statute are resolved in favor of the Indians. *Yankton Sioux*, 522 U.S. at 344 (citations omitted).

Solem and its progeny have established a three-prong test for analyzing whether a given statute diminished and altered a reservation's boundaries or simply offered non-Indians the opportunity to purchase land within the reservation. *Solem*, 465 U.S. at 470. The most probative evidence of congressional intent is the language of the statute itself. *Id.* Next, the court will look at the circumstances surrounding the passage of the act. *Id.* Third, but to a lesser extent, the court will look to events that occurred after the passage of the act to decipher Congress's intent. *Id.* at 471.

The analysis begins with the statutory language. Although the Supreme Court has never required a particular form of words, *Hagen v. Utah*, 510 U.S. 399, 411 (1994), when there is explicit reference to a cession or total surrender of all tribal interests in the land coupled with an unconditional commitment from Congress to pay the tribe for its land, there is an "almost insurmountable presumption" that Congress intended to disestablish the reservation. *Solem*, 465 U.S. at 470-71. Even with cession language coupled with sum certain compensation, however, courts also look to the legislative history and surrounding circumstances to determine congressional intent. *DeCoteau*, 420 U.S. at 445.

For example, the Supreme Court has found that language to "cede, sell, relinquish and convey" in exchange for a sum certain payment, and considering its surrounding circumstances and legislative history, terminated the boundaries of the Lake Traverse Reservation. *DeCoteau*, 420 U.S. at 425. In contrast, language that simply authorized the Secretary of the Interior "to sell or dispose of" unallotted lands with the proceeds from the sale of those lands to be distributed to the tribe was deemed insufficient to completely divest the Indian interest in the lands, and thus did not diminish the Colville Reservation boundaries. *Seymour v. Superintendent*, 368 U.S. 352 (1962), *see also Mattz v. Arnett*, 412 U.S. 481, 499 (1973) (reservation not terminated by discretionary allotment act that opened land for settlement).

The Supreme Court next turns to the circumstances surrounding the passage of the act, including its relevant legislative history to determine congressional intent. The Court has expressly "decline[d] to abandon [its] traditional approach to diminishment cases, which requires [an examination of] all the circumstances surrounding the opening of a reservation." *Hagen*, 510 U.S. at 412. The reasons are deeply rooted in history. As explained in *Yankton Sioux*, 522 U.S. at 343, "Congress naturally failed to be meticulous in clarifying whether a particular piece of legislation formally sliced a certain parcel of land off one reservation because the notion that reservation status may not be equal to tribal ownership was unfamiliar." Therefore, the courts have reviewed surrounding circumstances to determine congressional intent on a case-by-case basis. Indeed, "congressional intent must be clear, to overcome the general rule that doubtful expressions are to be resolved in favor of . . . the wards of the nation, dependent upon its protection and good faith." *DeCoteau*, 420 U.S. at 444. As summarized in *Solem*, "[w]hen events surrounding the passage of a surplus land Act—particularly the manner in which the

transaction was negotiated with the tribes involved and the tenor of legislative Reports presented to Congress—unequivocally reveal a widely held, contemporaneous understanding that the affected reservation would shrink as a result of the proposed legislation, we have been willing to infer that Congress shared the understanding that its action would diminish the reservation, notwithstanding the presence of statutory language that would otherwise suggest reservation boundaries remained unchanged." *Solem*, 465 U.S. at 471. Nevertheless, the Supreme Court has never been willing to extrapolate a specific congressional purpose to disestablish a reservation in a particular case from the general expectations in the allotment era. *Solem*, 465 U.S. at 468; *Mattz*, 412 U.S. at 499 (rejecting general congressional hostility to the reservation system as supporting termination of boundaries).

Lastly, but to a lesser extent, the Court looks to events that occurred after the passage of the act to determine congressional intent. *Solem* at 471. As part of this prong, the Court will look to subsequent demographics on a more "pragmatic level." *Solem*, 465 U.S. at 471. "Where non-Indian settlers flooded into the open portion of the reservation and the area has long-since lost its Indian character," the Court has acknowledged disestablishment may have occurred. *Id.* "Resort to subsequent demographic history is, of course, an unorthodox and potentially unreliable method of statutory interpretation." *Id.* at n.13. Moreover, "[t]here are . . . limits to how far we will go to decipher Congress' intent in any surplus land Act. When both the Act and its legislative history fail to provide substantial and compelling evidence of a congressional intention to diminish lands, we are bound by our traditional solicitude for the Indian tribes to rule that diminishment did not take place and that the old reservation boundaries survived the opening." *Solem* at 472 (citations omitted).

II. History 1868 - 1905

A. Establishment of the Reservation & the Lander Purchase

The United States and the Shoshone Indians established the Wind River Reservation in 1868 by the Treaty of Fort Bridger. 15 Stat. 673. The Reservation boundary was described as follows:

> Commencing at the mouth of Owl Creek and running due south to the crest of the divide between the Sweetwater and Papo Agie [sic] Rivers; thence along the crest of said divide and the summit of Wind River Mountains to the longitude of North Fork of Wind River; thence due north to mouth of said North Fork and up its channel to a point twenty miles above its mouth; thence in a straight line to headwaters of Owl Creek and along middle channel of Owl Creek to place of beginning.

Id. The treaty reserved "the absolute and undisturbed use and occupation of the Shoshone Indians herein named, and for such other friendly tribes or individual Indians as from time to time they may be willing, with the consent of the United States, to admit amongst them." *Id.* In 1878, the United States placed the Arapaho Indians on the Reservation. The Arapaho and the Shoshone have equal property rights to the Reservation. *See Shoshone Tribe v. United States*, 299 U.S. 476, 486-89 (1937).

On December 15, 1874, Congress ratified the Lander Purchase. 18 Stat. 291 (1874). Under the Lander Purchase, the Tribes agreed to an outright sale of all their interests in Reservation lands generally south of the 43rd parallel in exchange for a lump sum payment of $25,000. The express purpose of the Act ratifying the Lander Purchase was "to change the southern limit of said reservation." *Id.* at 292; *see also* 18 Stat. 291, 292 (1874). There is no dispute that pursuant to the Lander Purchase, Congress intended to diminish and alter the boundary of the Reservation to forever exclude those lands.

B. The 1891 and 1893 Failed Agreements

On March 3, 1891, Congress appointed a commission to negotiate for additional cessions of portions of the Reservation the Tribes "may choose to dispose of." 26 Stat. 989, 1009 (1891). The commission negotiated, and the Tribes agreed to, a proposed cession to an area lying north of the Big Wind River, together with a strip on the eastern side thereof, by which the Tribes agreed to "cede, convey, transfer, relinquish, and surrender, forever and absolutely . . . all their right, title, and interest, of every kind and character in and to the lands, and the water rights appertaining thereunto."[2] In consideration for the lands sold, the United States proposed to pay the Tribes $600,000.[3] Congress did not ratify this agreement.

In 1893, Congress sent another commission to negotiate with the Tribes. 27 Stat. 120, 138 (1892). The commissioners proposed a cession of all Reservation land lying north of the Big Wind River, as well as lying south and east of the Popo Agie/Little Wind River, in exchange for $750,000. The Tribes refused to consider any cession of lands on the southeastern side of the Reservation and no agreement was reached.[4]

C. The 1897 Thermopolis Purchase

In 1896, the United States negotiated with the Tribes for the sale of land around the Big Horn Hot Springs near the present town of Thermopolis. Indian Inspector James McLaughlin, the same federal agent who subsequently negotiated the agreement ratified by the 1905 Act, represented the United States. In April 1896, the United States and the Tribes entered into an

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[2] H.R. Ex. Doc. No. 70, 52d Cong., 1st Sess. (Jan. 11, 1892), "Shoshone and Arapaho Indians of the Shoshone or Wind River Reservation, Message from the President of the United States," BATES SH00578 at BATES SH00579, 00592. The land proposed to be ceded was north of the mid-channel of the Big Wind River to Wood Flat Crossing, then directly east to the Big Horn River, then directly south to the southern boundary of the Reservation. The Tribes refused to sell land on the southern border of the reservation. *Id.* at 4-5. *See also* H.R. Ex. Doc. No. 51, 53d Cong., 2d Sess. (Jan. 3, 1894), "Negotiations with Shoshone and Arapahoe Indians," BATES SH00644, and H.R. Rep. No. 58-2355, 58th Cong., 2d Sess. (April 11, 1904), "Indians On the Shoshone or Wind River Indian Reservation, Wyo.," BATES SH00721 at BATES SH00723 (the 1891 agreement proposed to cede an area in the northern and eastern part of the reservation).

[3] H.R. Ex. Doc. No. 70 at 3, 30. The agreement provided further that lands around the hot springs in the northeast corner of the Reservation should "be reserved from entry as public lands." *Id.* at 26. This language implies that the remainder of the ceded lands also would be subject to entry as public lands, which would be consistent with the intent of the Assistant Attorney General of the Department of the Interior when he requested legislative language to designate the sold lands as public lands. Congress rejected the proposed amendment. *Id.* at 15-16, 41-42.

[4] H.R. Ex. Doc. 51, 53d Cong., 2d Sess., at BATES SH00649, SH00654. The lack of agreement focused on a 5-mile strip on the south side of the Reservation. *Id.* at BATES SH00658-59.

agreement, known as the "Thermopolis Purchase," in which the Tribes agreed to "cede, convey, transfer, relinquish and surrender, forever and absolutely all their right, title, and interest of every kind and character in and to the lands and the water rights appertaining thereunto" with respect to a tract surrounding the Big Horn Hot Springs. Congress ratified the agreement on June 7, 1897. 30 Stat. 93 (1897), *see* S. Rep. No. 54-247, 54th Cong., 1st Sess., (May 8, 1896).[5] The sold lands were to be "set apart as a national park or reservation, forever reserving [the hot springs] for the use and benefit of the general public." *Id.* at 4. The Indians were "allowed to enjoy the advantages of the conveniences that may be erected thereat with the public generally." *Id.* "[I]n consideration for the lands ceded, sold, relinquished and conveyed," the United States agreed to pay a lump sum of $60,000. *Id.* After the Thermopolis Purchase, the General Land Office surveyed the lands acquired under the Act as public lands under the 6th Principal Meridian (the pre-existing eastern boundary of the Reservation had been surveyed as part of the Reservation's meridian – the Wind River Meridian.").[6] There is no dispute that pursuant to the Thermopolis Purchase, Congress intended to diminish and alter the boundary of the Reservation to forever exclude those lands.

D. 1905 Act

In March 1904, Representative Frank Mondell from Wyoming introduced a bill to open the Reservation under homestead, town-site, and coal and mineral land laws. The bill was based loosely on the 1891 and 1893 negotiations but included some important key differences.[7] The bill enlarged the area proposed to be ceded, used different cession language and, instead of providing for sum certain payment as proposed during the prior negotiations, the Tribes would be paid as the land was sold. H.R. Rep. No. 58-2355 at 4.[8] The report explained that "the bill provides that the land shall be opened to entry under the homestead, town-site, coal and mineral laws . . . ." *Id.* The Office of Indian Affairs reported favorably on the bill. *Id.* at 5.[9]

A month later, the Mondell bill was presented to the Tribes. *Id.* at 10.[10] It was McLaughlin who returned to the Reservation "to present to [the Tribes] a proposition for the opening of certain portions of [their] reservation for settlement by the whites."[11] McLaughlin did not, however, refer to the 1891 agreement in explaining the purposes of the agreement to the Tribes. Rather, he informed the Tribes that the United States would *not* pay a lump sum amount and described the agreement as "having the surplus lands of your reservation open to settlement

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[5] BATES SH00664 at BATES SH00680.

[6] *See* Letter, Thos. P. Smith, Acting Commissioner to Secretary (May 5, 1896), *reprinted in* S. Doc. No. 247, 54th Cong., 1st Sess., 15 (1896); H.R. Rep. 344, 59th Cong., 1st Sess., 2 (1906).

[7] The H.R. Rep. No. 58-2355 (1904) at 5, BATES SH00726. The Committee Report rejected a suggestion from the Department to reduce the ceded area by including in the proposed diminished reservation lands southeast of the Popo-Agie River where there were several Indian allotments. Instead, Article XI was amended to allow the Indians to take allotments in the ceded territory and confirm them prior to its being opened. It also was believed that "these are the most practicable and advantageous boundaries inasmuch as but few Indians or allotments will be outside of the said boundaries and it is important that the boundaries of the diminished reserve shall so far as possible remain a water boundary." *Id.* at 2, BATES SH00722.

[8] BATES SH00721 at BATES SH00725.

[9] *Id.* at BATES SH00726.

[10] BATES SH01367 at BATES SH01370-72.

[11] Minutes of council held at Shoshone Agency, Wyoming (April 19, 1904), BATES SH01367 at BATES SH01368.

and realizing money from the sale of that land, which will provide you with the means to make yourselves comfortable upon your reservation."[12]

McLaughlin also described the boundaries of the "diminished reservation"[13] and the fact that natural water boundaries would be respected to prevent trespass into the exclusive tribal area.[14] When the Tribes wanted some lands north of the Big Wind River excluded from the ceded area, McLaughlin countered that the allotments in the area could be retained, or cancelled and come within the Reservation, but that on the diminished reservation, they would be protected from the non-Indians. As stated by McLaughlin:

> A little corner of land left north of the Wind River would cause you no end of trouble, as you would be continually over-run by the herds of the whiteman. However, any of you who retain your allotments on the other side of the river can do so, and you will have the same rights as the whiteman, and can hold your lands or dispose of them or lease them, as you see fit. On the reservation, you will be protected by the laws that govern reservations in all your rights and privileges. Furthermore, all of you who may retain your allotments off the reservations [sic], will not lose any of your rights on the reservation, and you have rights the same as if you remained in the diminished reservation.[15]

Contemporaneous correspondence from the Tribes shows their reliance and understanding of McLaughlin's assurance "that the unsold lands would belong to [the Tribes]" until they were sold. Letter Arapahoe Delegation to Commissioner of Indian Affairs (March 9, 1908).[16]

On April 21, 1904, the Tribes signed an agreement containing language similar to the proposed bill ("1904 Agreement").[17] Congress ratified the 1904 Agreement with modification

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[12] *Id.* at 3-4, BATES SH01370-71.

[13] McLaughlin described the boundaries of the Reservation (*id.* at 6, BATES SH01373) as thus:

> I now wish to talk of the boundaries of the reservation and the residue that will remain in your diminished reservation. * * * The tract to be ceded to the United States . . . is estimated at 1,480,000 acres, leaving 808,500 acres in the diminished reservation. This embraces the lands within the lines described as follows: Commencing where the Wind River crosses your western boundary line, following down the Wind River to its junction with the Popo-Agie; thence up the Popo-Agie to its intersection with your southern boundary line; thence along the southern boundary line to the southwest corner of your reservation; thence north along the western boundary to the place of beginning on the Big Wind River.

[14] *Id.* at 14, BATES SH01381.

[15] *Id.*.

[16] BATES SH52182 at BATES SH52186.

[17] H.R. Rep. No. 58-3700, "Agreement with Indians Residing on the Shoshone Indian Reservation, Etc." 58th Cong., 3d Sess. at 15 (Jan. 19, 1905). As reported by McLaughlin to the Department:

> The diminished reservation leaves the Indians the most desirable and valuable portion of the Wind River Reservation and the garden spot of that section of the country. It is bounded on the north by the Big Wind River, on the east and southeast by the Big Popo-Agie River, which being never failing streams carrying a considerable volume of water, give natural boundaries with well defined lines; and the diminished reservation, approximately 808,000 acres about three-fourths of which is

by the Act of March 3, 1905, 33 Stat. 1016.[18] In Article I of the 1905 Act, the Tribes agreed to "cede, grant, and relinquish to the United States, all right, title, and interest . . . to all lands embraced within" the portion of Reservation located north of the Wind River, as well as the portion located southeast of the Popo Agie River. It also permitted those Indians who had previously selected a tract within "the portion of said reservation hereby ceded" to "have the same allotted and confirmed to him or her" or to select other lands "within the diminished reserve in lieu thereof at any time before the lands hereby ceded shall be opened for entry." *Id.*

In Article II, the United States agreed to dispose of the lands "ceded, granted, relinquished, and conveyed by Article I," amounting to approximately 1,480,000 acres, "under the provisions of the homestead, town-site, coal and mineral land laws, or by sale for cash." *Id.* at 1019. The Act did not provide for a sum-certain payment. Rather, the United States agreed to pay to the Indians the proceeds derived from the sales of the lands. The Act also did not guarantee to find purchasers for the lands, but rather the United States agreed to "act as trustee for said Indians to dispose of said lands and to expend for said Indians and pay over to them the proceeds received from the sale thereof only as received, as herein provided." Article IX, *id.* at 1020-21.[19]

III. Analysis

A. The 1905 Act

1. *Language of the 1905 Act*

The most probative evidence of congressional intent is the language of the statute itself. *Solem*, 465 U.S. at 470. The 1905 Act does not contain any of the hallmark language evincing clear congressional intent to sever the land addressed by that Act from Reservation status.

First, the 1905 Act does not utilize "[e]xplicit reference to cession or other language evidencing the present and total surrender of all tribal interests." *Solem*, 465 U.S. at 470. When

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> irrigable land, allows 490 acres each for the 1,650 Indians now on the reservation. I gave this question a great deal of thought and considered every phase of it very carefully and became convinced that the reservation boundary, as stipulated in the agreement was ample for the needs of the Indians belonging thereto; that by including any portion of the lands north of the Big Wind River or east of the Big Popo-Agie River in the diminished reservation it would only be a short time until the whites would be clamoring to have it open to settlement and the Indians would be eventually compelled to give it up.

Id. at 17.

[18] *Id.* at 4-9; H.R. Rep. Rep. No. 58-4884, "Agreement with Indians on the Shoshone Reservation in Wyoming, Etc." 58th Cong., 3d Sess. (March 1, 1905).

[19] Article III of the 1905 Act, amending the 1904 Agreement, provided that of the amount to be derived from sales of the opened area, $85,000 shall be used to make per capita cash payments of $50 dollars to each Indian. 33 Stat. 1020. In Article IX, Section 3, Congress ended up appropriating the $85,000, however, the money was not intended to be a lump sum payment, but was to be reimbursed as the land was sold. *Id.* Any balance remaining of the $85,000 was to be used for "survey and marking of the out boundaries of the diminished reservation where the same is not a natural water boundary," and for construction of an irrigation system on the diminished reserve. *Id.* at 1022. The survey was requested by the Tribes who believed that the south and southwestern boundaries under the 1868 Treaty at Fort Bridger were not correctly marked. BATES SH01367 at BATES SH01383, 01387.

contrasted to the text of the 1891 agreement and the 1897 Thermopolis Purchase, the operative language of the 1905 Act is remarkably more limited. The 1891 agreement provided the Tribes would "cede, convey, transfer, relinquish, and surrender, forever and absolutely . . . all their right, title, and interest, of every kind and character in and to the lands, and the water rights appertaining thereunto" lying north of the Big Wind River. H.R. Ex. Doc. No. 70;[20] *see also DeCoteau*, 420 U.S. at 438-40; *Yankton Sioux*, 522 U.S. at 337; *Rosebud*, 430 U.S. at 591-92. Similarly, the Thermopolis Purchase provided that the Tribes would "cede, convey, transfer, relinquish and surrender, forever and absolutely all their right, title, and interest of every kind and character in and to the lands and the water rights appertaining thereunto" with respect to a tract surrounding the Big Horn Hot Springs. 30 Stat. 93.[21] These prior actions illustrate Congress's legislative acumen in using words to permanently sever land from an Indian reservation. Importantly, Congress did not ratify the 1891 Agreement and did not use the more expansive, operative words in enacting the 1905 Act. Indeed, the language of the 1905 Act is devoid of any language conveying, transferring, or surrendering forever and absolutely any portion of the Wind River Reservation to the United States. Rather it "cede[s], grant[s], and relinquish[es]" the lands "embraced *within*" the Reservation to the United States. 33 Stat. 1016 (Art. I) (emphasis added). *Compare DeCoteau*, 420 U.S. at 438-40; *Yankton Sioux*, 522 U.S. at 337; *Rosebud*, 430 U.S. at 591-92.

Second, unlike the language in the previous failed agreements (1891 and 1893) and the Thermopolis Purchase, there was no sum certain compensation in the 1905 Act.[22] The Tribes would be compensated only as the lands were sold and, significantly, the Tribes continued to hold an interest in the lands unless sold. *See Ash Sheep Co. v. United States*, 252 U.S. 159 (1920); 54 I.D. 559.[23] Additionally, nothing in the Act "shall in any manner bind the United States to purchase any portion of the lands herein described or to dispose of said lands . . . ." 33 Stat. 1020 (Art. IX). Thus, there is simply no express language in the 1905 Act that severs the opened area from the Reservation.

Third, the 1905 Act did not restore the ceded land to the public domain. In fact, members of Congress disclaimed any intent to do so.[24] In contrast, the Thermopolis Purchase, which re-

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[20] BATES SH00578 at BATES SH00592.

[21] BATES SH00664 at BATES SH00667.

[22] *See supra* note 20. Although the Supreme Court has found diminishment of reservation boundaries in the absence of a sum certain, *see, e.g., Rosebud*, 430 U.S. 584, it has done so only after review of the surrounding circumstances and concluding those circumstances evidenced a clear intent to diminish and permanently sever land from the reservation. As discussed in Section III.A.2 below, however, the surrounding circumstances here do not reflect such congressional intent. Moreover, it is important to the analysis that the operative cession language in the 1905 Wind River Act is different and more limited than the language in *Rosebud*. *See infra* text at pg. 11-13.

[23] The Supreme Court characterized this cession to the United States as land "to be held by it in trust for the sale of such timber lands, timber and other products, and for the making of leases for various purposes." *United States v. Shoshone Tribe of Indians*, 304 U.S. 111, 114 (1938).

[24] For example, in a discussion in the House of Representatives on an amendment to protect a non-Indian coal lessee, Asmus Boysen, a question was raised as to whether the lease would terminate automatically if the bill were passed. The Chairman of the House Indian Affairs Committee Representative Marshall objected to the protection as unnecessary as the land was not being restored to the public domain.

> [Rep. Fitzgerald] says that Mr. Boysen's lease was canceled when the title to these lands passed from the Indians. True, there was a clause to the effect that when the lands were restored to the public domain this lease was canceled. The difficulty is, however, that these lands are not restored

designated the land for the public's use as a national park, is inconsistent with that land's continued use as an Indian reservation. The Supreme Court has found that language which "'restored to the public domain portions of a reservation would result in diminishment.'" *Hagen*, 510 U.S. at 414 (holding that restoration of unallotted lands to the public domain "evidences a congressional intent with respect to those lands inconsistent with reservation status") *citing Rosebud*, 430 U.S. at 589, and n.5. Thus, the limited and conditional commitment of the United States, coupled with the absence of explicit hallmark language of permanent surrender of the lands, reveal that the 1905 Act did not express a clear intent by Congress to permanently sever the opened lands and forever alter the exterior boundaries of the Reservation.

There are several references in the Act to a "diminished reserve" and in the legislative history to "reduce the reservation."[25] But as noted by the Supreme Court, such "isolated phrases . . . are hardly dispositive." *Solem*, 465 U.S. at 476. Moreover, at the time of the 1905 Act, the term "diminished" was not a legal term of art utilized in the manner as it is today. As the Supreme Court noted in *Solem*, "[w]hen Congress spoke of the 'reservation thus diminished' it may well have been referring to diminishment in common [tribal] lands and not diminishment of reservation boundaries." *Id.* at n.17 (citations omitted). Indeed as used in relation to the 1905 Act, it appears that the term is used merely as shorthand for that portion of the Reservation that the Tribes retained for their exclusive use.[26] Finally, there is no question that the Tribes retained an interest in the ceded lands until sold. The fact that the 1905 Act used the term "diminished" several times, therefore, is not dispositive; nor does it evince a clear intent by Congress to permanently alter the exterior boundaries of the Reservation. As discussed above, Congress knew how to explicitly express its intent and it did not do so here.

This conclusion that the language of the 1905 Act does not evince a clear congressional intent to diminish the boundary of the Wind River Reservation is consistent with the position of the United States in *In Re Rights to Use Water in Big Horn River*, 753 P.2d 76, 127, *aff'd by Wyoming v. U.S.*, 492 U.S. 406 (1989) (*Big Horn I*) involving the Tribes' water rights. There, the United States maintained that the 1905 Act did not diminish the boundary of the Reservation. In arguments before the Wyoming Supreme Court, the United States contended that the 1905 Act fails under both prongs of the *Solem* diminishment analysis:

> (1) where there is explicit language of cession or language evidencing the present and total surrender of all tribal interests and the Agreement gives an indication of an unconditional commitment of the United States to compensate the Indians, or (2) where "events surrounding the passage of the surplus land act, particularly the manner in which the transaction was negotiated with the

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> to the public domain, but are simply transferred to the Government of the United States as trustee for these Indians, and the clause which the gentlemen speaks of does not apply, and I think he knows it, as it was discussed in committee.

H. Cong. Rec. 1945 (Feb. 6, 1905), BATES SH08347.

[25] H.R. Rep. No. 58-2355 at 3 explained the purposes of the bill as "propos[ing] to reduce the reservation, as suggested by Mr. Woodruff at the time of the making of the agreement of 1891 . . . The bill in question still leaves the Indians with 808,500 acres in the diminished reserve." *But see Solem*, 465 U.S. at 476 n.17.

[26] *See supra* notes 15 and 16 with accompanying text.

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> tribe involved and the tenor of the legislative reports presented to Congress – unequivocally reveal a widely held contemporaneous view that the affected reservation would shrink as a result of the proposed legislation."

U.S. Brief at 96 (emphasis in original).[27] Consistent with the requirement that the Act be read as a whole,[28] the United States pointed out in its brief that the Act contains several provisions that indicate no diminishment: (1) in Article IX, the United States specifically did not commit to compensate the Tribes a fixed amount – the Tribes would be paid as the land was sold; (2) in Article III, the United States recognized the right of Indians to remain in the ceded area;[29] (3) in Article III, the United States authorized payments to establish water rights for the Indians remaining in the ceded area; (4) in Article X, the United States stated nothing in the Act would deprive the Tribes of their rights under the Treaty; and, (5) the Agreement does not use the word "convey" in Article I. *Id.* Moreover, receipts from the land sales under the 1905 Act did not go to the general fund of the United States Treasury. U.S. Brief at 98.

These distinctions are in direct contrast with the Thermopolis Purchase in which: (1) the United States committed to pay the Tribes a fixed amount; (2) the Indians retained no rights to occupy the ceded area; (3) there is no retention of treaty rights in the ceded lands; and (4) the Thermopolis Purchase used the word "convey." *Id.* The Wyoming Supreme Court ruled that Congress intended to reserve water for the Wind River Reservation and emphasized that lands ceded under the 1905 Act held the same reservation status and reserved water rights as reservation lands not affected by the 1905 Act. *Big Horn I*, 753 P.2d at 114. Significantly, in the *Big Horn I* litigation, the Special Master heard arguments on whether the 1905 Act disestablished the Reservation boundaries and squarely rejected them, concluding instead that the language of the 1905 Act "clearly indicates that the intent of th[e] Act was to establish a trust relationship, with the United States acting as trustee for the sale of certain Indian lands to the settlers."[30] Because the unsold opened lands did not lose their Indian status, they acquired the same reserved water rights priority dates as lands within the unopened portion of the Reservation.[31] The State District Court upheld this finding by the Special Master.[32]

The 1905 Act contains none of the hallmark language signifying Congress's intent to alter the exterior boundaries of the Wind River Reservation. This position is consistent with the long-standing position of the United States and with applicable case law, including the court's finding in the *Big Horn* adjudication. It is clear that the 1905 Act did not disestablish or otherwise alter the exterior boundaries of the Reservation.

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[27] Today, the *Solem* test is referred to most frequently as a 3-part test. *Hagen*, 510 U.S. at 411.
[28] *Solem*, 465 U.S. at 476.
[29] Tribal members could obtain allotments in the 1905 Act area before it was opened to non-Indians. In *Solem*, the Court found such a provision to be inconsistent with intent to diminish. *Id.* at 474. *See also* text surrounding fn. 20, *supra.*
[30] Report of Special Master Roncalio, Concerning Reserved Water Right Claims by and on behalf of the Tribes of the Wind River Indian Reservation, Wyoming, 39 ("Master's Report"), BATES SH04101 at BATES SH04152.
[31] *Id.* at 37.
[32] *In re The General Adjudication of All Rights to Use Water in the Big Horn River System and All Other Sources*, CIV No. 4493, Op. at 23 (Wyo. D. Ct. May 10, 1983), BATES SH04484 at BATES SH04507.

2. *Surrounding Circumstances*

According to the *Solem* framework, congressional intent also may be gleaned from circumstances surrounding the particular statute, including its legislative history. *Solem*, 465 U.S. at 471. In conducting this analysis, courts consider that "[w]hen events surrounding the passage of a surplus land Act—particularly the manner in which the transaction was negotiated with the tribes involved and the tenor of legislative Reports presented to Congress—unequivocally reveal a widely held, contemporaneous understanding that the affected reservation would shrink as a result of the proposed legislation, we have been willing to infer that Congress shared the understanding that its action would diminish the reservation, notwithstanding the presence of statutory language that would otherwise suggest reservation boundaries remained unchanged." *Solem*, 465 U.S. at 471.

The surrounding circumstances of the 1905 Act do not support a conclusion that Congress intended the 1905 Act to diminish the exterior boundaries of the Reservation. At first glance the 1905 may look similar to the act at issue in *Rosebud*, in which the Supreme Court concluded that the boundaries of the Rosebud Reservation were diminished. However, the 1905 Act and its surrounding circumstances are different in several important respects. Moreover, it is noteworthy that the Supreme Court has opined that statutes like the one at issue in *Rosebud* fall between the extremes of legislation that clearly intend to diminish reservation boundaries and those that clearly intend not to diminish boundaries. Thus the surrounding circumstances take on additional importance here. *Solem*, 465 U.S. at 469 n.10.

In *Rosebud*, McLaughlin negotiated and obtained an agreement (by majority vote) from the Tribe in 1901 to cede a portion of its Reservation. 430 U.S. at 590. Under the 1901 agreement the Tribe agreed to "cede, surrender, grant, and convey . . . all their claim, right, title and interest in and to all that part of the Rosebud Indian Reservation now unallotted situated within the boundaries of Gregory County, South Dakota." *Id.* at 591. In describing the agreement to the Tribe, McLaughlin explained that "'[t]he cession of Gregory County' by ratification of the Agreement 'will leave your reservation a compact, and almost square tract, and would leave your reservation about the size and area of Pine Ridge Reservation.'" *Id.* The 1901 agreement was not ratified by Congress at the time because concerns were raised in Congress about obtaining the money needed upfront for the land cession. *Id.* at 591-92 and note 10 ("The problem in the Congress was not jurisdiction, title, or boundaries. It was, simply put, money.") (internal citations and quotations omitted). The intent of the agreement, however, was clearly described by McLaughlin, who said its purpose was to shrink the size of and change the shape of their Reservation. *See Solem* at 471. Had the agreement been ratified, the Court noted "it would have disestablished that portion of the Rosebud Reservation that lay in Gregory County." *Id.* at 591.

In 1903, Congress requested that McLaughlin go back to the tribe and seek the same agreement with the one exception: rather than a lump sum payment, the Tribe would receive payment as the lands were sold. *Id.* 592-93. In discussing this agreement with the Tribe, McLaughlin explained, "I am here to enter into an agreement which is similar to that of two years ago, except as to the manner of payment. . . . You will still have as large a reservation as Pine Ridge after this is cut off." *Id.* at 593. Thus, McLaughlin again discussed the agreement as

affecting the boundaries and changing the size and shape of the Rosebud Reservation. In examining the "legislative processes which resulted in the 1904 Act," the Court was convinced that the purpose of the 1901 Agreement (to change the size, shape and boundaries of the Reservation) was carried forth and enacted. *Id.* at 592. Indeed the Court noted that "in examining the congressional intent, there is no indication that Congress intended to change anything other than the form of, and responsibility for payment." *Id.* at 594-95.

The Wind River negotiations present an entirely different scenario than in *Rosebud.* As in *Rosebud*, McLaughlin was responsible for obtaining the Tribes' consent. Before McLaughlin went to negotiate with the Tribes, the House Committee on Indian Affairs submitted a report stating that the purpose of the proposed legislation was to "reduce the reservation, as suggested by Mr. Woodruff at the time of the making of the agreement of 1891."[33] Although Mondell's bill was said to be modeled in part on the un-ratified 1891 Agreement, it was in fact and effect significantly different: the 1904 Agreement did not include the same broad cession language as the 1891 Agreement; it changed the method of payment from a sum certain to payment only when the lands were sold; and it enlarged the area to be ceded to include additional lands north of the mid-channel of the Big Wind River and lands southeast of the Popo Agie River, among other things.

Moreover, in stark contrast to McLaughlin's negotiations in *Rosebud*, here McLaughlin did not refer back to the 1891 Agreement when he presented the Tribes with the 1904 Agreement. Additionally, in describing the new agreement, McLaughlin explained it as opening surplus lands of the Reservation, but he did not describe it as "cutting off" any portion of the Reservation.[34] And, while McLaughlin described the opened area in his meetings with the Tribes, he did so in contrast to the "diminished" or unopened portion Reservation that would remain for the exclusive use of the Tribes.[35] Correspondence from the Tribes also reflected an understanding that they were retaining an interest in the opened lands within the Reservation until sold and not a complete severance and "cutting off" of the opened part of the Reservation.[36] Had McLaughlin wanted the Tribes to understand that the exterior boundaries of their Reservation were being "cut off," he would have explained the Agreement using similar words and descriptions as he did in *Rosebud.* For these reasons, the Act and surrounding circumstances as a whole are factually and historically distinguishable from the circumstances in *Rosebud.*

This case is similarly distinguishable from *DeCoteau.* In *DeCoteau*, the negotiations leading to the agreement by which the tribe ceded the land "show plainly that the Indians were willing to convey to the Government, for a sum certain, all of their interest in all of their unallotted lands." 420 U.S. at 445. The operative language in *DeCoteau* was much broader than the narrower and more limited cession language used in the 1905 Act. And, unlike in *DeCoteau*, the United States' commitment to pay the Tribes was limited and conditioned in the 1905 Act. Additionally, in *DeCoteau*, the Court found unambiguous evidence that the Tribe did not expect

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[33] H.R. Rep. No. 58-2355, 58th Cong., 2d Sess., BATES SH00721 at BATES SH00723.
[34] *See* Minutes of council held at Shoshone Agency, Wyoming (April 19, 1904), BATES SH01367 at BATES SH01369-70.
[35] *Id.* at 12, 14.
[36] Letter Shoshone Delegation to Commissioner of Indian Affairs (March 10, 1908) BATES SH08402; letter Arapahoe Delegation to Commissioner of Indian Affairs (March 9, 1908), BATES SH52182 at BATES SH52186.

to maintain its reservation boundaries intact. Here, however, the Tribes understood that they would continue to have an interest in the 1905 Act lands until they were sold.

Based on the circumstances surrounding the 1905 Act, there was no clear understanding by the Tribe or the United States that the purpose of the 1905 Act was to permanently sever and alter the boundaries of the opened portion of the Reservation. Moreover, when compared to *DeCoteau* and *Rosebud*, here the legislative history and surrounding circumstances do not provide the kind of clear evidence of congressional intent that the Supreme Court requires to diminish or disestablish a reservation's boundaries. *See Solem*, 465 U.S. at 472. The circumstances surrounding the 1905 Act, therefore, do not unequivocally reflect a "widely-held contemporaneous understanding" that the Reservation boundaries would be altered.[37]

3. *Subsequent Treatment*

To a lesser extent, the Court has looked to events that occurred after the passage of the statute to decipher Congress's intentions, including Congress's own treatment of the area and that of the BIA and local judicial authorities. *Solem*, 465 U.S. at 471. The evidence from the years immediately after the 1905 Act indicates some inconsistent treatment of the 1905 area, but the record on the whole more reasonably supports a conclusion that Congress did not intend to diminish the boundaries of the Reservation. Therefore, the subsequent treatment and demographics further confirm that the 1905 Act did not evince an intent to diminish the boundaries of the Reservation.

a. Congressional and Departmental Actions

The 1905 Act called for the United States to survey the boundaries of the opened area. The surveys for these plats were completed by December 1905 and approved by the General Land Office in 1906. Significantly, the surveys were done using the Wind River Meridian, not a Principal Meridian, as was used for public lands. Moreover, the resulting plats identify the "North Boundary Shoshone Indian Reservation" as the northern boundary of the ceded area and the "East Boundary Shoshone Indian Reservation" as the eastern boundary of the ceded area. These surveys confirm that although the 1905 opened a portion of the Reservation to settlement, nothing in the Act changed or diminished the boundaries of the Reservation. *See, e.g., State of Louisiana v. State of Mississippi*, 202 U.S. 1, 55, 56 (1906) (relying on official General Land Office township plats prepared from detailed survey because only official plats by the federal government are acceptable in boundary disputes).

References to the 1905 Act area following its enactment, continued to describe the ceded area as being "opened" to settlement and as part of the Wind River Reservation. For example, in 1906, Congress passed a joint resolution extending the time for "opening to public entry the

[37] At best, the surrounding circumstances of the 1905 Act are equivocal, but that is insufficient to demonstrate that Congress intended to diminish the Reservation boundaries. *See Solem*, 465 U.S. at 471; *Yankton Sioux*, 522 U.S. at 355 (finding as unpersuasive a "mixed record" that "reveals no consistent or dominant approach"); *see also Solem*, 465 U.S. at 478 (rejecting a few scattered, isolated, and ambiguous phrases). Moreover, to the extent that there are any ambiguities in the language of the 1905 Act, they are to be resolved in favor of the Tribes. *DeCoteau*, 420 U.S. at 444.

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ceded portion of the Shoshone or Wind River Indian Reservation in Wyoming." 34 Stat. 825 (1906). In the Department's report to Congress, the opened lands are described as "the ceded portion of the Shoshone or Wind River Reservation" and the land as being opened to settlement. H.R. Doc. No. 59-601, 59th Cong., 1st Sess. (1906). A Presidential Proclamation of June 2, 1906, which merely recited the cession language from the 1905 Act, formally opened the unallotted portion of the Reservation to settlement. In conjunction with the Presidential Proclamation, a map delineating the area opened for settlement, and showing Indian allotments in the opened area, is titled "Map of that part of the Wind River or Shoshone Indian Reservation, Wyoming, to be opened for settlement, August 15, 1906 Under Presidents [sic] Proclamation."

In addition, a Senate Report from 1909 on a statute to extend the time for miners making mineral claims "within the Shoshone and Wind River Reservation" referred to the claims as being within the Reservation and more specifically "within the ceded portion of the Shoshone Reservation." S. Rep. 60-980, 60th Cong., 2d Sess. (1909). The next year, another Senate Report referred to "desert lands formerly in the Shoshone or Wind River Indian Reservation." S. Rep. 61-303, 61st Cong., 2d Sess. (1910). However, this Report also referred to the 1905 Act lands as being "within the limits of the ceded portion of the Shoshone or Wind River Indian Reservation." *Id.* Yet another Senate Report simply referred to "the ceded portion of the Wind River Reservation." S. Rep. 62-543, 62nd Cong., 2d Sess. (1912). Also in 1916, the Indian Appropriation Act, 39 Stat. 123-158 (1916), provided $5,000 to pay for plans and cost estimates for "irrigation of all of the irrigable lands of the Shoshone or Wind River Reservation, including the ceded lands of said reservation." *Id.* at 158. The Secretary of the Interior forwarded to Congress a "Report on Wind River Project, Wyoming" that described the ceded lands as "formerly included" in the Reservation and the Reservation as "[o]n the south or southwest side of the Wind River." Importantly, however, it also recognized the continued interest "retained by the Indians in the 'ceded-land' portion of the reservation." H.R. Doc. No. 1767, 64th Cong., 2d Sess. (1916) at 9, 18.[38] The Indian Service also distinguished the "diminished reservation" from "the ceded part of the former reservation." H.R. Doc. No. 1478, 64th Cong., 2d Sess. (1916). Thus, although the history subsequent to the 1905 Act references the "ceded" or "open" lands, the entire record shows that the 1905 Act area as a whole continued to be within the exterior boundaries of the Reservation. Such distinctions appear to be made to contrast the opened (ceded) portion of the Reservation with the unopened (diminished) portion of the Reservation.

Some references to and maps of the Wind River Reservation made shortly after the enactment of the 1905 Act appear to be less clear in terms of whether the Act changed the boundaries of the Reservation. In 1907, after the President proclaimed the lands opened for settlement, Congress passed an Act extending the time for entry in the 1905 Act area in which it referred to "lands formerly embraced in the Wind River or Shoshone Indian Reservation, in Wyoming, which were opened to entry." Act of January 17, 1907, 34 Stat. 849. This appears to be a limited instance in which Congress used the words "formerly embraced in the . . .

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[38] The Report at 9 described the Reservation as the diminished area:

> The project under consideration is within the "ceded lands" portion of what was formerly included in the Wind River or Shoshone Indian Reservation. On the south or southwest side of Wind River is the Indian reservation, now sometimes referred to as diminished reservation.

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Reservation" and is not by itself sufficient to evidence a strong congressional intent that the Reservation boundaries had changed. *See supra* note 38.

Similarly, a map from 1907 of the State of Wyoming and a 1912 map produced by the General Land Office show the Wind River Reservation to be the unopened portion of the Reservation only.[39] The 1907 map, however, is a compilation of maps created by the State and is not an official map of the United States; nor does it purport to be an official map of the Wind River Reservation. *See United States v. Morrison*, 240 U.S. 192, 210-211 (1916) (it is not an "official act" until land is surveyed, approved by the Surveyor General, and approved by Commissioner); *State of New Jersey v. State of Delaware*, 295 U.S. 694 (1935) (a compilation map is different than an official plat). Additionally, the 1912 map is a road map of the Wind River Reservation, Wyoming, created by the Department's Office of Indian Affairs. H. Doc. No. 516, 63d Cong., 2d Sess. The 1912 map does not purport to be a Reservation Boundary Map, but rather its expressly stated purpose is to show roads and was intended only to do so within the unopened portion of the Reservation.[40]

In addition, a map accompanying the 1914 Annual Report of the Commissioner of Indian Affairs to the Secretary labeled the area south of the Big Wind River and west of the Popo Agie as "Reservation," and the area north and east of those rivers as "Opened." These designations, however, are consistent with statements made after enactment of the 1905 Act, as discussed above, in which part of the Reservation was considered to be "opened" and part was solely reservation lands for the exclusive use of the Tribes. None of these references or maps, either by themselves or collectively, supports a conclusion that the 1905 altered the Reservation boundaries. These references are ambiguous and inconsistent at best, and under the Indian canons of construction are to be resolved in favor of the Tribes. *Yankton Sioux*, 522 U.S. at 344; *DeCoteau*, 420 U.S. at 444. Thus, while Congress was at times inconsistent in its reference to the 1905 Act area and sometimes referenced them as "former reservation," overall, subsequent treatment of the opened area evidences a view that the lands were part of the Reservation, most commonly referring to the Reservation as encompassing two parts, a ceded or opened area and a diminished or exclusive tribal area.

More significantly, there was no rush of non-Indian settlers into the open area and Congress's modest expectation for the ceded land never materialized. As of 1909, only 113,743.68 acres or 7.91 percent of the 1,438,633.66 acres opened were actually sold. By 1914, only 128,986.58 acres or 8.97 percent had been sold. During this time the United States also granted 50,000 acres of allotments in the ceded area to members of the Tribes.[41] Ultimately, only 196,360 acres were alienated, substantially less than the acreage later restored to tribal ownership within the opened area.[42] And in 1913, the Department concluded that the remaining

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[39] *See* Exhibits 5 & 6, State's Comments.
[40] Act of Aug. 24, 1912, 37 Stat. 518, 539.
[41] Letter dated June 12, 1914, Assistant Commissioner Indian Affairs to Hon. C.O. Lobeck, House of Representatives, BATES SH08201 at BATES SH08404, 08203. Another publication references that 33,064.74 acres were allotted in the ceded area, *Survey of Conditions of the Indians in the United States*, Hearing before a Subcommittee of the Committee on Indian Affairs, U. S. Senate, September 12, 13, and 14, 1932, Part 27 at 14467 ("*Survey*").
[42] Solicitor's Opinion, M-31480 (February 12, 1943), 2 *Op. Sol. on Indian Affairs* 1185, 1191 n.7 (U.S.D.I. 1979).

lands need not be sold "until it is thought best to do so."[43] In August 1915, the Secretary further advised the Commissioner of the General Land Office to postpone all sales in the opened area indefinitely.[44] A letter from the Commissioner of Indian Affairs in 1930 indicates the primary reason for halting the sales so early after enactment of the 1905 Act was that the Tribes were realizing significant amounts of money from leasing the land within the opened area for grazing.[45] The short period of time that the opened area was actually available for purchase by settlers hardly indicates an intent to permanently affect the boundaries of the Reservation and, in fact, supports the opposite conclusion. Thus, although lands in the opened area were available for settlement for a short period of time, those lands were still held for the benefit of the Tribes and the United States continued to manage those lands as the Tribes' trustee.[46]

During congressional hearings in 1932, the Reservation was referred to as a "quadrangular area approximately 65 miles by 55 miles," encompassing approximately 2,238,633 acres, in a "ceded portion" and a "diminished portion." The opened portion was again referenced as being used as tribal lands.[47] And, on November 2, 1934, Commissioner of Indian

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[43] As referenced in letter dated January 27, 1930, Commissioner C.J. Rhoads to E.O. Fuller. BATES SH00920.

[44] *Id. See also* Solicitor's Opinion, M-31480 (February 12, 1943), 2 *Op. Sol. on Indian Affairs* 1185, 1188, 1191 (U.S.D.I. 1979).

[45] *Id.* In 1916, Congress adopted a statute directing the Secretary of the Interior to issue oil and gas leases for the benefit of the Indians. Act of Aug. 21, 39 Stat. 519 (1916 Act). A dispute arose as to whether the oil and gas reserves under the ceded lands were subject to lease under the general land laws or under an 1891 law governing leases in the 1905 Act area. Representative Clark of Wyoming responded affirming the continuing status of the opened lands as Indian land:

> This is land upon the ceded portion of an Indian reservation which was subject to homestead entry under the law which ceded it, but the time for homestead entry has been exhausted so that this Indian land which was not taken is interspersed among other lands. It is still Indian land and the Indians are entitled to it.

53 Cong. Rec. 12,159 (1916). The 1905 Act area, therefore, clearly was not public land. It was ceded land within the Reservation, temporarily opened for settlement, but unless and until sold, it remained Indian land. Additionally, in a letter dated June 21, 1923, Commissioner of Indian Affairs Burke informed the Superintendent that the public land mineral leasing act of February 25, 1920, 41 Stat. 437 (1920), "gave the General Land Office no jurisdiction over the leasing of coal mining lands on the ceded portion of [the] Shoshone Reservation; but the former act, that approved March 3, 1905, provided for the sale of these lands under the provisions of the . . . mineral land laws." BATES SH08207. He concluded that land office could dispose of the lands, the proceeds of sales to go to the credit of the Indians. *Id.* The map accompanying the 1923 Annual Report of the Commissioner of Indian Affairs, labeled the area south of the Big Wind River and west of the Popo Agie as "Reservation;" the area north and east labeled "Former Indian Reservation." On June 15, 1929, however, in response to a request from homesteaders to manage the area for their benefit, the Department reaffirmed its commitment to managing the 1905 Act area for the benefit of the Tribes. BATES SH08209.

[46] Additionally, McLaughlin's action in the years following the 1905 Act provide further evidence that the Reservation boundaries were intended to remain intact. In 1922, seventeen years after 1905, McLaughlin met with the Tribes again and explained the Thermopolis Agreement as separate and distinct from the 1905 Act. In particular, McLaughlin pointed out that in the 1905 Act the "government simply acted as trustee for disposal" of the land north of the Big Wind River. Transcription Council Minutes, August 14, 1922, BATES SH08429 at BATES SH08433. McLaughlin recognized that "[i]t is ceded land under the control of the government, entirely," further affirmed that the Indians "still have an equitable right because the agreement has not been fulfilled in full." *Id.* at 10. As to obtaining allotments within the 1905 Act area, McLaughlin pointed out that as opened lands, parcels in that area could only be homesteaded during the period after it was officially opened for settlement, but allotments could be taken on the diminished reservation. *Id.* at 11.

[47] *Survey*, at 14428, 14467.

Affairs John Collier issued an opinion discussing the newly enacted Indian Reorganization Act (IRA) and its provision granting the Secretary the ability to stop the further withdrawal of Indian lands on reservations that were opened for settlement if the Tribe voted to accept the IRA. 54 I.D. 559 (Nov. 2, 1934). Of particular relevance here is Collier's explanation that around 1890, the Government started opening up to entry and sale, lands of reservations that were not needed for allotment, "the Government taking over the lands only as trustee for the Indians," and that "[u]ndisposed of lands of this class remain[ed] the property of the Indians until disposed of as provided by law." *Id.* at 560. Collier then concluded that the Wind River was one such reservation (along with numerous others) and withdrew those lands opened for entry within the reservation from further disposal of any kind under the authority granted in IRA. *Id.* at 562, 563. On June 15, 1935, the Shoshone and Arapahoe Tribes voted to exclude themselves from the Act. Theodore H. Haas, *Ten Years of Tribal Government Under I.R.A.*, United States Indian Service, 1947. On October 31, 1935, Secretary Ickes rescinded Collier's memo on further withdrawals for eight reservations, including the Wind River, as those tribes had voted to exclude themselves from the Act.[48]

Even though the Tribes did not vote to accept the IRA, in 1939, Congress directed the Secretary of the Interior to restore to tribal ownership significant acreage within the Reservation opened under the 1905 Act. Act of July 27, 1939, 53 Stat. 1128 ("Restoration Act"). This Act provided for the creation of land use districts for the consolidation of the respective Indian and non-Indian land holdings and authorized the restoration to the Tribes of "all undisposed-of surplus or ceded lands . . . which are not at present under lease or permit to non-Indians." *Id.* at 1129-30. It further restored to tribal ownership the "balance of said lands progressively as and when the non-Indian owned lands . . . are acquired by the Government for Indian use pursuant to the provisions of this Act." *Id.*

The Department proceeded with a series of land restorations consistent with this Act, restoring substantial acreage to tribal ownership, "adding" and "making" it part of the existing Reservation.[49] One illustrative example is in 1944, when the Secretary's order, published in the *Federal Register*, restored to the Tribes and the Reservation enumerated ceded lands that settlers had not acquired, providing:

> Now, Therefore, by virtue of authority vested in the Secretary of the Interior by section 5 of the Act of July 27, 1939 (53 Stat. 1128-1130), I hereby find that restoration to tribal ownership of the lands described above, which are classified as undisposed of, ceded lands of the Wind River Reservation, Wyoming, and which total 625,298.82 acres more or less, will be in the tribal interest, and they

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[48] *To Provide Compensation to the Shoshone and Arapahoe Tribes of Indians for Certain Lands of the Riverton Reclamation Project Within the Ceded Portion of the Wind River Indian Reservation, and for Other Purposes*, Hearing on H.R. 4483 Before the Committee on Interior and Insular Affairs, U.S. Senate, 83rd Cong. at 5-6 (May 6, 1953).

[49] *See* 5 Fed. Reg. 1805 (May 17, 1940); 7 Fed. Reg. 7458 (Sept. 22, 1942), as corrected by 7 Fed. Reg. 9439 (1943); 7 Fed. Reg. 11,100 (Dec. 30, 1942); 8 Fed. Reg. 6857 (May 25, 1943); 9 Fed. Reg. 9749 (Aug. 10, 1944); 10 Fed. Reg. 2254 (Feb. 27, 1945); 10 Fed. Reg. 2812 (Mar. 14, 1945); 10 Fed. Reg. 7542 (Jun. 22, 1945); 13 Fed. Reg. 8818 (Dec. 30, 1948); 21 Fed. Reg. 5067 (Jul. 7, 1956); 39 Fed. Reg. 27,561 (Jul. 30, 1974), as amended by 40 Fed. Reg. 42553 (September 15, 1975); 58 Fed. Reg. 32856 (June 14, 1993).

are hereby restored to tribal ownership for the use and benefit of the Shoshone-Arapahoe Tribes of Indians of the Wind River Reservation, Wyoming, and are added to and made a part of the existing Wind River Reservation, subject to any valid existing rights.

9 Fed. Reg. 9,754 (Aug. 10, 1944). Pursuant to the 1939 Act, and in a series of Orders like the 1944 Order, the Secretary restored to tribal ownership the majority of the lands opened under the 1905 Act and "added" those lands to and/or "made them a part of" the Reservation. These restoration orders included lands on the eastern boundary of the Reservation – in particular land underlying what is now the Boysen Reservoir.

Any doubt as to the integrity of the Reservation's boundaries under the 1905 Act thus disappeared when the Secretary expressly closed the Reservation and returned the balance of lands within the existing Reservation to Indian ownership. Moreover, nothing in the restoration orders requires a conclusion that to be restored to reservation status, the lands must have been severed from the Reservation in 1905. Any such an interpretation is an over-simplification of the purpose of the Restoration Act and fails to comprehend the status of the ceded lands. Undisposed of ceded lands remained a part of the Reservation and were administered by the Federal Government in its capacity as trustee. The Restoration Act simply verified that the unsold lands were now removed from their opened status and reverted to full tribal ownership (versus an equitable interest held by the Tribes). Through the Restoration Act, Congress affirmatively and clearly rejected the notion that the Reservation was diminished for all time. That is, even if the 1905 Act diminished the reservation, which it did not, the orders issued under the 1939 Act expressly restored significant acreage to tribal ownership and reinforced the Reservation's status – including lands along the eastern boundary of the Reservation.

Subsequent history further reinforces the fact that the Reservation boundaries remained intact. In 1940, Interior Solicitor Nathan Margold was asked to issue an opinion on whether the Secretary had authority to sign a proposed agreement that fixed the boundary lines of certain parcels of land north of and abutting the Wind River and located within the 1905 Act area for purposes of oil lessees. Solicitor Margold advised that the Secretary was without authority to fix the boundary lines of the allotted, tribal, and ceded parcels of land for all time as it would change the boundaries of the Wind River Indian Reservation. He further noted that the land covered by the proposed agreement "represents undisposed of ceded land" and is limited by the 1905 Act and by the 1916 Act, neither of which permitted disposition of the lands as proposed in the agreement.[50] To resolve this problem, Congress passed an Act granting the Secretary the authority, upon certain conditions, to fix the boundaries of certain parcels of allotted, tribal and ceded lands north of the Wind River in certain specific locations. 55 Stat. 207 (1941). No action, however, was ever taken by the Department pursuant to the congressional authorization. Moreover, the 1940 opinion addressed parcels of land within the 1905 area and not the actual exterior boundaries of the Reservation. Likewise, in 1943, legal questions arose concerning the authority of the Tribes and the State to regulate hunting and fishing on the diminished reservation and lands within the opened portion of the reservation. The Solicitor's 1943 opinion dealt only with jurisdictional issues within the previously opened portion of the Reservation and expressly did not address the exterior boundaries of the Reservation. *Id.* at 1193 n.8 (expressly

[50] Solicitor's Opinion, M-30923 (December 13, 1940), 1 *Op. Sol. on Indian Affairs* 1011, 1016 (U.S.D.I. 1979).

declining to opine on the boundaries of the Reservation).[51] Thus, neither the 1940 Marigold opinion nor the 1943 Solicitor opinion relating to hunting and fishing rights have any significant relevance to the question of the Reservation's exterior boundaries.

In 1952, Congress passed an act to vest the United States with title to "certain lands and interests in lands of the Shoshone and Arapaho Indian Tribes of the Winder River Reservation." *See* Act of July 18, 1952, 66 Stat. 780; *see also* S. Rep. No. 82-1980, 82d Cong., 2d Sess. (1952) (explaining that the purpose of the legislation was "to acquire by the United States approximately 25,880 acres of land which are *subject to certain rights* of the Shoshone and Arapaho Indian Tribes of the Winder River Indian Reservation . . .") (emphasis added).[52] The 1952 Act authorized the Secretary to provide the Tribes with "reasonable consideration" in exchange for tribal "property and rights . . . *needed . . . for the construction and operation and maintenance* of the Boysen Unit of the Missouri River Basin project."[53] Act of July 18, 1952, 66 Stat. 780. (emphasis added). The 1952 Act incorporated and ratified a Memorandum of Understanding (MOU) between the Bureau of Reclamation (BOR) and the Bureau of Indian Affairs (BIA) (acting on behalf of the Tribes).[54] Pursuant to the terms of the MOU, the Tribes agreed to convey only the surface rights to 25,500 acres located along a portion of the eastern boundary of the Wind River Reservation to the BOR for construction and operation of the Boysen Unit. However, the Tribes retained all of the oil, gas, and minerals rights to the land. In addition, the MOU provided that, where the Tribes only conveyed the surface, they retained certain rights of occupancy, access, and/or grazing on lands surrounding and on the shores of the reservoir.[55] Significantly, neither the 1952 Act nor the MOU refer to the boundaries of the Reservation, to the return of any land to the public domain, or to the 1905 Act. *Cf. Solem*, 465 U.S. at 470 (Congress must "clearly evince an intent to change boundaries before diminishment will be found") (additional quotation and citation omitted).

The 1952 Act falls far short of utilizing language that contains an "[e]xplicit reference to cession or other language evidencing the present and total surrender of all tribal interests." *Solem*, 465 U.S. at 470. The 1952 Act does not use words of permanence such as "forever and

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[51] The 1943 opinion found that the Tribes retained certain property rights in the lands as the beneficial owners of the lands, and that a trust was impressed upon the lands to protect those rights. *Id.* at 1188-89. It also recognized that absent congressional authorization, the State could not use its regulatory authority merely "as a means of obtaining revenue from the ceded lands." *Id.* at 1190.

[52] The 1953 Reclamation Act (67 Stat. 592 (1953)), which provided compensation to the Shoshone and Arapahoe Tribes for certain lands of the Riverton reclamation project, addresses only lands located within the exterior boundaries of the Wind River Reservation. It neither mentions nor in any way affects the exterior boundaries of the Reservation. As such, the 1953 Reclamation Act is not relevant to the question presented here. Therefore, this opinion does not discuss or address the 1953 Reclamation Act in detail.

[53] *See* S. Rep. No. 82-1980 at 2 (stating that the "board of appraisers recommend $458,000 as a fair price for the Indian lands and rights to be acquired for the Boysen Dam and Reservoir").

[54] The MOU was approved by the Secretary of the Interior on December 29, 1951 and amended with his approval on May 1, 1952. The Senate Report accompanying the Act includes the MOU and lists the tribal and the allotted lands to be acquired for the dam and for the reservoir. S. Rep. No. 82-1980.

[55] *See, e.g., id.* at 3, 6, 9, 50, 52. Section 4(b) of the MOU identifies the tracts of land (generally lands on and surrounding the shores of the reservoir) where the Tribes retained an exclusive right of occupancy so long as the tracts are not inundated by reservoir waters and the abutting lands remain "subject to occupancy rights" of the Tribes. *Id.* at 3, 9, 50. Section 4(c) describes the lands where the Tribes retained the rights of access and grazing when any such tract is not inundated by reservoir waters, so long as the lands abutting the tract remain subject to Indian occupancy rights. *Id.* at 52.

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absolutely" but, rather, makes clear that significant tribal interests in the land were retained notwithstanding the conveyance of the surface right.[56] The MOU demonstrates that the Tribes (a) conveyed only the surface estate of the land for the reservoir and specifically retained their mineral rights;[57] (b) retained an exclusive right of access to portions of the Boysen Reservoir shoreline so long as adjacent lands remained subject to Indian occupancy rights;[58] (c) retained dual access to certain areas on the southeastern portion where those areas abut land still subject to Indian occupancy; and (d) retained certain grazing rights. All of these retained rights are clearly inconsistent with "the present and total surrender of all tribal interests" required in order to evidence congressional intent to alter the boundaries of the Reservation.[59] *Solem*, 465 U.S. at 470. Similarly, the circumstances surrounding the passage of the 1952 Act do not indicate such a congressional intent.[60] Thus, the 1952 Act did not alter the Reservation boundaries.[61] Moreover, the purpose of the 1952 Act, to facilitate the construction of a dam and reservoir on the Tribe's Reservation, is consistent with the Tribes' continued use and occupancy of its Reservation. In fact, the 1952 Act and MOU between BIA and BOR specifically recognizes the Tribes' right to utilize and graze on the shoreline and lands surrounding the reservoir notwithstanding the conveyance of certain lands within the Wind River Reservation for the Boysen unit. This recognition demonstrates that Congress understood that the Tribes would continue to inhabit their Reservation, which remained intact, and benefit from the use of the land surrounding the reservoir.

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[56] The Tribes conveyed approximately 366 acres in fee for the dam itself. Given the *de minimus* nature of this portion in comparison to the conveyance as a whole (approximately 26,000 acres), this fact does not demonstrate an intent to diminish. The 1952 Act must be read as a whole, and there is no reference to changing the exterior boundaries of the Reservation, or intent to do so.

[57] *Crow Tribe of Indians v. Mont.*, 819 F.2d 895, 898 (9th Cir. 1987) (mineral estate underlying reservation is "component of the reservation land itself"), *aff'd by* 523 U.S. 696 (1998).

[58] The fact that, in 1952, Congress recognized a retained right to exclusive tribal use, notwithstanding the Tribes' conveyance of the surface right, indicates that Congress understood that the Reservation was not eviscerated by the 1905 Act. *See Solem*, 465 U.S. at 471-72 ("Congress' own treatment of the [lands affected by a surplus land act], particularly in the years immediately following the opening, has some evidentiary value . . .").

[59] *Compare* Act of July 18, 1952, 66 Stat. 780, *with* discussion of the Lander Purchase, *supra.* at 3-4 (concluding that the Lander Purchase, 18 Stat. 291, diminished the boundary of the Reservation because the Tribes agreed to an outright sale of all their interests in Reservation lands generally south of the 43rd parallel in exchange for a lump sum payment of $25,000 and the express purpose of the Act ratifying the Lander Purchase was "to change the southern limit of said reservation"), *and* discussion of the Thermopolis Purchase, *supra.* at 5 (finding that the Thermopolis Purchase diminished the boundary of the Reservation because, among other things, "the Tribes agreed to 'cede, convey, transfer, relinquish and surrender, forever and absolutely all their right, title, and interest of every kind and character in and to the lands and the water rights appertaining thereunto' with respect to a tract surrounding the Big Horn Hot Spring . . . [and] [t]he sold lands were to be 'set apart as a national park or reservation, forever reserving [the hot springs] for the use and benefit of the general public' . . . 'in consideration for the lands ceded, sold, relinquished and conveyed,' the United States agreed to pay a lump sum of $60,000").

[60] The 1951 MOU was the product of extensive negotiations between the Tribes and the United States which resulted in the Tribes' retention of significant interests in lands conveyed. S. Rep. No. 82-1980, 82d Cong., 2d Sess. (1952). The Tribes passed a resolution approving the conveyance contingent on retention of those rights by the Tribes. *Id.* at 4.

[61] This legal position is consistent with the holding in *Lower Brule Sioux Tribe v. South Dakota*, 711 F.2d 809, 821 (1983), *cert. denied*, 464 U.S. 1042 (1984), that neither the Fort Randall nor Big Bend Acts disestablished the boundaries of the Lower Brule Reservation. There, the Circuit Court also opined that continued Indian control of land taken for the dams and reservoirs was not inconsistent with the Federal Government's purpose in acquiring the property, as might be the case if the land were acquired for settlement. *Id.* at 817-818, 820.

Furthermore, congressional enactment of the 1952 Act demonstrates that Congress recognized that the Tribes had a surface interest in the 25,500 acres conveyed, as well as a mineral estate and other interests in that land. Indeed, approximately 47 years after Congress enacted the 1905 Act, the terms of the 1952 Act confirm that Congress recognized the Tribes' interests within the Reservation otherwise there would have been no need to address these particular interests and establish an MOU between BOR and BIA.

In sum, these facts illustrate that Congress and the Department never disclaimed the Tribes' continuing interest in the ceded lands and that those lands were considered as being within the Reservation boundaries. The official survey approved by the General Land Office confirmed that the 1905 Act opened the lands for settlement but did not change the exterior boundaries of the Reservation. To the extent there are inconsistent references made with respect to the Reservation, those must be interpreted in favor of the Tribes and reflect the unique nature of the Act as opening, but not conveying, the lands immediately. It is significant that the opening of the Reservation failed and was soon halted by 1915 when the Tribes were permitted to lease the lands for grazing instead. The Restoration Act and two Solicitor's opinions further confirmed the unchanged Reservation status and that the exterior boundaries remained intact. Under the 1905 Act, the Tribes' cession was more of a "cession in trust," and not an outright conveyance of all their interest in the land. *Id.* at 100. Since the ceded lands did not become public lands or part of the public domain, they retained their reservation status. *Id.* at 100-102.[62]

b. Demographics of the Opened Area

The demographics of the ceded area are least probative of congressional intent. *Solem*, 465 U.S. at 471-472. The record contains virtually no evidence of the demographic makeup of the 1905 Act area. What is clear from the record, however, is that the opening of the ceded portion of the Reservation did not succeed in generating sales to non-Indians for the benefit of the Tribes. As stated above, there was no rush of non-Indian settlers into the area and Congress's modest expectation for the ceded land never materialized. As of 1909, only 7.91 percent of the acres opened were actually sold. By 1914, only 128,986.58 acres or 8.97 percent had been sold. All told only a little more than 11 percent of the ceded lands were sold to non-Indians. During this time, the United States also granted 50,000 acres of allotments in the ceded area to members of the Tribes.

Ultimately, only 196,360 acres were alienated, substantially less than the acreage restored to the Tribes pursuant to the 1939 and other Acts. There is a concentration of non-Indian fee land in and around the City of Riverton, patented in 1907. But Riverton was comprised of only 160 acres then and did not develop immediately following the 1905 Act. Nor is it representative of the 1905 area. Demographic changes far removed from 1905 provide an unreliable method of statutory interpretation. *Solem*, 465 U.S. at 471, n.13. Thus, the demographics of the 1905 area do not support a finding that the 1905 intended to diminish the Reservation boundaries to permanently sever or "cut off" that area from the Reservation.

[62] *See also* discussion regarding public domain, *supra* notes 19 and 36.

4. *Review of State Supreme Court Decision in Yellowbear*

The State points to *Yellowbear v. Wyoming*, 174 P.3d 1270 (Wyo. 2008), in which the court held that crimes committed within the 1905 Act area did not occur on the Reservation.[63] It argues that decision supports a conclusion that the 1905 Act diminished the boundaries of the Reservation. While the *Yellowbear* case is not binding precedent, it is considered here to determine whether it is persuasive. *Johnson v. Yellow Cab Transit Co.*, 321 U.S. 383, 391 (1944).

Yellowbear is the only case to consider the 1905 Act since the Supreme Court established the relevant precedent. The case involved federal *habeas corpus* relief for Mr. Yellowbear's state conviction of the first degree murder of his infant daughter. In affirming the district court's denial of relief, the Circuit Court concluded that Mr. Yellowbear had failed to explain how the Wyoming Supreme Court failed to apply objectively U.S. Supreme Court precedent to his jurisdictional arguments that the Reservation had been diminished or that the decision was otherwise incorrect. Thus, the Circuit Court's opinion is not a decision on the merits of the reservation diminishment, but rather a decision on the burden of showing that the State Supreme Court erred. In addition, its reasoning is unpersuasive for several reasons. The *Yellowbear* court did not thoroughly analyze the 1905 Act in light of the unique facts surrounding the Reservation. Rather the court only looked at and found the operative words of the 1905 Act to be "indistinguishable" from the language in *DeCoteau* in which the Court found diminishment. 174 P.3d 1270, 1282 (Wyo. 2008). But, as discussed above, there are significant ways in which the two statutes differ and, moreover, any such similarity is not determinative.

The *Yellowbear* court failed to consider whether any of the provisions of the 1905 Act were contrary to diminishment. Additionally, the court mistakenly found a sum certain payment because the 1905 Act provided specified amounts of money for per capita payments, a survey, schools, and an irrigation project. *Id.* But these funds were to be paid out of the proceeds of future land sales and, as discussed above footnote 15, did not substitute for the sum certain payment in the 1891 unratified Agreement. Rather, they parallel other provisions of that 1891 Agreement. The Tribes were not paid a sum certain for the land. The United States obligation to pay was conditional – the Tribes were paid only when the lands were sold. Thus, the court's analysis amounts to an enumeration of the 1905 Act's reference to "diminished reserve" and "diminished reservation," despite precedent that cautions against conflating casual references to geography with express intent to diminish. *Solem*, 465 U.S. at 476.

Importantly, the court did not have before it, and thus did not examine, the evidence of the legislative history and circumstances surrounding the 1905 Act. *Yellowbear* was a criminal

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[63]The State also points to *Blackburn v. State*, 357 P.2d 174 (Wyo. 1960), and *State v. Moss*, 471 P.2d 333 (Wyo. 1970), to support its position. Importantly, however, the Wyoming Supreme Court decided *Blackburn* before the Supreme Court established any precedent for determining whether a reservation was diminished by a congressional act. Accordingly, it did not apply the relevant precedent and its reasoning is not persuasive. The court also based its decision on the fact that the crime occurred in the 1905 Act area that was part of a 1953 reclamation project. But, as pointed out in footnote 53, the 1953 Act dealt with lands within the exterior boundaries of the Reservation. Similarly, when *Moss* was decided, the U.S. Supreme Court had decided just one diminishment case, *Seymour v. Superintendent*, 368 U.S. 351 (1962), and had not yet established the standard for determining reservation diminishment.

proceeding, which lacked a fully developed record and expert historical reports relating to the Reservation's boundaries. The court simply referred to the recitation of facts in the dissenting opinion in *Big Horn I* by Justice Thomas and concluded, "while [the majority and dissent] disagreed over whether reserved water rights continued to exist in the ceded lands, [they]. . . agreed that the reservation had been diminished." *Id.* at 1283. The dissent is not controlling, but, more importantly, it mistakenly concluded that the 1905 Act diminished the Reservation based on a belief that the 1905 Act "approved" the 1891 Agreement. 753 P.2d at 128.

Finally, in considering subsequent treatment and demographics, the court focused on the City of Riverton, noting that 92 percent of the population of Riverton is non-Indian and that Riverton and the State provide sanitation, street maintenance, water and sewer service, planning and zoning, and law enforcement. *Id.* The demographics of Riverton tell us nothing about the demographics of the ceded area as a whole. Although modern demographics may be considered on a pragmatic level, they are potentially unreliable and cannot on their own provide a basis for finding diminishment. *Solem*, 465 U.S. at 472 (citing *Mattz*, 412 U.S. at 505; *Seymour*, 368 U.S. 351 (1962)).

V. Conclusion

Under Supreme Court precedent and consistent with the United States' longstanding position on this issue, the original boundaries of a reservation remain intact unless Congress clearly evidences an intention to diminish that reservation. Unlike the Lander Purchase and Thermopolis Purchase, the language of the 1905 Act, its legislative history, and the circumstances surrounding its enactment do not reveal clear congressional intent to diminish and alter the exterior boundaries of the Wind River Reservation.

Please do not hesitate to contact me or Patrice H. Kunesh, (202-208-4549), Deputy Solicitor of Indian Affairs, if we can be of further assistance.

Sincerely,

Hilary C. Tompkins
Solicitor

EPA-WR-009755

FILED
United States Court of Appeals
Tenth Circuit

November 7, 2017

Elisabeth A. Shumaker
Clerk of Court

PUBLISH

UNITED STATES COURT OF APPEALS

FOR THE TENTH CIRCUIT

STATE OF WYOMING,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; E. SCOTT PRUITT, in his official capacity as Administrator of the United States Environmental Protection Agency; DOUG BENEVENTO,* in his official capacity as Region 8 Administrator of the United States Environmental Protection Agency,

Respondents.

THE NORTHERN ARAPAHO TRIBE; EASTERN SHOSHONE TRIBE; CITY OF RIVERTON, WYOMING; FREMONT COUNTY, WYOMING,

Intervenors.

STATE OF IDAHO; STATE OF ALABAMA; STATE OF COLORADO; STATE OF KANSAS; STATE OF MONTANA; STATE OF NEBRASKA;

Nos. 14-9512 & 14-9514

* Pursuant to Fed. R. App. P. 43(c)(2) Doug Benevento is substituted for Deb Thomas as the Region 8 Administrator of the United States Environmental Protection Agency.

STATE OF NORTH DAKOTA; STATE OF OKLAHOMA; STATE OF SOUTH DAKOTA; STATE OF UTAH; INDIAN LAW PROFESSORS; RIVERTON MEMORIAL HOSPITAL, LLC; NATIONAL CONGRESS OF AMERICAN INDIANS,

Amici Curiae.

ORDER

Before **TYMKOVICH**, Chief Judge, **KELLY**, and **LUCERO**, Circuit Judges.

These matters are before the court on the separate *Petitions for Rehearing En Banc* filed by Intervenors Northern Arapaho Tribe and Eastern Shoshone Tribe. We also have responses to the petitions from the State of Wyoming and the Wyoming Farm Bureau Federation.

Upon consideration, the petitions were circulated to all the judges of the court who are in regular active service and who are not recused. *See* Fed. R. App. P. 35(a). As no judge on the original panel or the en banc court requested that a poll be called, the requests for en banc review are denied.

The judges in the majority of the panel decision have, however, determined amendment of the original opinion is warranted. The panel therefore grants *sua sponte* panel rehearing in part and to the extent of the changes made to the attached revision decision. *See* Fed. R. App. P. 40. A revised dissent will also be filed. The clerk is directed

to file the revised opinion and dissent *nunc pro tunc* to the original filing date of February 22, 2017.

Finally, we grant the motions filed by the Federal Indian Law Professors and the National Congress of American Indians to file amici curiae briefs on rehearing.

Entered for the Court



ELISABETH A. SHUMAKER, Clerk

FILED
United States Court of Appeals
Tenth Circuit

February 22, 2017

Elisabeth A. Shumaker
Clerk of Court

PUBLISH

UNITED STATES COURT OF APPEALS

TENTH CIRCUIT

STATE OF WYOMING, and WYOMING FARM BUREAU FEDERATION,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; E. SCOTT PRUITT, in his official capacity as Administrator of the United States Environmental Protection Agency; DOUG BENEVENTO, in his official capacity as Acting Region 8 Administrator of the United States Environmental Protection Agency,[*]

Respondents.

THE NORTHERN ARAPAHO TRIBE; EASTERN SHOSHONE TRIBE; CITY OF RIVERTON, WYOMING; FREMONT COUNTY, WYOMING,

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[*] Pursuant to Fed. R. App. P. 43(c)(2) Doug Benevento is substituted for Deb Thomas as the Region 8 Administrator of the United States Environmental Protection Agency.

STATE OF IDAHO; STATE OF ALABAMA; STATE OF COLORADO; STATE OF KANSAS; STATE OF MONTANA; STATE OF NEBRASKA; STATE OF NORTH DAKOTA; STATE OF OKLAHOMA; STATE OF SOUTH DAKOTA; STATE OF UTAH; INDIAN LAW PROFESSORS; RIVERTON MEMORIAL HOSPITAL, LLC; FEDERAL INDIAN LAW PROFESSORS; NATIONAL CONGRESS OF AMERICAN INDIANS,

Amici Curiae.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF WYOMING
(D.C. NO. EPA-1-R08-2013-0007)

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Before **TYMKOVICH**, Chief Judge, **KELLY**, and **LUCERO**, Circuit Judges.

TYMKOVICH, Chief Judge.

This case requires us to determine whether Congress diminished the boundaries of the Wind River Reservation in Wyoming in l905. We find that it did.

The Eastern Shoshone and Northern Arapaho Tribes jointly inhabit the Wind River Reservation. The State of Wyoming and the Wyoming Farm Bureau Federation challenge a decision by the Environmental Protection Agency granting the Tribes' application for joint authority to administer certain non-regulatory programs under the Clean Air Act on the Reservation. As part of their application for administrative authority, the Tribes were required to show they possess jurisdiction over the relevant land. In their application, the Tribes described the boundaries of the Wind River Reservation and asserted that most of the land within the original 1868 boundaries fell within their jurisdiction.

Wyoming and others submitted comments to the EPA arguing the Reservation had been diminished in 1905 by act of Congress, and that some land described in the application was no longer within tribal jurisdiction. After review, the EPA determined the Reservation had not been diminished in 1905 and the Tribes retained jurisdiction over the land at issue. Because the EPA decided the Tribes otherwise satisfied Clean Air Act program requirements, it granted their application.

Wyoming and the Farm Bureau appealed the EPA's Reservation boundary determination. Regionally applicable final actions of the EPA are directly appealable to this court. Exercising jurisdiction under 42 U.S.C. § 7607(b)(1), we grant the petition for review, vacate the EPA's boundary determination, and remand for further proceedings consistent with this opinion. We find by its 1905 legislation, Congress evinced a clear intent to diminish the Reservation.

I. Background

The history of federal Indian policy in the United States is marked by a series of eras, each characterized by a different approach to the inevitable conflict between the Native Americans who inhabited western America and homesteaders flooding west in search of a better life. *Cohen's Handbook of Federal Indian Law* 7–8 (Nell Jessup Newton et al. eds., 2012). The story of the Wind River Reservation begins in the second half of the nineteenth century, when a new federal policy of allotment and assimilation began to take shape, which followed a period when Indian reservations were created throughout the western United States. Unsurprisingly, westward expansion placed pressures on the traditional lifestyles of the Native American tribes. Recognizing the potential for conflicts, particularly over land, the United States negotiated a series of treaties and agreements with dozens of tribes, including the Eastern Shoshone.

The Eastern Shoshone are part of the larger Shoshone Tribe, who in the mid-nineteenth century inhabited what would become the states of Colorado,

Idaho, Nevada, Utah, and Wyoming. Henry Stamm, *People of the Wind River* 9 (1999). In 1863, the United States and the Eastern Shoshone entered into the First Treaty of Fort Bridger, 18 Stat. 685 (1863), which established "Shoshonee County," an area encompassing more than forty-four million acres. *See United States v. Shoshone Tribe of Indians of Wind River Reservation of Wyo.*, 304 U.S. 111, 113 (1938). But the treaty proved to be short lived. With the end of the Civil War, a new wave of settlers forged westward. Fearing the Eastern Shoshone's homeland would be settled and thus lost forever, the tribal leader, Chief Washakie, urged the United States to reserve the Wind River Valley—the Tribe's historic buffalo hunting grounds—as the Eastern Shoshone's permanent homeland.

Chief Washakie's efforts were successful: in 1868, the United States and the Eastern Shoshone Tribe signed the Second Treaty of Fort Bridger, 15 Stat. 673 (1868). This treaty set aside roughly three million acres for exclusive tribal use. In exchange, the Tribe relinquished its claim to the land held under the 1863 treaty. *Shoshone*, 304 U.S. at 113. As it had promised, the United States developed the Reservation's infrastructure and began to establish and expand agricultural lands in an effort to aid the Eastern Shoshone's transition away from hunting wild game, which was rapidly disappearing. For their part, the Eastern Shoshone resolved to settle permanently on the Reservation, pursue an agrarian lifestyle, and send their children to school. But land issues persisted: settlers vied

for agricultural lands south of the Big Wind River, and the Reservation's superintendent feared it would be impossible to observe the boundaries created by the 1868 treaty.

Meanwhile, Congress had departed from its previous policy of segregating tribes from homesteaders in favor of a new policy of educating Native American children in residential boarding schools and splitting up communal, tribally owned reservations into individual, privately owned parcels of land. Judith V. Royster, *The Legacy of Allotment*, 27 Ariz. St. L.J. 1, 7–9 (1995). At the time, Congress, and indeed most of America, assumed the reservation system would eventually cease to exist and members of Native American tribes would become fully assimilated into American society. *See Solem v. Bartlett*, 465 U.S. 463, 468 (1984); Marta Adams et al., *American Indian Law Deskbook* 93 (2015). Thus, reservations began to shrink in size. In 1874, the Eastern Shoshone Tribe sold all of its land south of the forty-third parallel in the so-called Lander Purchase in exchange for a payment of $25,000. 18 Stat. 291, 292 (1874). According to the ratifying act, this transaction "change[d] the southern limit of said reservation." 18 Stat. at 292. Around this time, the Northern Arapaho—traditionally, an enemy of the Eastern Shoshone—joined the Eastern Shoshone on the Wind River Reservation, where they remain today. 1877 Comm'r Indian Aff. Ann. Rep. 19.

The Wind River Reservation boundaries changed again in 1897, when Congress passed legislation purchasing additional land. That act, known as the

Thermopolis Purchase, provided that, in exchange for $60,000, the Tribes agreed to "cede, convey, transfer, relinquish, and surrender forever and absolutely all their right, title, and interest of every kind and character" in a tract around the Big Horn Hot Springs, located on the northern boundary of the Reservation. 30 Stat. 93, 94 (1897). Following up on failed efforts to acquire additional land from the Tribes in 1891 and 1893, in 1904 Representative Frank Mondell of Wyoming introduced a bill initiating the cession of the land north of the Big Wind River flowing through the north-central portion of the Reservation. The 1904 legislation was the framework for negotiations with the Tribes, which the Tribes ultimately agreed to as amended. Congress passed the 1904 agreement in 1905. 33 Stat. 1016 (1905). It is the 1905 Act that is at issue in this case.

But the 1905 Act was not the last piece of legislation affecting the Reservation. In 1934, Congress enacted the Indian Reorganization Act, the first step in its new national policy of tribal self-determination. *See* 48 Stat. 984 (1934). Since the Tribes voted to exclude themselves from this Act, however, Congress had to pass specific legislation to carry out its new policies on the Wind River Reservation. Thus, in 1939, Congress directed the Secretary of the Interior to restore to tribal ownership any unsold lands in the area that had been ceded in 1905. 53 Stat. 1128, 1129 (1939).

That brings us to the present day. Currently, approximately seventy-five percent of the land affected by the 1905 Act is held in trust by the United States

for the Tribes and their members. In 2008, the Tribes applied to the EPA for authority to manage certain non-regulatory programs for air quality in areas under tribal jurisdiction. They were able to do so because in 1990, Congress amended the Clean Air Act, 42 U.S.C. §§ 7401–671 (CAA), to authorize the EPA to treat Native American tribes as states for the purposes of the CAA. § 7601(d). Pursuant to this grant of authority, the EPA promulgated the Tribal Authority Rule, 40 C.F.R. 49, under which qualified tribes may apply for authority to implement and manage programs for air quality in areas under tribal jurisdiction. 42 U.S.C. § 7601(d)(2)(B).

A successful application must describe the area over which a tribe seeks to assert its regulatory authority. Thus, in their application, the Tribes had to specify the proposed scope of their regulatory jurisdiction, which required them to clearly delineate the boundaries of the Reservation. The Tribes claimed the boundaries of the Wind River Reservation were those set forth in the 1868 treaty, reduced only by the Lander and Thermopolis transactions. As required by the CAA, the EPA notified all governmental entities located contiguous to the Reservation and provided local government and the general public notice and an opportunity to comment on the proposed boundary description. When a treatment-as-a-state application is subject to an objection, EPA may also request additional information or consult with the Department of the Interior. 40 C.F.R. § 49.9(d).

In their comments, Wyoming and the Farm Bureau argued the Reservation was diminished by the 1905 Act, which, they contended, established the current boundaries of the Reservation. Based on these objections, the EPA asked the Department of the Interior for an analysis of the competing claims. In 2011, the solicitor issued a legal opinion concluding the 1905 Act had not changed the boundaries established by the 1868 treaty. Relying on this analysis, the EPA issued its final decision granting the Tribes' application. The decision agreed with the Tribes' interpretation that the 1905 Act did not diminish the boundaries of the Reservation.

II. Analysis

Our task here is limited: we must determine whether Congress diminished the Wind River Reservation in 1905 by legislative act.[**] As we have previously

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[**] We must also address two jurisdictional issues:

(1) In response to the court's November 17, 2015 order for supplemental briefing regarding a mootness issue raised during oral argument, we have reviewed the parties' and intervenors' supplemental briefs and find this case is not moot. Mootness is a threshold requirement: without the existence of a live case or controversy, we cannot constitutionally exercise jurisdiction over a claim. *Rio Grande Silvery Minnow v. Bureau of Reclamation*, 601 F.3d 1096, 1110 (10th Cir. 2010). For a live controversy to exist, a present determination of the issues must have "some effect in the real world," and the parties must retain a concrete interest in the outcome of the litigation. *Id.* at 1109–10. Here, even though the EPA has revoked the Tribes' funding under the CAA, the EPA's determination of the Reservation boundaries still stands, and the EPA has not indicated it will reconsider its decision. Because the boundary determination affects the present and future rights and responsibilities of the parties, the case is not moot.

(continued...)

explained, only Congress has the power to diminish reservation boundaries, and its intent "must be clearly expressed." *Osage Nation v. Irby*, 597 F.3d 1117, 1121–22 (10th Cir. 2010). Even further, diminishment "will not be lightly inferred." *Solem v. Bartlett*, 465 U.S. 463, 470 (1984). Nevertheless, we may not "'ignore plain language that, viewed in historical context and given a fair appraisal clearly runs counter to a tribe's later claims.'" *Osage Nation*, 597 F.3d at 1122 (quoting *Pittsburg & Midway Coal Mining Co. v. Yazzie*, 909 F.2d 1387, 1393 (10th Cir. 1990)).

The Supreme Court has declined to infer a congressional purpose of diminishment from the passage of every surplus land act during the allotment and assimilation period. "Rather, it is settled law that some surplus land acts diminished reservations, and other surplus land acts did not." *Solem*, 465 U.S. at

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[**](...continued)

(2) We also find the Wyoming Farm Bureau has standing to sue on behalf of its members. For an organization to bring suit in its representative capacity, it must show, among other things, that "its members would otherwise have standing to sue in their own right." *Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 343 (1977). Standing requires a concrete and particularized injury that is traceable to the defendant's conduct and redressable by a favorable court decision. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–61 (1992). In this case, some Farm Bureau members own farms within the disputed area and face the costs of complying with a new regulatory regime following the EPA's decision. We have previously recognized precisely this type of injury as sufficiently concrete and particularized. *See Hydro Res., Inc. v. EPA*, 608 F.3d 1131, 1144 (10th Cir. 2010). And since the alleged injuries are clearly traceable to the EPA's decision and would be redressed by a reversal of that decision, Farm Bureau members have standing to sue in their own right. Therefore, we find the Farm Bureau has standing to sue on behalf of its members.

469 (citations omitted). "The effect of any given surplus land Act depends on the language of the Act and the circumstances underlying its passage." *Id.* To determine whether the 1905 Act had the effect of diminishing the Reservation, we look to the well-settled approach described in *Solem*, where the Court outlined a hierarchical, three-step framework to ascertain congressional intent.

First, we look to the text of the statute, because it is "[t]he most probative evidence of congressional intent." *Id.* at 470; *see also Nebraska v. Parker*, 136 S. Ct. 1072, 1079 (2016) ("[W]e start with the statutory text, for '[t]he most probative evidence of diminishment is, of course, the statutory language used to open Indian lands.'" (citation omitted) (second alteration in original)).

Second, we examine the circumstances surrounding the passage of the act, "particularly the manner in which the transaction was negotiated with the tribes involved and the tenor of legislative reports presented to Congress." *Solem*, 465 U.S. at 471; *see also Parker*, 136 S. Ct. at 1079; *South Dakota v. Yankton Sioux Tribe*, 522 U.S. 329, 351–52 (1998).

Third and finally, "to a lesser extent," we look to "the subsequent treatment of the area in question and the pattern of settlement there." *Id.* at 344; *Solem*, 465 U.S. at 471–72.

In doing so, we afford no deference to the EPA's boundary determination. As our precedents tell us, "'the Supreme Court has applied, without comment, a de novo standard of review in determining congressional intent [regarding

reservation boundary diminishment].'" *Osage Nation*, 597 F.3d at 1122 (alteration in original) (quoting *Yazzie*, 909 F.2d at 1393). Although examination of the historical record "involves a mixed question of law and fact," de novo review is appropriate "[w]here a mixed question 'primarily involves the consideration of legal principles.'" *Id.* at 1393–94 (quoting *Supre v. Ricketts*, 792 F.2d 958, 961 (10th Cir. 1986)). The EPA does not dispute this standard of review, because it concedes a de novo standard is "consistent with the [Administrative Procedure Act's] 'otherwise not in accordance with the law' standard," Aple. EPA Br. 23, which we apply to the agency action here.

A. The Text of the 1905 Act

We begin our analysis with the 1905 Act's operative language, for "[s]tatutory language is the most probative evidence of congressional intent to disestablish or diminish a reservation." *Osage Nation*, 597 F.3d at 1122–23. "'Explicit reference to cession or other language evidencing the present and total surrender of all tribal interests strongly suggests that Congress meant to divest from the reservation all unallotted opened lands.'" *Id.* at 1123 (quoting *Solem*, 465 U.S. at 470). There are no magic words of cession required to find diminishment. Rather, the statutory language, whatever it may be, must "establis[h] an express congressional purpose to diminish." *Hagen v. Utah*, 510 U.S. 399, 411 (1994).

Here, Article I of the 1905 Act reads,

> The said Indians belonging on the Shoshone or Wind River Reservation, Wyoming, for the consideration hereinafter named, do hereby *cede, grant, and relinquish to the United States, all right, title, and interest* which they may have to all the lands embraced within said reservation, except the lands within and bounded by the following lines . . . .

33 Stat. at 1016 (emphasis added). This language of cession aligns with the type of language the Supreme Court has called "precisely suited" to diminishment. *Yankton Sioux*, 522 U.S. at 344. Indeed, it is nearly identical to the statutory language in cases where the Supreme Court has found a congressional purpose to diminish a reservation in the statute's text.

For example, in *DeCoteau v. District County Court for the Tenth Judicial District*, the Court considered an act providing that the Sisseton-Wahpeton Tribe agreed to "cede, sell, relinquish, and convey to the United States all their claim, right, title, and interest in and to all the unallotted lands within the limits of the reservation." 420 U.S. 425, 445 (1975). The Court found this language was precisely suited to a congressional purpose of terminating the Lake Traverse Indian Reservation. *Id.* Similarly, in *Rosebud Sioux Tribe v. Kneip*, the Court held Congress clearly evinced an intent to diminish the boundaries of the Rosebud Sioux Reservation when it passed a series of acts affecting unallotted lands on that reservation. 430 U.S. 584, 615 (1977). The first act, passed in 1904, provided that the Rosebud Sioux Tribe agreed to "cede, surrender, grant, and convey to the United States all their claim, right, title, and interest in and to" the

unallotted portion of its reservation. *Id.* at 597. This too, the Court held, was language precisely suited to diminishment. *Id.*[***]

Two decades later, in *Hagen*, the Court found Congress evinced a clear intent to diminish a reservation even when it employed less express language of cession. The operative language of the statute at issue provided that "all the unallotted lands within said reservation shall be restored to the public domain." 510 U.S. at 412. The Court held this language evidenced a congressional intent "inconsistent with the continuation of reservation status." *Id.* at 414.[****] And in *Yankton Sioux*, the Court unanimously held Congress spoke with a clear purpose of diminishment when it passed an act providing that the Yankton Sioux Tribe would "cede, sell, relinquish, and convey to the United States all their claim, right, title, and interest in and to all the unallotted lands within the limits of the reservation." 522 U.S. at 344, 351.

[***] Although the 1907 and 1910 Acts in *Rosebud* merely authorized the Secretary of the Interior "to sell or dispose of" the unallotted portions, the court found a "continuity of intent" from the earlier 1904 Act and a 1901 agreement, based on the circumstances surrounding the passage of the later acts. *Id.* at 606–13.

[****] Citing to *Hagen*, the EPA argues that when the operative language does not restore ceded lands to the public domain, diminishment is less likely. We disagree. While the Court in *Hagen* found language restoring lands to the public domain probative of congressional intent to diminish a reservation, nowhere did it suggest the *absence* of public domain language cuts against diminishment—especially where, as here, the statute's operative language includes even stronger language of cession than in *Hagen*.

In contrast, in cases where the Court has found a lack of clear congressional intent to diminish, the operative language of the statutes merely opened a reservation to settlement by non-Indians or authorized the Secretary of the Interior to act as a "sales agent" for the Native American tribes. For example, in *Seymour v. Superintendent of Wash. State Penitentiary*, the Court concluded that an act providing "for the sale of mineral lands and for the settlement and entry under the homestead laws of surplus lands remaining on the diminished Colville Reservation after allotments were first made . . . did no more than open the way for non-Indian settlers to own land on the reservation."[*****] 368 U.S. 351, 354–56 (1962). Similarly, in *Mattz v. Arnett*, the Court held an act providing that lands within a reservation were "subject to settlement, entry, and purchase" did not, on its own, "recite or even suggest that Congress intended thereby to terminate the Klamath River Reservation." 412 U.S. 481, 495–97 (1973).

The operative language in *Solem* itself was similar: the act merely "authorized and directed" the Secretary of the Interior "to sell and dispose of all that portion of the Cheyenne River and Standing Rock Indian reservations" within the described boundaries. 465 U.S. at 472–73. The Court compared the language

[*****] The Tenth Circuit distinguished *Seymour* in *Ellis v. Page*, stating, "It is one thing to open an Indian Reservation to mineral exploitation, allotment to Indians, and non-Indian homesteaders by Congressional enactment as in *Seymour*. It is quite another to agree by treaty to cede and relinquish all claim, title and interest in the lands within the limits of a reservation." 351 F.2d 250, 252 (10th Cir. 1965)

to the acts in *Rosebud* and *DeCoteau* and concluded that unlike in those cases, "the Secretary of the Interior was simply being authorized to act as the Tribe's sales agent." *Id.* at 473. The Court added, "Nowhere else in the Act is there specific reference to the cession of Indian interests in the opened lands or any change in existing reservation boundaries." *Id.* at 474.[******] Likewise, just last year in *Parker*, the Court held that an act stating the disputed lands would be "'open for settlement under such rules and regulations as [the Secretary of the Interior] may prescribe,'" 136 S. Ct. at 1079 (alteration in original) (quoting 22 Stat. 341 (1882)), fell into the category of acts that "'merely opened reservation land to settlement,'" *id.* (quoting *DeCoteau*, 420 U.S. at 448).[*******]

[******] The Court in *Solem* did acknowledge that language of diminishment present elsewhere in the act undisputedly supported the view that the reservation had been diminished. 465 U.S. at 474–75. Without express language of cession, however, isolated references to diminishment alone could not "carry the burden of establishing an express congressional purpose to diminish." *Id.* at 475. Here, in contrast, in addition to the express language of cession in Article I, Articles I, III, IV, VI, and IX of the 1905 Act refer to the diminished reservation. 33 Stat. at 1016, 1017, 1018, 1020, 1022.

[*******] The EPA points to a circuit case, *United States v. Grey Bear*, which it argues falls outside this framework. 828 F.2d 1286 (8th Cir. 1987). That case involved an interpretation of cession language for the Devils Lake Indian Reservation that is similar to *Rosebud*, *DeCoteau*, and here, but unlike these cases, the legislative history of the act was quite limited, and the subsequent treatment of the area strongly indicated Congress did not view the act as disestablishing the reservation. *Id.* at 1290–91. Thus although step one of the *Solem* analysis pointed to diminishment, steps two and three made it clear that was not Congress's intent.

Plainly, the 1905 Act falls into the first line of cases: those with express language of cession. Nevertheless, the EPA and the Tribes argue that Congress's intent remains unclear, because of the absence of words such as "sell" or "convey" that were present in other statutes during the period. But our task is not to divine why Congress may have chosen certain synonyms over others in this particular Act. We believe Congress's use of the words "cede, grant, and relinquish" can only indicate one thing—a diminished reservation. A review of several dictionaries from the turn of the twentieth century confirms that adding the words "sell" or "convey" would not materially change the intent Congress

evinced in the 1905 Act.[********] And in any event, Article II of the 1905 Act includes the word "conveyed":

> In consideration of the lands *ceded, granted, relinquished, and conveyed* by Article I of this agreement, the United States stipulates and agrees to dispose of the same, as hereinafter provided . . . .

33 Stat. at 1019–20 (emphasis added).[*********]

[********] The absence of the words "convey" or "sell" in Article I tells us little about Congress's intent, since the contemporaneous definitions of "cede," "grant," and "relinquish" were virtually indistinguishable from the definitions of "convey" and "sell." For example, at the time, "cede" was defined as "[t]o yield or surrender, give up." *Webster's Commonsense Dictionary* 76 (J.T. Thompson ed., 1902). Likewise, "grant" was defined as "[t]o allow, yield, concede; to bestow or confer, in answer to prayer or request; to make conveyance of, give the possession or title of." *Webster's Practical Dictionary* 165–66 (1906). And "relinquish" was defined as "[t]o give up the possession or occupancy of; to quit; to forsake; to abandon; to give up; to resign," *Webster's Commonsense Dictionary* 405, or "[t]o withdraw from, leave behind; to give up, renounce a claim to, resign, quit, forsake, abandon, forego," *Webster's Practical Dictionary* 342.

By way of comparison, "convey" was defined as "to transfer to another, make over," *id.* 81, and "[t]o carry; to remove; to transmit," *Webster's Commonsense Dictionary* 105. "Sell" was defined as "[t]o give or deliver in exchange for some equivalent; to exchange for money," *id.* 438, and "[t]o transfer to another for an equivalent; to dispose of in return for something, esp. for money," *Webster's Practical Dictionary* 361. It is true the word "sell" could add the notion of an exchange for money, but the Supreme Court has found a statute's operative language to be "precisely suited" to diminishment without the presence of the word "sell." *See Rosebud*, 430 U.S. at 597.

[*********] It is worth noting the Wyoming Supreme Court, applying *Solem*, held the operative language of the 1905 Act evinced Congress's clear intent to diminish the Reservation. *Yellowbear v. State*, 174 P.3d 1270, 1282 (Wyo. 2008). Specifically, the court concluded the language of cession in Article I was "indistinguishable from the language of *DeCoteau*." *Id.* And upon review of

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The EPA and the Tribes also argue the lack of unconditional payment of a sum certain in the 1905 act indicates Congress did not intend to diminish the Reservation. The 1905 Act does not provide for a single, lump-sum payment, but rather outlines a hybrid payment scheme, under which different amounts derived from the proceeds of sales of the ceded lands are allocated to specific funds. For example, the Act provides $150,000 for "the construction and extension of an irrigation system within the diminished reservation," $50,000 for a school fund, and $50,000 for the purchase of livestock. 33 Stat. 1017–18. The Act also creates a general welfare and improvement fund and appropriates $85,000 for per capita payments of $50 each. 33 Stat. 1018, 1020–21. As we explain in more detail below, it was thought this hybrid payment scheme would yield more revenue to the tribes, since they would be paid from the proceeds collected from the homesteaders.

In arguing this payment scheme is fatal to a finding of diminishment, the EPA and the Tribes rely on *Solem*. There the Court held language of cession combined with a sum certain payment creates "an almost insurmountable presumption that Congress meant for the tribe's reservation to be diminished."

*********(...continued)
Yellowbear's federal habeas petition, we concluded Yellowbear failed to present any argument "calling into question the correctness of [the Wyoming Supreme Court's] decision." *Yellowbear v. Atty. Gen. of Wyo.*, 380 F. App'x 740, 743 (10th Cir. 2010), *cert. denied sub nom.*, *Yellowbear v. Salzburg*, 562 U.S. 1228 (2011).

465 U.S. at 470–71. But this presumption is not a two-way street. In *Hagen*, the Court expressly rejected the argument that a finding of diminishment requires "both explicit language of cession or other language evidencing the surrender of tribal interests *and* an unconditional commitment from Congress to compensate the Indians." 510 U.S. at 411 (emphasis added). The Court explained, "While the provision for definite payment can certainly provide additional evidence of diminishment, the lack of such a provision does not lead to the contrary conclusion." *Id.* at 412. The Court continued, "In fact, the statutes at issue in *Rosebud*, which we held to have effected a diminishment, did not provide for the payment of a sum certain to the Indians." *Id.* And indeed, in *Rosebud*, the Court noted a sum certain payment or lack thereof is only one of many textual indicators of congressional intent. 430 U.S. at 598 n.20. Congress's decision to abandon the sum certain method of payment was "not conclusive with respect to congressional intent."********** *Id.* at 588. What matters most is not the

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********** The Court in *Rosebud* added that the act at issue was not completely devoid of a guaranteed payment. The Court observed, "[d]espite this 'uncertain sum' proviso," the act mandated that "all lands herein ceded and opened to settlement . . . remaining undisposed of at the expiration of four years from the taking effect of this Act, shall be sold and disposed of for cash . . . ." *Rosebud*, 430 U.S. at 596 n.18 (citation omitted). In the Court's words, such arrangement "suggests that Congress viewed this land as disestablished immediately." *Id.* Similarly, here, the 1905 Act requires "[t]hat any lands remaining unsold eight years after the said lands shall have been opened for entry may be sold to the highest bidder for cash without regard to the above minimum limit of price." 33 Stat. at 1021.

mechanism of payment, but rather the "language of immediate cession." *Id.* at 597.

Finally, the EPA and the Tribes argue the trusteeship language in the 1905 Act demonstrates that Congress merely meant for the United States to hold the land in trust for the Tribes until it was sold. The EPA and the Tribes thus believe the Act effected no change in ownership until parcels were sold to settlers. They point to Article IX of the Act, which provides,

> [N]othing in this agreement contained shall in any manner bind the United States to purchase any portion of the lands herein described or to dispose of said lands except as provided herein, or to guarantee to find purchasers for said lands or any portion thereof, it being the understanding that United States shall act as trustee for said Indians to dispose of said lands and to expend for said Indians and pay over to them the proceeds received from the sale thereof only as received, as herein provided.

33 Stat. at 1020–21. In support of this argument, the EPA relies on similar language the Court considered in *Ash Sheep Co. v. United States*, 252 U.S. 159 (1920). There the Court held that the Crow Tribe retained a beneficial interest in ceded lands that precluded them from becoming "public lands." *Id.* at 166. But the Court has since explained that the question considered in *Ash Sheep*—whether lands became "public lands"—is "logically separate" from diminishment. *See Rosebud*, 430 U.S. at 601 n.24. Accordingly, *Ash Sheep* is seldom mentioned in subsequent cases.

In any event, the Court has made clear that trust status is not incongruous with congressional intent to diminish a reservation. In *Rosebud*, for example, the Court considered a series of statutes in which the United States did not promise to find purchasers for the lands, but rather agreed to act as trustee for the Indians to dispose of the lands and collect and distribute the proceeds. 430 U.S. at 596, 608. The Court held congressional intent was to diminish the Rosebud Reservation, notwithstanding the trusteeship provisions. *See id*. 430 U.S. at 615. The Court agreed with the Eighth Circuit that "'the fact that a beneficial interest is retained does not erode the scope and effect of the cession made, or preserve to the reservation its original size, shape, and boundaries.'" *Id.* at 601 n.24 (quoting *Rosebud Sioux Tribe v. Kneip*, 521 F.2d 87, 102 (8th Cir. 1975)). Even the dissent acknowledged, "[o]f course, it is possible that Congress intended to remove the opened counties from the Reservation while leaving the Indians with a host of rights in the counties." *Rosebud*, 430 U.S. at 622.

In sum, the express language of cession in the Act's operative text, taken together with the Act's other references to diminishment, strongly suggests that Congress intended to diminish the boundaries of the Wind River Reservation. The lack of a sum certain payment and the inclusion of a trusteeship provision do not compel a different conclusion.

B. The Historical Context of the Act

The contemporary historical context further confirms Congress intended to diminish the Wind River Reservation when it passed the 1905 Act. Although we believe the statutory language points strongly towards diminishment, we also consider "the manner in which the transaction was negotiated with the tribes involved and the tenor of legislative reports presented to Congress." *Solem*, 465 U.S. at 471; *see also Yankton Sioux*, 522 U.S. at 351. As the Supreme Court has stated, "[e]ven in the absence of a clear expression of congressional purpose in the text of a surplus land Act, unequivocal evidence derived from the surrounding circumstances may support the conclusion that a reservation has been diminished." *Id.* Of course, here we need not search for unequivocal evidence, for the statute contains express language of cession. But our scrutiny of the circumstances surrounding the 1905 Act confirms that Congress intended to diminish the Reservation's boundaries.

The legislative history and the negotiations leading up to the 1905 Act reveal Congress's longstanding desire to sever from the Wind River Reservation the area north of the Big Wind River. As in *Rosebud*, "[a]n examination of the legislative processes which resulted in the 190[5] Act convinces us . . . that this purpose was carried forth and enacted." 430 U.S. at 592. "Because of the history of the . . . Agreement, the 190[5] Act cannot, and should not, be read as if it were

the first time Congress had addressed itself to the diminution of the [Wind River] Reservation." *See id.*

In 1891, Congress drafted a bill that, had it passed, would have changed the Reservation's boundaries to exclude the land north of the Big Wind River. Under the 1891 agreement, the Tribes were to "cede, convey, transfer, relinquish and surrender, forever and absolutely . . . all [the Tribes'] right, title, and interest, of every kind and character, in and to the lands, and the water rights appertaining thereunto" in exchange for the sum of $600,000. H.R. Exec. Doc. No. 52-70, at 29, 30 (1892). Though Congress did not ratify this agreement, two years later the Secretary of the Interior sent another commission to negotiate with the Tribes for the sale of the land north of the Big Wind River. This time, the United States asked for additional land and offered the Tribes $750,000. H.R. Exec. Doc. No. 53-51, at 4 (1894). Despite the higher offer, the Tribes refused three different proposals, and no agreement was reached.[**********]

Congressional activity resumed in 1904, when Representative Frank Mondell of Wyoming introduced a bill to further reduce the Wind River Reservation. The 1904 Mondell Bill was based on the 1891 and 1893 proposals. But by 1904, the Supreme Court had declared that Congress had plenary authority over relations with Native Americans, so Congress no longer needed tribal

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[**********] Congress did successfully obtain the land around the Big Horn Hot Springs through the Thermopolis purchase in 1897. 30 Stat. at 94.

approval to change reservation boundaries. *See Lone Wolf v. Hitchcock*, 187 U.S. 553, 565 (1903). As Representative Thomas Frank Marshall, the Chairman of the Committee on Indian Affairs wrote, the 1904 Bill "propose[d] to reduce the reservation, as suggested . . . at the time of the making of the agreement of 1891 . . . ." H.R. Rep. No. 58-2355, at 3 (1904).

The Mondell Bill, however, differed from the 1891 agreement in several respects. One amendment—and one the EPA and the Tribes point to—was the elimination of the $600,000 sum certain payment. To that, Representative Marshall explained, "[The Mondell Bill] follows as closely as possible, under the changed conditions and the *present policy* of Congress relative to payments for lands purchased from Indians, the agreement of 1891 and the bill prepared at the time for carrying out the provisions of that agreement." H.R. Rep. No. 58-2355, at 4 (emphasis added). "[The bill] follows the now established rule of the House of paying to the Indians the sums received from the ceded territory under the provisions of the bill." H.R. Rep. No. 58-2355, at 2; *see also* H.R. Rep. No. 58-2355, at 8 (quoting letter from then-Acting Commissioner to the Secretary of the Interior A. C. Tonner explaining structure of payment framework). Thus, to comply with prevailing policy, the sum certain payment was excised and replaced with a framework whereby lands would be sold at different times and at different prices with the proceeds to be transferred to the Tribes. And, incidentally, Congress believed that the Tribes could realize greater compensation under such a

framework. H.R. Rep. No. 58-2355, at 4 (observing "[t]he amount which the Indians would receive at $1 an acre would be $1,480,000"). Such a payment scheme was the prevailing congressional policy at the time. As the Supreme Court has explained, Congress adopted "'a new policy in acquiring lands from the Indians [by] provid[ing] that the lands shall be disposed of to settlers . . ., and to be paid for by the settlers, and the money to be paid to the Indians only as it is received . . . from the settlers.'" *Rosebud*, 430 U.S. at 592 (footnote omitted) (alterations in original).

Given these congressional directives, in April 1904, Indian Inspector James McLaughlin met with the Tribes and presented the terms of the Mondell Bill in a series of meetings on the Wind River Reservation.********** McLaughlin opened by stating,

> My friends, I am sent here at this time by the Secretary of the Interior to present to you a proposition for the opening of certain p[or]tions of your reservation for settlement by the whites. It is believed that it will be to the best interests of your two tribes *to cede to the United States* the portions referred to.

********** McLaughlin, who had also negotiated the 1897 Thermopolis Purchase, negotiated many land agreements with Native American tribes, including the Lower Brules, the Otoes, the Missourias, the Klamaths, the Modocs, the Yankton, the Sioux, the Red Lake Chippewas, the Mille Lacs Chippewas, the Pah-Utes, and the Standing Rock Sioux. James McLaughlin, *My Friend the Indian* 295 (1910). The Supreme Court has reviewed agreements he negotiated that resulted in diminishment in a number of cases, including *Rosebud* and *Hagen*.

Minutes of Council between James McLaughlin, U.S. Indian Inspector, and the Indians of the Eastern Shoshone and Arapaho Tribes, at 2 (Apr. 19–21, 1904) (emphasis added) (reproduced in JA 509–36) [Council Minutes]. But McLaughlin explained that since his last agreement with the Tribes, Congress's policy for paying for ceded land had changed: "For several years past there has been a sentiment in Congress . . . opposed to paying the Indians a lump sum consideration for their lands. Instead of stipulating, or providing in the agreement, a lump sum consideration for any tract of land, they have determined upon giving the Indians the full benefit of the land by paying the Indians from the proceeds of the sale of the land as whitemen settle upon it." Council Minutes, at 3. McLaughlin explained to the Tribes that they would "receive more in the aggregate than under the old lump sum agreements." Council Minutes, at 4.

McLaughlin advised the Tribes during negotiations that the boundaries of the Reservation would change as a result of the Act, just as they would have under the agreement in 1891 and the negotiations in 1893. He stated,

> I now wish to talk of the *boundaries of the reservation and the residue of land that will remain in your diminished reservation*. That being a very important matter. . . . The tract to be ceded to the United States, as proposed by the "Mondell Bill," is estimated at 1,480,000 acres, leaving 800,500 acres in the diminished reservation.

Council Minutes, at 6 (emphasis added).[**********] McLaughlin informed the Tribes that "a large reservation is not in your interest," while the reduction would be, and that Congress could now unilaterally change the boundaries of the Reservation if the Tribes did not agree. Council Minutes, at 7.

Explaining the purpose of the Mondell Bill, McLaughlin told the Tribes that this agreement would allow the Tribes to "dispos[e] of the lands that you do not need" and that they would "realiz[e] money from the sale of that land, which will provide you with means to make yourselves comfortable upon your reservation . . . ." Council Minutes, at 3. He also referred to the ceded lands as "the public domain" and made clear the land on the north side of the Big Wind River (part of the ceded territory), after the agreement, would be different:

> Those of you who have allotments on the north side of the river, if you so desire, can have them cancelled *and come within the diminished reservation*. * * * However, any of you who retain your allotments on the other side of the river can do so, and you will have the same rights as the whiteman, and can hold your lands or dispose of them, as you see fit. On the reservation, you will be protected by

[**********] We acknowledge the Supreme Court stated in *Solem* that a "few scattered phrases" describing agreements as "reducing the reservation," or "the reservation as diminished," do not indicate a clear congressional purpose to diminish the boundaries of a reservation. 465 U.S. at 478; *see also id.* at 475 n.17 (reasoning "'diminished' was not yet a term of art in Indian law"). For as the Court observed, "[I]t is unclear whether Congress was alluding to the reduction in Indian-owned lands that would occur once some of the opened lands were sold to settlers or to the reduction that a complete cession of tribal interests in the opened area would precipitate." *Id.* (citation omitted). But here we are not limited to a few ambiguous phrases; rather, we are presented with a more complete set of circumstances similar to those the Supreme Court credited in *Rosebud*.

> the laws that govern reservations in all your rights and privileges.
>
> Furthermore, all of you who may retain your allotments *off the reservation*, will not lose any of your rights on the reservation, and you have rights the same as if you remained within the diminished reservation. You will have rights to surplus lands, the timber etc, *although your home may be on the public domain*.

Council Minutes, at 14 (emphasis added).

The tenor of the Tribes' understanding of the agreement reflects that the Reservation's boundaries would be diminished. One representative for the Eastern Shoshone told McLaughlin that his Tribe understood it was "parting with [its lands] forever and [could] never recover [them] again." Council Minutes, at 17. Long Bear, a chief of the Arapaho Tribe, proclaimed, "I understand what he comes for . . . and I will tell what part of the Reservation I want to sell. . . . I want to cede that portion of the reservation from the mouth of the Dry Muddy Gulch in a direct line to the mouth of Dry or Beaver Creek below Stagner's on Wind River." Council Minutes, at 9. Rev. Sherman Coolidge of the Arapaho added he was glad McLaughlin had come "to purchase a portion of our reservation. The proposed ceded portion has not been used except for grazing. . . . We need the money that we will get from the sale of these lands for improvements on the unceded portion." Council Minutes, at 12.

The Tribes and McLaughlin entered into an agreement, *see* Council Minutes, at 27, and McLaughlin reported the progress back to Washington. Specifically, he wrote,

> *The diminished reservation* leaves the Indians the most desirable and valuable portion of the Wind River Reservation and the garden spot of that section of the country. It is bounded on the north by the Big Wind River, on the east and southeast by the Big Popo-Agie River, which, being never failing streams carrying a considerable volume of water, give natural boundaries with well-defined lines; *and the diminished reservation, approximately 808,500 acres* . . . allows 490 acres for each of the 1,650 Indians now belonging to the reservation. I have given this question a great deal of thought and considered every phase of it very carefully and became convinced that *the reservation boundary, as stipulated in the agreement*, was ample for the needs of the Indians . . . .

H.R. Rep. No. 58-3700, at 17 (1905) (emphasis added). But the 1904 Mondell Bill as negotiated with the Tribes was never approved. Instead, it was amended and codified as a new bill (the 1905 Act), which was approved by Congress on March 3, 1905. The legislative history reveals almost no debate about the cession and payment provisions of the 1905 Act; as discussed, most of the debate had occurred in the drafting of the 1904 Act. According to the House Report on the issue, the 1905 Act was "in harmony" with the Mondell Bill, with "the principal changes . . . in form rather than substance." H.R. Rep. No. 58-3700, at 6.

We believe the circumstances surrounding the 1905 Act most closely resemble those in *Rosebud*. In 1901, McLaughlin was dispatched to negotiate

with the Indians on the Rosebud Reservation to cede unalloted portions of their reservation. *Rosebud*, 430 U.S. at 590. They agreed to cede 416,000 acres for a sum of $1,040,000, but the agreement was not ratified because it "'provided that the Government should pay for the lands outright.'" *Id*. at 591 (citation omitted). The Supreme Court observed it was "undisputed" that had the agreement been ratified, it would have changed the reservation's boundaries. *Id*. Working from that baseline, the Court concluded, "An examination of the legislative processes which resulted in the 1904 Act convinces us . . . that this purpose was carried forth and enacted." *Id*. at 592.

Similarly, here, the unratified 1891 agreement with the Tribes served as a predicate for the 1905 Act. Indeed, in introducing the Mondell Bill, Representative Mondell had the 1891 agreement read into the record and then offered amendments to that agreement to reflect the revisions discussed. 38 Cong. Rec. 5,245, 5,245, 5,246–47 (1904). Thus, the actual congressional record belies the EPA's finding that no continuity of purpose existed between the 1891 agreement and the 1905 Act. That provisions were revised to reflect the McLaughlin negotiations and the prevailing policy on compensating Native Americans for ceded land at the time is insufficient reason for severing and rendering irrelevant the circumstances prior to 1904.

Additionally, this case is unlike *Solem*, because the legislative history reveals that Congress explicitly stated its intent to cede portions of the

Reservation. *Cf. Solem*, 465 U.S. at 477 (Congress enacted a "sell and dispose" act). Moreover, the 1905 Act bears the same hallmarks that, as the Supreme Court put it, made *Solem* a "more difficult" case and evidenced diminishment. *Compare id*. at 474 (explaining act permitted "Indians already holding allotments on the opened lands to obtain new allotments . . . 'within the respective reservations thus diminished'" (citation omitted)), *with* 33 Stat. at 1016 ("[A]nd any Indian who has made or received an allotment of land within the ceded territory shall have the right to surrender such allotment and select other lands within the diminished reserve in lieu thereof . . . ."). [**********] In the end,

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[**********] Of course, Congress's inclusion or removal of certain provisions in the 1905 Act may cut against—but not defeat—a finding of diminishment. For example, the Act included a provision that retained the lease rights of one Asmus Boysen and gave him the option to purchase preferential land. 33 Stat. at 1020. Boysen's agreement with the Tribes contained a clause that would have terminated the lease upon extinguishment of the Tribes' title to covered lands. JA 4604. The EPA's decision opined that Congress's concern with the Boysen lease—particularly, its potential for clouding the title of certain opened lands—evinced an intent not to diminish the Reservation's boundaries. JA 4606–07. The EPA's understanding of Congress's treatment of the Boysen lease was limited to a finding that "the 1905 Act would retain a Tribal trust interest in the opened lands and that those lands would not be returned to the public domain." JA 4606. But as we explained in step one of our analysis, the existence of a trust relationship is not determinative of diminishment, and, unlike *Hagen*, this is not a "public domain" case. Additionally, the EPA pointed to Congress's removal of a provision that would have required the United States to pay the Tribes for sections 16 and 36 (as school lands) or equivalent lands of each township. JA 4608–09. The Supreme Court found the inclusion of such a provision probative of diminishment in *Rosebud* and *Yankton Sioux*. *See Rosebud*, 430 U.S. at 599–601; *Yankton Sioux*, 522 U.S. at 349–50. But the record in this case reveals that Wyoming may have received federal land elsewhere in exchange, obviating the need for a school lands provision.

Congress's consistent attempts at the turn of the century to purchase the disputed land compel the conclusion that this intent continued through the passage of the 1905 Act. And the statements in the legislative history about the diminishment of the reservation, when taken together with the Act's plain language, compel the conclusion Congress intended to diminish the Wind River Reservation by separating the land north of the Big Wind River.

C. Subsequent Treatment of the Area

Third and finally, and "[t]o a lesser extent," we can consider "Congress's own treatment of the affected areas, particularly in the years immediately following the opening," as well as "the manner in which the Bureau of Indian Affairs and local judicial authorities dealt with unallotted open lands." *Solem*, 465 U.S. at 471. "[A]s one additional clue as to what Congress expected would happen," we also "look to the subsequent demographic history of opened lands." *Id.* at 471–72. But although such evidence can buttress a finding of diminishment based on the statutory text, the Supreme Court "has never relied solely on this third consideration." *Parker*, 136 S. Ct. at 1081. Accordingly, subsequent events "'cannot undermine substantial and compelling evidence from an Act and events surrounding its passage.'" *Osage Nation*, 597 F.3d at 1122 (quoting *Yazzie*, 909 F.2d at 1396). Our review of the subsequent treatment of the area is therefore brief and ultimately does not impact our conclusion Congress intended to diminish the Reservation by the 1905 Act.

From the outset, we note the parties have provided volumes of material evidencing the treatment of the ceded land after the 1905 Act. Unsurprisingly, each side has managed to uncover treatment by a host of actors supporting its respective position. Recognizing this inevitability, the Supreme Court has warned that at times "subsequent treatment" may be "so rife with contradictions and inconsistencies as to be of no help to either side." *Solem*, 465 U.S. at 478. Because we are unable to discern clear congressional intent from the subsequent treatment, we find it is of little evidentiary value. *See also* JA 4624 (the EPA conceding "Congressional and Executive Branch references to the opened area were inconsistent"); JA 3636 (Solicitor indicating "[t]he evidence from the years immediately after the 1905 Act indicates some inconsistent treatment of the 1905 area").**********

Nonetheless, we examine some of the more germane evidence. Perhaps the most telling indication that Congress intended to diminish the Reservation's boundaries in the 1905 Act is the Indian Reorganization Act, 48 Stat. 984 (1934), in which Congress began implementing its new policy of Indian self-determination. But because the Tribes opted out of the Reorganization Act that would have restored the ceded lands, in 1939, Congress authorized the restoration

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********** We agree with Judge Lucero that the *Solem* third step tells us little of value, and in fact "irrationally" requires us to infer intent from subsequent demographic developments. The better guide is statutory text and the historical context that drove Congressional action.

of "all undisposed-of surplus or ceded lands . . . which [we]re not at present under lease or permit to non-Indians," and restored to tribal ownership the "balance of said lands progressively as and when the non-Indians owned the lands." 53 Stat. 1128, 1129–30 (1939). In administering the land restoration, the Secretary of the Interior sought to "add" the restored lands to, or "make them part of," the Reservation. For example, in one order, the Secretary stated,

> Now, Therefore, by the virtue of authority vested in the Secretary of the Interior by section 5 of the Act of July 27, 1939 (53 Stat. 1128-1130), I hereby find that the restoration to tribal ownership of the lands described above, which are classified as undisposed of, ceded lands of the Wind River Reservation, Wyoming, . . . will be in the tribal interest, and they are hereby restored to tribal ownership for the use and benefit of the Shoshone-Arapahoe Tribes of Indians of the Wind River Reservation, Wyoming, and are *added to and made part of* the existing Wind River Reservation . . . .

9 Fed. Reg. 9,754 (1944) (emphasis added). It is difficult to conceive why the Secretary would have used such language if indeed the ceded lands at all relevant times remained part of the Reservation.

Subsequent statements made by Congress also indicate Congress believed the 1905 Act changed the Reservation's boundaries. In 1907, Congress extended the time for entry onto the ceded territory. In that Act, Congress referred to the land as "lands *formerly embraced* in the Wind River of Shoshone Indian Reservation, in Wyoming, which were opened for entry." 34 Stat. 849 (1907) (emphasis added); *see also* H.R. Doc. No. 64-1757, at 9 (1916) (stating "the

[irrigation] project under consideration is within the 'ceded lands' portion of *what was formerly included in the Wind River or Shoshone Indian Reservation*" (emphasis added)). Again, Congress's consistent reference to lands that were formerly part of the Reservation is probative of diminishment.

Likewise, some maps from the period indicate the Reservation only included the unopened lands. *See* JA 3638 (explaining 1907 map by the State of Wyoming and 1912 map by the General Land Office purported to show the Reservation's boundaries only encompassed lands unopened by the 1905 Act). But, as the solicitor pointed out in her 2011 opinion, other maps merely reference the ceded lands as "open lands." *Id*. Ultimately, we agree with the solicitor that "[t]hese references are ambiguous and inconsistent at best." *Id*.

We also briefly consider the subsequent demographics of the ceded area, though this consideration is the least probative of congressional intent. *Solem*, 465 U.S. at 471–72. As we have previously stated, "'subsequent events and demographic history can support and confirm other evidence but cannot stand on their own; by the same token they cannot undermine substantial and compelling evidence from an Act and events surrounding its passage.'" *Osage Nation*, 597 F.3d at 1122 (quoting *Yazzie*, 909 F.2d at 1396). Here, the demographic history is mixed. On the one hand, only a small portion of the ceded land was ultimately sold to non-Indians because of disinterest in the area. *See* JA 3638. On the other hand, as the Wyoming Supreme Court has noted, roughly ninety-two percent of

the population of Riverton—the largest township on the ceded land—is non-Indian. *Yellowbear*, 174 P.3d at 1283. These mixed demographics do not establish that "non-Indian settlers flooded into the opened portion," causing the area to "los[e] its Indian character," *Solem*, 465 U.S. at 471–72; by the same token, they do not undermine our conclusion that the statutory language and historical context of the 1905 Act compel a finding of diminishment.

Finally, jurisdictional and judicial treatment of the area is also mixed and thus has little probative value. Wyoming has previously exercised criminal jurisdiction over parts of the disputed area. For example, in a 1960 opinion the Wyoming Supreme Court found the state had jurisdiction over a crime that occurred north of Riverton in the ceded lands. *Blackburn v. State* 357 P.2d 174, 179–80 (Wyo. 1960). Ten years later, the court held the state had jurisdiction over a murder committed in Riverton. *State v. Moss*, 471 P.2d 333, 339 (Wyo. 1970). And in *Yellowbear*, the court applied the *Solem* factors and concluded "that it was the intent of Congress in passing the 1905 Act to diminish the Wind River Indian Reservation." 174 P.3d at 1284. The court thus determined the state had jurisdiction to prosecute Yellowbear. *Id.* Upon habeas review, we declined to disturb that decision. *Yellowbear*, 380 F. App'x at 743.

On the other hand, both Wyoming and several federal agencies have exercised civil jurisdiction over the disputed area. Aple. EPA Br. 65–66. And in deciding *Dry Creek Lodge, Inc. v. Arapahoe & Shoshone Tribes*, we summarily

referred to the town of Riverton as being within the boundaries of the Reservation. 623 F.2d 682, 683 (10th Cir. 1980) ("Plaintiffs' land is within the exterior boundaries of the Wind River Reservation of the Shoshone and Arapahoe Indians in Wyoming."). But as the EPA acknowledged in its decision below, *Dry Creek* is "generally unrevealing regarding the legal effect of the 1905 Act," given that we did not consider the 1905 Act in light of the *Solem* criteria. JA 4645.

Adding to the varied treatment is the Wyoming Supreme Court's decision in *In re General Adjudication of All Rights to Use Water in the Big Horn River System (Big Horn I)*, 753 P.2d 76 (Wyo. 1988), *aff'd sub nom. Wyoming v. United States*, 492 U.S. 406 (1989), *overruled in part by Vaughn v. State*, 962 P.2d 149 (Wyo. 1998). But *Big Horn I* actually tells us little about how courts have treated the Wind River Reservation. Contrary to the Tribes' assertion, the court in *Big Horn I* did not interpret the 1905 Act as maintaining a larger Reservation. Instead, the court merely held the 1905 Act did not evince a clear intent to abrogate the *water rights* granted to the entire Wind River Reservation at its creation in 1868. *Big Horn I*, 753 P.2d at 93–94. The court never stated that its allocation of water rights was based upon the Reservation boundaries, nor did it make a specific finding about those boundaries.

Nevertheless, the Northern Arapaho argue *Big Horn I* bars Wyoming from challenging the EPA's boundary determination on *res judicata* grounds. But, as detailed above, *Big Horn I* concerned the allocation of water rights, specifically

the priority dates for those rights. 753 P.2d at 83. The special master's conclusion that the 1905 Act did not sever the 1868 priority date for water rights, *see id*. at 92, is not determinative on the issue of diminishment—the issues are mutually exclusive, and Wyoming is not relitigating the water rights determination. Indeed, in dispensing of the issue, the Wyoming Supreme Court merely stated, "A reservation of water with an 1868 priority date is not inconsistent with the permit provisions of the pre-Winters 1905 Act." *Id*. at 93. Even more detrimental to the Northern Arapaho's position, the Wyoming Supreme Court has since expressly rejected the Tribe's characterization of *Big Horn I*. In *Yellowbear*, the court stated "while [the majority and the dissent] disagreed over whether reserved water rights continued to exist in the ceded lands, the majority and dissent in *Big Horn River* agreed that the reservation *had been diminished*." 174 P.3d at 1283 (emphasis added).

In sum, on balance the subsequent treatment of the ceded lands neither bolsters nor undermines our conclusion, based on steps one and two of the *Solem* framework, that the 1905 Act diminished the Wind River Reservation.

III. Conclusion

For the foregoing reasons, we find Congress diminished the boundaries of the Wind River Reservation. We therefore GRANT Wyoming's petition for review, VACATE the EPA's order, and REMAND for further proceedings consistent with this opinion.

14-9512 & 14-9514, Wyoming v. United States Environmental Protection Agency
LUCERO, J., dissenting.

The "Indian right of occupancy of tribal lands, whether declared in a treaty or otherwise created, has been stated to be sacred." Lone Wolf v. Hitchcock, 187 U.S. 553, 564 (1903). Our respect for this right stems, or should stem, from Tribes' status as "separate sovereigns pre-existing the Constitution." Santa Clara Pueblo v. Martinez, 436 U.S. 49, 56 (1978). Although Congress possesses the unilateral authority to diminish the reservations of these sovereign nations, Solem v. Bartlett, 465 U.S. 463, 470 n.11 (1984) (citing Lone Wolf, 187 U.S. 553), we must not lightly assume that Congress has exercised this destabilizing power. Only when express statutory language, legislative history, and surrounding circumstances "point unmistakably to the conclusion that" a reservation was diminished should we read a statute as having that effect. DeCoteau v. Dist. Cty. Ct. for Tenth Jud. Dist., 420 U.S. 425, 445 (1975).

In 1905, Congress passed an act transferring certain lands in the Wind River Reservation to the United States. The federal government was to act as trustee by selling the lands and paying the Indians the proceeds. Act of March 3, 1905, 33 Stat. 1016 (the "1905 Act" or the "Act"). From this placement of property into trust status in exchange for a conditional promise of payment, my colleagues in the majority infer clear congressional intent to diminish the Wind River Reservation. I cannot agree. By deriving an intent to diminish absent sum-certain payment or statutory language restoring lands to the public domain, the majority opinion creates a new low-water mark in diminishment jurisprudence. Applying the three-step analysis from Solem, 465 U.S. at

470-71, I would hold that the 1905 Act did not diminish Reservation boundaries. Accordingly, I respectfully dissent.

I

Our diminishment analysis begins with the statutory text. The Court has stated that "language evidencing the present and total surrender of all tribal interests," when coupled with an "unconditional commitment from Congress to compensate the Indian tribe for its opened land," creates a presumption of diminishment. Solem, 465 U.S. at 470-71; see also DeCoteau, 420 U.S. at 445-49 (finding diminishment based on language of cession and sum-certain payment). The 1905 Act states that the Indians "cede, grant, and relinquish to the United States, all right, title, and interest" to certain lands "within the said reservation." 33 Stat. at 1016. But the United States did not agree to pay a sum certain. Instead, the Act provides that "the United States shall act as trustee for said Indians to dispose of said lands and to expend for said Indians and pay over to them the proceeds received from the sale thereof only as received, as herein provided." Id. at 1021 (emphasis added). Moreover, the Act states that "nothing in this agreement contained shall in any manner bind the United States to purchase any portion of the lands herein described or to dispose of said lands except as provided herein, or to guarantee to find purchasers for said lands." Id. at 1020. Citing the Act's designation of a portion of the sale proceeds for per capita payments, the majority adopts the euphemism "hybrid payment scheme." (Majority Op. 20.) However, the terms of the statute unambiguously reflect a conditional promise to pay.

Because the 1905 Act lacked sum-certain payment, the majority opinion's reliance on sum-certain cases is misplaced. It repeatedly asserts that the language of the 1905 Act, like the statutory language in DeCoteau, is "precisely suited" to diminishment. (See, e.g., Majority Op. 14 (citing DeCoteau, 420 U.S. at 445).) But when the Court in DeCoteau made that observation, it was comparing the statutory language of an 1889 agreement to "that used in the other sum-certain, cession agreements" ratified in the same act. 420 U.S. at 446 (emphasis added). The DeCoteau Court distinguished both Seymour v. Superintendent, 368 U.S. 351 (1962), and Mattz v. Arnett, 412 U.S. 481 (1973), in part, on the ground that the acts at issue in those cases conditioned payment to the tribes on the "uncertain future proceeds of settler purchases"—precisely the situation presented here. DeCoteau, 420 U.S. at 448. In contrast, the 1891 act in DeCoteau "appropriate[d] and vest[ed] in the tribe a sum certain." Id.

The 1905 Act differs from legislation deemed to have diminished reservations in another important respect: It did not restore the lands at issue to the public domain. Cf. id. at 446 (citing legislators' statements that "ratified agreements would return the ceded lands to the 'public domain'" to support claim that agreements unquestionably diminished reservations). Because the lands at issue here were held in trust under the Act, they remained Indian lands. In Ash Sheep Co. v. United States, 252 U.S. 159 (1920), the Tribe "ceded, granted, and relinquished to the United States all of their right, title and interest." Id. at 164 (quotations omitted). However, the government did not provide unconditional payment, promising only to give the Indians the future proceeds of any land sales. Id. at 164-65. And, in language nearly identical to the 1905 Act, the

statute stated that the United States was not bound to purchase or sell the affected lands but rather to "act as trustee" in their disposal. Id. at 165-66. The Court determined, based on this language, that although the Indians had "released their possessory right to the government," the lands remained "Indian lands" because any benefits derived therefrom would belong to the Indians as beneficiaries and not the government as trustee until the lands were sold. Id. at 166.[1]

Admittedly, the retention of a beneficial interest is not dispositive of reservation status. See Rosebud Sioux Tribe v. Kneip, 430 U.S. 584, 601 n.24 (1977). But the majority too easily dismisses the trust status of the lands at issue. (See Majority Op. at 22-23.) "The notion that reservation status of Indian lands might not be coextensive with tribal ownership was unfamiliar at the turn of the century." Solem, 465 U.S. at 468. Accordingly, although it is not determinative, Congress' decision not to restore these lands to the public domain cuts strongly against the majority's conclusion that the Reservation was diminished.

Given the absence of sum-certain payment or restoration of lands to the public domain, we could easily interpret the language of cession contained in the 1905 Act as merely opening portions of the Wind River Reservation to settlement.[2] In assessing

[1] The majority states that Ash Sheep is seldom cited in more recent diminishment cases because it addresses the different issue of whether lands became "public lands." (Majority Op. 22.) But in DeCoteau, a case upon which the majority relies, the Court cites Ash Sheep in distinguishing Mattz based on the absence of sum-certain payment. See DeCoteau, 420 U.S. at 448.

[2] As in Solem, the 1905 Act provides that Indians who held an allotment within the opened territory would be permitted to obtain a new allotment in the unopened area,

statutory language nearly identical to the 1905 Act, the Eighth Circuit concluded that the Devils Lake Indian Reservation had not been diminished. United States v. Grey Bear, 828 F.2d 1286 (8th Cir.), vacated in part on other grounds on reh'g en banc, 836 F.2d 1088 (8th Cir. 1987). Specifically, the court held that although the language "do hereby cede, surrender, grant, and convey to the United States all their claim, right, title, and interest" was suggestive of diminishment, id. at 1290 (emphasis omitted) (quoting Act of April 27, 1904, ch. 1620, 33 Stat. 321-22), it did not "evince a clear congressional intent to disestablish the Devils Lake Reservation" absent an "unconditional commitment" by Congress to pay for the ceded lands, id.

The majority attempts to distinguish Grey Bear, noting that the legislative history of the act at issue there was not extensive and that subsequent treatment of the area weighed against a finding of diminishment. (Majority Op. 17 n.6.) But the majority claims that the statutory text "strongly suggests that Congress intended to diminish the boundaries of the Wind River Reservation" and that the lack of sum certain payment does "not compel a different conclusion." (Id. at 23.) The majority thus reaches a conclusion squarely opposite to one of our sibling circuits, creating a needless circuit split.

---

referring to the latter as the "diminished reserve." 33 Stat. at 1016; Solem, 465 U.S. at 474 (describing unopened areas as "reservations thus diminished"). But the Supreme Court explained that this phrase "cannot carry the burden of establishing an express congressional purpose to diminish" because at the time of the Act, "'diminished' was not yet a term of art in Indian law." Solem, 465 U.S. at 475 & n.17. Thus, Congress "may well have been referring to diminishment in common lands and not diminishment of reservation boundaries." Id. Similarly, references to a reservation "in the past tense" should not "be read as a clear indication of congressional purpose to terminate." Mattz, 412 U.S. at 498-99.

The Supreme Court has counseled that "[w]hen we are faced with . . . two possible constructions, our choice between them must be dictated by a principle deeply rooted in this Court's Indian jurisprudence: Statutes are to be construed liberally in favor of the Indians, with ambiguous provisions interpreted to their benefit." Cty. of Yakima v. Confederated Tribes & Bands of Yakima Indian Nation, 502 U.S. 251, 269 (1992) (quotation and alteration omitted). Adhering to that principle in this case, we must read the 1905 Act as providing for sale and opening of lands rather than diminishment.

II

In very limited circumstances, courts have been willing to find diminishment even absent "explicit language of cession and unconditional compensation." Solem, 465 U.S. at 471. But that is true only if surrounding circumstances "unequivocally reveal a widely-held, contemporaneous understanding that the affected reservation would shrink as a result of the proposed legislation." Id. A "few phrases scattered through the legislative history" are insufficient to manufacture clear congressional intent to diminish if a plain statement of that objective is lacking in the statutory text. Id. at 478.

Legislative history surrounding two ancillary portions of the 1905 Act counsel against an intent to diminish. First, Congress chose to omit a school lands provision from the 1905 Act, demonstrating its view that the opened lands retained their Reservation status. A precursor bill, presented to Congress in 1904, initially provided that the United States would pay $1.25 per acre for sections 16 and 36, or equivalent lands, in the opened townships. 38 Cong. Rec. H5247 (1904). This provision mirrored the Wyoming Enabling Act, which grants sections 16 and 36 of each township to the state for school

purposes unless those lands are sold or disposed of, in which case the state may take other lands in lieu. Wyoming Enabling Act, ch. 664, § 4, 26 Stat. 222, 222-23 (1890). During debate on the 1904 bill, Representative Mondell proposed to strike the school lands provision. 38 Cong. Rec. H5247. He explained that although "the bill originally provided that the State should take lands on the reservation" for the price of $1.25 per acre, eliminating the school lands provision would "leav[e] the State authorized under the enabling act to take lieu lands." Id. (statement of Rep. Mondell) (emphasis added). Both Mondell's statement and the decision to omit the provision evince the belief that sections 16 and 36 would remain part of the Reservation. The House Committee on Indian Affairs later reported that it had adhered to this policy in drafting the bill that would ultimately become the 1905 Act. See H.R. Rep. No. 58-3700, pt. 1, at 7 (1905) (stating that it had been "deemed wise by the committee to adhere to the policy laid down in the former bill and agreement," under which there was no school lands provision and "Indians [were] to receive the same rates from settlers for sections 16 and 36 as paid for other lands").[3]

Conversely, if a school lands provision is included in a statute, the Supreme Court has been more apt to find congressional intent to diminish. In Rosebud, for example, the

[3] Although the Wyoming Enabling Act did not exempt reservations from the grant of sections 16 and 36 to the state for school purposes, the Wyoming Constitution disclaims "all right and title to . . . all lands lying within said limits owned or held by any Indian or Indian tribes." Wyo. Const. art. XXI, § 26. Because "Congress is presumed to act with knowledge of controlling constitutional limitations" when it enacts new statutes, Golan v. Gonzales, 501 F.3d 1179, 1183 (10th Cir. 2007), the decision to omit the school lands provision is further evidence Congress believed the opened lands to retain their reservation status.

Court held that the inclusion of a similar school lands provision evinced "congressional intent to disestablish Gregory County from the Rosebud Reservation, thereby making the sections available for disposition to the State of South Dakota for school sections." 430 U.S. at 601 (quotation omitted); see also South Dakota v. Yankton Sioux Tribe, 522 U.S. 329, 349-50 (1998) (inclusion of school lands provision indicative of intent to diminish).[4] The majority notes that the State of Wyoming may have received federal land elsewhere as a result of Congress' decision to omit the school lands provision. (Majority Op. 33 n.13.) But that is exactly the point. By striking the provision, Congress recognized that Wyoming could take lieu lands elsewhere, rather than pay $1.25 for "lands on the reservation." 38 Cong. Rec. H5247 (statement of Rep. Mondell) (emphasis added); see also 26 Stat. at 222-23.

Also weighing against a finding of diminishment is a provision granting Asmus Boysen a preferential right to lease new lands "in said reservation" in lieu of his existing lease rights. 33 Stat. at 1020. The provision was opposed by a minority in the House of Representatives, who argued that Boysen should not be granted preferential rights because his lease would terminate upon passage of the Act, and because "other persons desiring to enter and settle upon the lands to be opened" should stand on equal footing.

[4] In contrast to the Wyoming Enabling Act, the statute admitting North and South Dakota into the Union expressly provided that sections 16 and 36 "embraced in permanent reservations" would not "be subject to the grants . . . of [the] act." Act of February 22, 1889, 25 Stat. 676, 679. However, as discussed in n.3, supra, the Wyoming Constitution served a similar function by disclaiming "all right and title" to lands held by Indian Tribes. Wyo. Const. art XXI, § 26. Accordingly, even if the grant of sections 16 and 36 on the Wind River Reservation was not expressly prohibited by the Wyoming Enabling Act, it makes sense that Congress would not have provided for Wyoming to take lands to which the state had "forever disclaim[ed] all right and title." Id.

H.R. Rep. No. 58-3700, pt. 2, at 2, 3 (emphasis added). By describing the "lands to be opened" as being "in said reservation," 33 Stat. at 1020, the 1905 Act demonstrates Congress' understanding that the opened areas would retain their reservation status.[5]

The majority relies on a prior history of negotiations to conclude that the 1905 Act resulted in diminishment, citing Rosebud for the proposition that implied continuity in purpose from a prior agreement is informative. (See Majority Op. 31-32 (citing Rosebud, 430 U.S. at 590-92); see also id. at 15 n.2.) But the negotiation history presented here differs markedly from that considered by the Court in Rosebud. In Rosebud, the Rosebud Sioux Tribe reached an agreement with the United States to diminish reservation boundaries in 1901. 430 U.S. at 587. Although Congress failed to ratify the agreement, the Court concluded that the agreement's purpose was carried out in subsequent acts passed in 1904, 1907, and 1910. Id. at 587-88, 592.

There were several factors in Rosebud that are not present in this case. Notably, a mere three years passed between the 1901 agreement and the 1904 act in Rosebud. It should be unsurprising that congressional intent remained static for such a brief period.

[5] Although the trust status of lands is not dispositive of the diminishment issue, the inclusion of the Boysen provision is further evidence that the opened lands were placed in trust for the benefit of the Tribes. Boysen had previously entered into a mineral lease with the Tribes that included portions of the opened area. The terms of the lease provided it would terminate "in the event of extinguishment . . . of the Indian title to the lands covered by" the agreement. As discussed, supra, a minority opposed to the provision argued that there was no need to grant Boysen preferential rights to the opened lands because his existing lease rights would automatically terminate upon passage of the 1905 Act. But as Representative Marshall, the chairman of the subcommittee that considered the Boysen provision, explained, Indian title would not be extinguished because "these lands are not restored to the public domain, but are simply transferred to the Government of the United States as trustee for these Indians." 39 Cong. Rec. H1945 (1905) (statement of Rep. Marshall).

Here, my colleagues rely extensively on a proposed agreement from 1891, nearly a generation prior to passage of the 1905 Act. (See Majority Op. 24-25, 32.)

Further, in Rosebud the reason Congress failed to ratify the prior agreement "was not jurisdiction, title, or boundaries" but "simply put, money." 430 U.S. at 591 n.10 (quotation omitted). The 1904 act was essentially identical to the 1901 agreement other than the form of payment. Id. at 594-97. In contrast, the government and Tribes in this case were unable to reach an agreement as to the particular lands to be opened in either 1891 or 1893. In 1891, certain members of Congress called for the opening of more lands than what was provided for in the proposed agreement. H.R. Doc. No. 52-70, at 7-8 (1892). And the Tribes rejected three separate counteroffers in 1893, indicating they did not wish to sell the lands under discussion. H.R. Doc. No. 53-51 (1894). Thus, unlike the three-year delay in Rosebud from an agreement that went unratified because of concerns over the manner of payment, we are presented with a fourteen-year halt following negotiations that failed because the parties could not agree on material terms.

Not only did a significant period of time elapse between the 1891 negotiations and the 1905 Act in this case, but any continuity of purpose was also disrupted by intervening agreements regarding cession of other portions of the Reservation. In 1896, for example, Inspector McLaughlin successfully negotiated the Thermopolis Purchase Act, under which the Tribes ceded the Big Horn Hot Springs to the United States in exchange for a sum-certain payment of $60,000. Act of June 7, 1897, 30 Stat. 62, 93-94. At a council meeting in 1922, McLaughlin expressly distinguished the agreements underlying the 1897 and 1905 Acts, stating that they were "entirely distinct and separate" and that under

the 1905 Act, "the government simply acted as trustee for disposal of the land north of the Big Wind River."

The absence of a continuity of purpose to diminish the Reservation is further evidenced by the negotiations preceding passage of the 1905 Act. In his 1903 negotiations with the Rosebud Tribe, McLaughlin stated that he was there "to enter into an agreement which is similar to that of two years ago, except as to the manner of payment." Rosebud, 430 U.S. at 593. In this case, McLaughlin did not tell the Tribes in 1904 that he sought to reopen the 1891 or 1893 negotiations. And although the majority quotes McLaughlin's use of the word "cede," (Majority Op. 27), he used that term interchangeably with the concept of "opening . . . certain portions of [the] reservation for settlement by the whites." Similarly, any references to a diminished reservation "may well have been referring to diminishment in common lands and not diminishment of reservation boundaries." Solem, 465 U.S. at 475 & n.17.

Looking to the totality of the circumstances surrounding the 1905 Act, it cannot be said that they "unequivocally reveal a widely-held, contemporaneous understanding that the affected reservation would shrink as a result of the proposed legislation." Solem, 465 U.S. at 471 (emphasis added). At best, the historical record is mixed regarding Congress' intent. As such, it is insufficient to overcome ambiguity in the statutory text.

III

At the third step of the Solem analysis, we consider "[t]o a lesser extent . . . events that occurred after the passage of a surplus land act to decipher Congress's intentions."

Solem, 465 U.S. at 471. But this third prong comes into play only at the margins.[6] If "an act and its legislative history fail to provide substantial and compelling evidence of a congressional intention to diminish Indian lands, we are bound by our traditional solicitude for the Indian tribes to rule that diminishment did not take place and that the old reservation boundaries survived the opening." Solem, 465 U.S. at 472.

Because the statutory text and legislative history in this case fail to provide compelling evidence of congressional intent to diminish, we need not consider this third prong. Even if we did, however, I agree with the majority that the post-Act record is so muddled it does not provide evidence of clear congressional intent. (Majority Op. 34-35.)[7] But, as with the first two steps in the analysis, this lack of clarity must not be treated

[6] Although I acknowledge that controlling precedent permits courts to consider post-enactment events, I feel compelled to remark on the irrational nature of such an inquiry. The demographic makeup of an area decades or more following passage of a statute cannot possibly tell us anything about the thinking of a prior Congress. See Philip P. Frickey, A Common Law for Our Age of Colonialism: The Judicial Divestiture of Indian Tribal Authority Over Nonmembers, 109 Yale L.J. 1, 19 (1999) (noting "[t]he conceptual problem with this approach, of course, is that postenactment developments reveal nothing about original congressional intent, much less intent sufficiently clear to satisfy the canon" requiring ambiguous statutes to be construed in favor of tribal interests). The Court itself has apparently recognized the dubiousness of this analysis, referring to "de facto" diminishment as a "necessary expedient." Solem, 465 U.S. at 471, 472 n.13.

The third step of the Solem analysis cannot be meaningfully described as a tool to decipher congressional intent. Rather, it is a means of ignoring that intent. Courts should be loath to abandon the proper tools of statutory interpretation in any context, but to do so with respect to Indian law is particularly perverse given our canon of construction that "statutes are to be construed liberally in favor of the Indians." Confederated Tribes & Bands of Yakima Indian Nation, 502 U.S. at 269 (quotation and alteration omitted).

[7] I also agree with the majority that this controversy has not been rendered moot and that the Wyoming Farm Bureau has standing. (See Majority Op. 10-11 n.1.)

as a neutral element. Because we apply a "presumption that Congress did not intend to diminish," Solem, 465 U.S. at 481, proponents of diminishment must show that "non-Indian settlers flooded into the opened portion of a reservation and the area has long since lost its Indian character," id. at 471. The appellants have not met this burden.

Land sales in the opened area were largely a failure. By 1915, less than 10% of the land had been sold to non-Indians, prompting the Department of the Interior ("DOI") to indefinitely postpone further sales. Less than 15% of the opened area was ultimately transferred to non-Indians. Cf. Yankton Sioux Tribe, 522 U.S. at 339 (noting that approximately 90% of unallotted tracts were settled in that case); Rosebud, 430 U.S. at 605 (same). The DOI continued to allot parcels in the opened lands to Tribal members, and in 1939, Congress restored tribal ownership over the unsold land. Act of July 27, 1939, ch. 387, 53 Stat. 1128. Today, approximately 75% of the lands opened for settlement by the 1905 Act is held in trust by the United States for the benefit of the Tribes and their members.

Despite the sometimes conflicting treatment of the area by non-Indian authorities, (see Majority Op. 35-40), there can be little doubt that most of the opened area retains its Indian character. Accordingly, we face no risk of upsetting "justifiable expectations," Rosebud, 430 U.S. at 605, by construing the 1905 Act as maintaining Reservation boundaries.

IV

We consider in this case an Act that began with Inspector McLaughlin's warning to the Tribes that "Congress had the right to legislate for the opening of Indian

reservations without consulting the Indians or obtaining their consent." Recognizing that Congress possesses the nearly unfettered power to impose its will, leaving the Tribes "no choice but to consent," the Court has held that "any doubtful expressions in [legislation] should be resolved in the Indians' favor." Choctaw Nation v. Oklahoma, 397 U.S. 620, 631 (1970). This rule must be given "the broadest possible scope" in the diminishment context. DeCoteau, 420 U.S. at 447. In interpreting the 1905 Act, we must bear in mind the government's "moral obligations of the highest responsibility and trust, obligations to the fulfillment of which the national honor has been committed." United States v. Jicarilla Apache Nation, 564 U.S. 162, 176 (2011) (citation and quotations omitted). With this heavy thumb on the scale, I would hold that the 1905 Act did not diminish the Wind River Reservation. I respectfully dissent.

From: jeanett@blm.gov
To: laun@westernlaw.org; king@westernlaw.org
Subject: FOIA Request BLM-2017-00883 Release 6 Part 1 of 3
Date: Friday, February 9, 2018 12:57:24 PM
Attachments: 2017-00883_Signed_Interim Response_6.pdf
2017-00883_Release_6_Redacted_Part1.pdf

Ms. Laun and Ms. King,

Please see the attached response letter for the sixth interim release and Part 1 of the responsive documents to your FOIA request. To ensure delivery of the records via email, the sixth interim release is broken into three parts. Parts 2 and 3 were sent in a separate email.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

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BLM_WO_FOIA@blm.gov

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

February 8, 2018

In Reply Refer To:
1278-FOIA (640)
FOIA# 2017-00883

Ms. Shannon Laun
Western Environmental Law Center
1402 Third Ave, Suite 1022
Seattle, WA 98101

Dear Ms. Laun:

This letter is in response to Laura King's Freedom of Information Act (FOIA) request, dated April 25, 2017 and assigned tracking number is 2017-00883. In Ms. King's letter, she asked for the following:

" I. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(ii) of Secretary of the Interior Ryan Zinke's Secretarial Order 3349 ("SO 3349"), ordering the Director of the Bureau of Land Management ("BLM") to "review the final rule entitled, 'Waste Prevention, Production Subject to Royalties, and Resource Conservation,' 81 Fed. Reg. 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O."

"II. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(c)(v) of SO 3349, ordering that "[w]ithin 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources."

"III. Guardians requests all "agency records" of the Bureau of Land Management associated with:

> Section 5(b)(i) of SO 3349, ordering that "[w]ithin 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O. . . ."

While we continue to review additional records that are responsive to your requests, we are writing to provide you an Interim Response to your request. Accompanying this letter is a PDF file consisting of 1146 pages. Portions of 250 pages are being withheld under FOIA Exemption 5. Additionally, 22 pages are being withheld in full under FOIA Exemption 5.

Exemption 5 allows an agency to withhold "inter-agency or intra-agency memorandums or letters which would not be available by law to a party... in litigation with the agency." 5 U.S.C. § 552(b)(5); *see Nat'l Labor Relations Bd. v. Sears Roebuck & Co.*, 421 U.S. 132, 149 (1975). Exemption 5 therefore incorporates the privileges that protect materials from discovery in litigation, including the deliberative process, attorney work-product and attorney-client privileges. The deliberative process privilege protects the decision-making process of government agencies and encourages the "frank exchange of ideas on legal or policy matters" by ensuring agencies are not "forced to operate in a fish bowl." *Mead Data Cent., Inc. v. United States Dep't of the Air Force*, 566 F.2d 242, 256 (D.C. Cir. 1977) (internal citations omitted). A number of policy purposes have been attributed to the deliberative process privilege. Among the most important are to: (1) "assure that subordinates . . . will feel free to provide the decision maker with their uninhibited opinions and recommendations;" (2) "protect against premature disclosure of proposed policies;" and (3) "protect against confusing the issues and misleading the public." *Coastal States Gas Corp. v. United States Dep't of Energy*, 617 F.2d 854, 866 (D.C. Cir. 1980). The deliberative process privilege protects materials that are both pre-decisional and deliberative. The privilege covers records that "reflect the give-and-take of the consultative process" and may include "recommendations, draft documents, proposals, suggestions, and other subjective documents which reflect the personal opinions of the writer rather than the policy of the agency." *Id.*

The materials that have been withheld under the deliberative process privilege of Exemption 5 are both pre-decisional and deliberative. They do not contain or represent formal or informal agency policies or decisions. They are the result of frank and open discussions among employees of the Department of the Interior. Their contents have been held confidential by all parties and public dissemination of this information would have a chilling effect on the agency's deliberative processes; expose the agency's decision-making process in such a way as to discourage candid discussion within the agency, and thereby undermine its ability to perform its mandated functions.

As incorporated into Exemption 5, the attorney-client privilege protects "confidential communications between an attorney and his client relating to a legal matter for which the client has sought professional advice" and is not limited to the context of litigation. Mead Data Cent, Inc. v. United States Dep't of the Air Force, 566 F.2d 242, 252-53 (D.C. Cir. 1977). Moreover, although it fundamentally applies to confidential facts divulged by a client to his/her attorney, this privilege also encompasses any opinions given by an attorney to his/her client based upon, and thus reflecting, those facts, as well as communications between attorneys that reflect confidential client-supplied information.
See Elec. Privacy Info. Ctr. v. United States Dep't of Homeland Sec., 384 F. Supp. 2d 100, 114-15 (D.D.C. 2005). The information that has been withheld under the attorney-client privilege of Exemption 5 constitutes confidential communications between agency attorneys and agency clients, related to legal matters for which the client sought professional legal assistance and services. Additionally, the Bureau employees who communicated with the attorneys regarding this information were clients of the attorneys at the time the information was generated and the attorneys were acting in their capacities as lawyers at the time they communicated legal advice. Finally, the Bureau has held this information confidential and has not waived the attorney-client privilege.

Ryan Witt, Bureau of Land Management (BLM) FOIA Officer, is responsible for this partial release. Brett Myrick, Attorney Advisor in the Office of the Solicitor, was consulted.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

Sincerely,

for Martayal Harris

Ryan Witt, Acting Chief
Division of Intergovernmental and
External Affairs

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:55 AM

Conversation Contents

Important Update to the Waste and Prevention Rule Page

Attachments:

/2. Important Update to the Waste and Prevention Rule Page/1.1 VF Page Markup.pdf
/2. Important Update to the Waste and Prevention Rule Page/1.2 Statement on Venting and Flaring_final.docx
/2. Important Update to the Waste and Prevention Rule Page/1.3 WEA Letter_VF.pdf
/2. Important Update to the Waste and Prevention Rule Page/1.4 API Letter_VF.pdf

"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Tue Jun 13 2017 13:52:37 GMT-0600 (MDT)
To:	Tyrone Weaver <tweaver@blm.gov>
CC:	Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	Important Update to the Waste and Prevention Rule Page
Attachments:	VF Page Markup.pdf Statement on Venting and Flaring_final.docx WEA Letter_VF.pdf API Letter_VF.pdf

Hi Tyrone,

I am writing to you to layout an important update to the waste and prevention rule page (venting and flaring) on the web (https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/operations-and-production/methane-and-waste-prevention-rule)

The BLM is publishing a notice tomorrow in the FR and we need to announce it on the web.

Here is what's attached:

-- VF Page Markup: This is a pdf showing what needs to be deleted and replaced on the page. Basically, keep the headline "Methane and Waste Prevention Rule" and delete the text under it and delete the regulatory processes section. Please delete the references on the page to the Fact Sheet and the Qs&As -- these are both on the page and in the quick links box.

-- Statement on venting and flaring_final: This is the new text. Note you'll need 3 hyperlinks. One to each of two letters underlined in the text and one to the Federal Register, which we'll have to get in the morning (from Faith or Ian). This link will likely need to be updated on Thursday, but let's discuss that tomorrow.

-- Two letters -- one from WEA and API mentioned above.

I think this is everything.

Holler if you want to talk. I'm at MIB but call my desk there (x7239) and you should reach me.

The page can go live when we get the link to the Federal Register, with hope sometime tomorrow morning.

Thanks!!

Bev

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

"Weaver, Tyrone" <tweaver@blm.gov>

From:	"Weaver, Tyrone" <tweaver@blm.gov>
Sent:	Tue Jun 13 2017 14:06:31 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>
CC:	Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	Re: Important Update to the Waste and Prevention Rule Page

Hi Bev...I will begin the edits and hold publishing until I have the link to the FR tomorrow...thanks

Tyrone Weaver
Program Analyst
Bureau of Land Management
Business Management Office WO-302
20 M Street, SE, Rm 2134
Washington, DC 20003
202 912-7122

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Bev

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Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Tue Jun 13 2017 14:13:26 GMT-0600 (MDT)
To:	"Weaver, Tyrone" <tweaver@blm.gov>
CC:	Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	Re: Important Update to the Waste and Prevention Rule Page

Thanks, Tyrone. Let me now if you have any questions.

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"Weaver, Tyrone" <tweaver@blm.gov>

From:	"Weaver, Tyrone" <tweaver@blm.gov>
Sent:	Wed Jun 14 2017 07:14:11 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>
CC:	Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed Jun 14 2017 07:17:46 GMT-0600 (MDT)
To:	"Weaver, Tyrone" <tweaver@blm.gov>
CC:	"Winston, Beverly" <bwinston@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	Re: Important Update to the Waste and Prevention Rule Page

Good deal...can you send me the link?

Sent from my iPhone

On Jun 14, 2017, at 7:14 AM, Weaver, Tyrone <tweaver@blm.gov> wrote:

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From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Wed Jun 14 2017 07:43:55 GMT-0600 (MDT)

To:	Timothy Spisak <tspisak@blm.gov>
CC:	"Weaver, Tyrone" <tweaver@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
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"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Wed Jun 14 2017 08:02:31 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	"Weaver, Tyrone" <tweaver@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
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From:	"Weaver, Tyrone" <tweaver@blm.gov>
Sent:	Wed Jun 14 2017 08:23:29 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
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Beverly Winston <bwinston@blm.gov>

From:	Beverly Winston <bwinston@blm.gov>
Sent:	Wed Jun 14 2017 08:33:16 GMT-0600 (MDT)
To:	"Weaver, Tyrone" <tweaver@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	Re: Important Update to the Waste and Prevention Rule Page

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From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Wed Jun 14 2017 11:30:00 GMT-0600 (MDT)
To:	"Weaver, Tyrone" <tweaver@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	Re: Important Update to the Waste and Prevention Rule Page

And E&E had the story so the circle of life is complete:

https://www.eenews.net/greenwire/2017/06/14/stories/1060056009

On Wed, Jun 14, 2017 at 10:23 AM, Weaver, Tyrone <tweaver@blm.gov> wrote:

> Bev...ok...done...I have attached a .pdf of the federal reg. file to the page in Drupal...no need for tomorrow update...thanks

Tyrone Weaver
Program Analyst
Bureau of Land Management
Business Management Office WO-302
20 M Street, SE, Rm 2134
Washington, DC 20003
202 912-7122

Pride only breeds quarrels, but wisdom is found in those who take advice. Proverbs 13:10

On Wed, Jun 14, 2017 at 10:02 AM, Winston, Beverly <bwinston@blm.gov> wrote:

> Tyrone,
> Two things: 1) Please remove the link to the old press release both places.
> 2) There will be a new permanent link tomorrow, but I think you are off.
> Let's figure out how to handle.
> Thanks everyone!!
>
> On Wed, Jun 14, 2017 at 9:43 AM, Winston, Beverly <bwinston@blm.gov> wrote:
>
> > Here you go. Reviewing now.
> >
> > https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/operations-and-production/methane-and-waste-prevention-rule
> >
> > On Wed, Jun 14, 2017 at 9:17 AM, Timothy Spisak <tspisak@blm.gov> wrote:
> >
> > > Good deal...can you send me the link?
> > >
> > > Sent from my iPhone
> > >
> > > On Jun 14, 2017, at 7:14 AM, Weaver, Tyrone <tweaver@blm.gov> wrote:
> > >
> > > > Good Morning Bev...the requested edit is now live...advise if additional edits are needed...thanks
> > > >
> > > > **Tyrone Weaver**
> > > > **Program Analyst**
> > > > **Bureau of Land Management**
> > > > **Business Management Office WO-302**
> > > > **20 M Street, SE, Rm 2134**
> > > > **Washington, DC 20003**
> > > > **202 912-7122**
> > > >
> > > > **Pride only breeds quarrels, but wisdom is found in those who take advice. Proverbs 13:10**
> > > >
> > > > On Tue, Jun 13, 2017 at 3:52 PM, Winston, Beverly <bwinston@blm.gov> wrote:
> > > >
> > > > > Hi Tyrone,
> > > > >
> > > > > I am writing to you to layout an important update to the waste and prevention rule page (venting and flaring) on the web (https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/operations-and-production/methane-and-waste-prevention-rule)

The BLM is publishing a notice tomorrow in the FR and we need to announce it on the web.

Here is what's attached:

-- VF Page Markup: This is a pdf showing what needs to be deleted and replaced on the page. Basically, keep the headline "Methane and Waste Prevention Rule" and delete the text under it and delete the regulatory processes section. Please delete the references on the page to the Fact Sheet and the Qs&As -- these are both on the page and in the quick links box.

-- Statement on venting and flaring_final: This is the new text. Note you'll need 3 hyperlinks. One to each of two letters underlined in the text and one to the Federal Register, which we'll have to get in the morning (from Faith or Ian). This link will likely need to be updated on Thursday, but let's discuss that tomorrow.

-- Two letters -- one from WEA and API mentioned above.

I think this is everything.

Holler if you want to talk. I'm at MIB but call my desk there (x7239) and you should reach me.

The page can go live when we get the link to the Federal Register, with hope sometime tomorrow morning.

Thanks!!

Bev

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

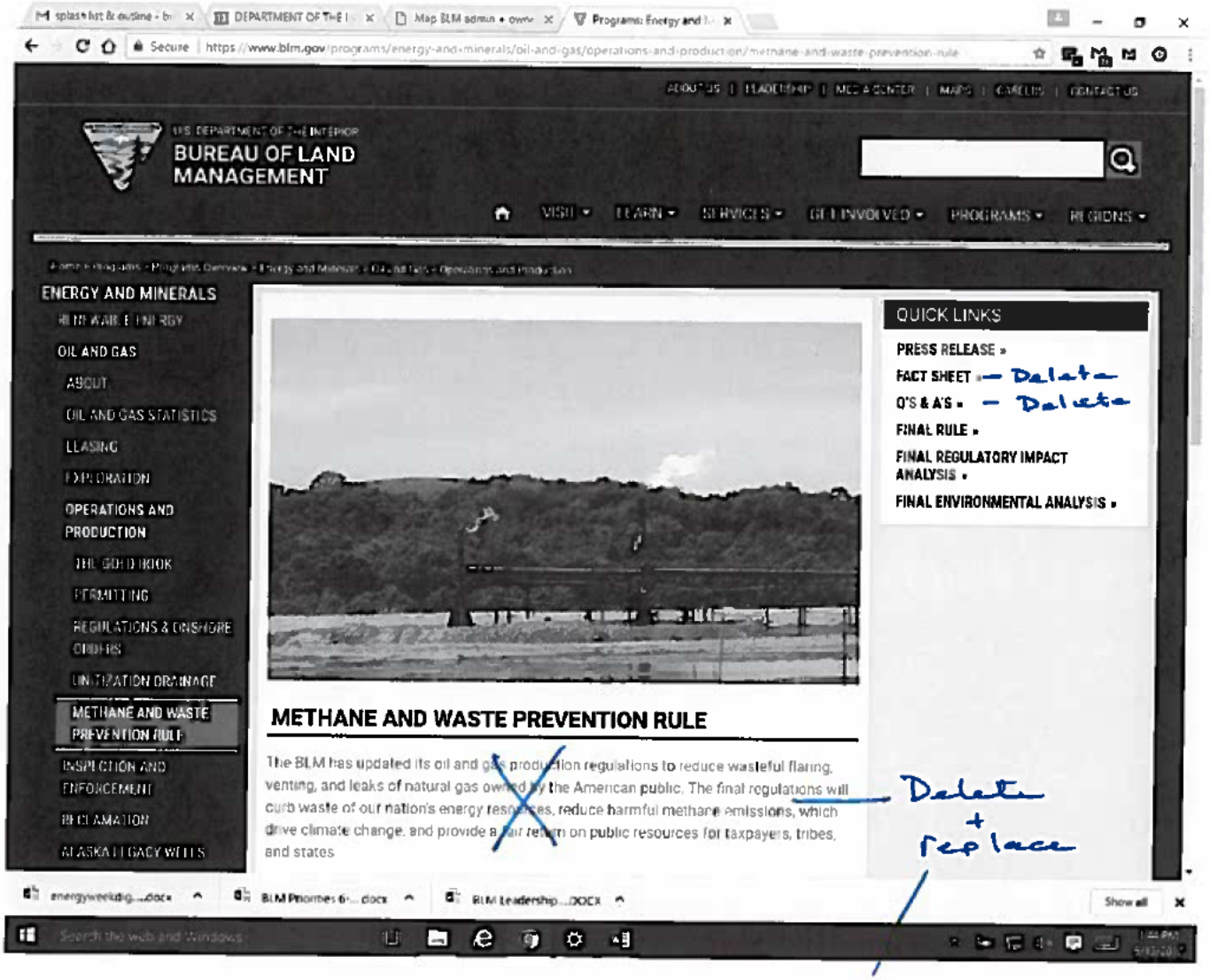
--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

VF mark-up 1



— Delete

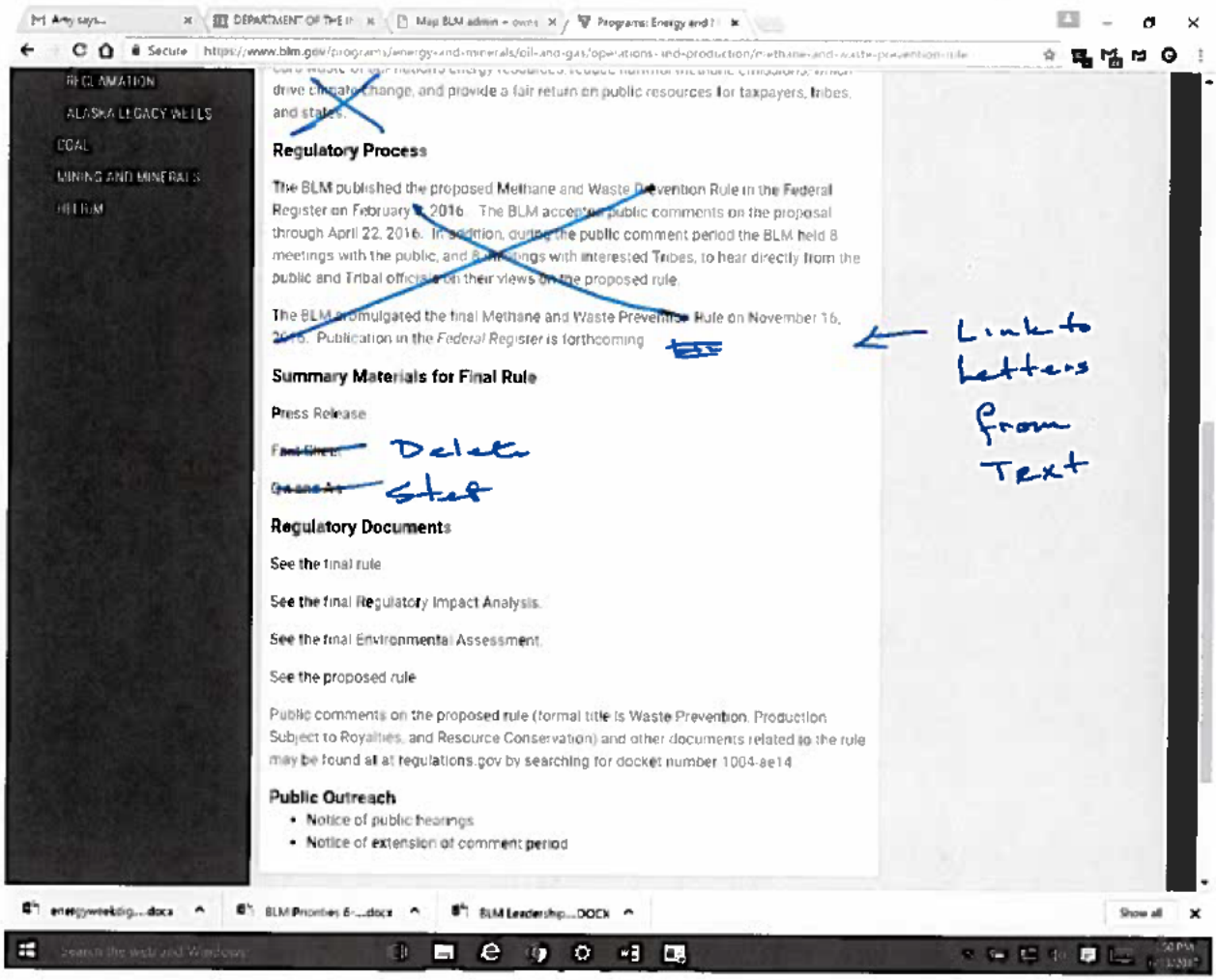
— Delete

Delete + replace

w/ note about FRN

VF markup 2

Amy says... | DEPARTMENT OF THE I | Map BLM admin - owns | Programs: Energy and I
Secure https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/operations-and-production/methane-and-waste-prevention-rule



RECLAMATION
ALASKA LEGACY WELLS
COAL
MINING AND MINERALS
HELIUM

drive climate change, and provide a fair return on public resources for taxpayers, tribes, and states.

Regulatory Process

The BLM published the proposed Methane and Waste Prevention Rule in the Federal Register on February 8, 2016. The BLM accepted public comments on the proposal through April 22, 2016. In addition, during the public comment period the BLM held 8 meetings with the public, and 8 meetings with interested Tribes, to hear directly from the public and Tribal officials on their views on the proposed rule.

The BLM promulgated the final Methane and Waste Prevention Rule on November 16, 2016. Publication in the *Federal Register* is forthcoming.

Link to Letters from Text

Summary Materials for Final Rule

Press Release

~~Fact Sheet~~ Delete

~~Q-and-A~~ Stet

Regulatory Documents

See the final rule

See the final Regulatory Impact Analysis.

See the final Environmental Assessment.

See the proposed rule

Public comments on the proposed rule (formal title is Waste Prevention, Production Subject to Royalties, and Resource Conservation) and other documents related to the rule may be found at at regulations.gov by searching for docket number 1004-ae14

Public Outreach

- Notice of public hearings
- Notice of extension of comment period

Because of several legal questions raised in pending litigation concerning the implementation of the recently adopted Methane Waste Prevention Rule, the BLM announced in the Federal Register that it is suspending the implementation of provisions of the rule that have not yet gone into effect. The BLM published its final rule on November 18, 2016, with some provisions going into effect in January 2017 and others in January 2018. The rule is intended to limit the loss through venting, flaring or leaks of natural gas from oil and gas production on public and Indian lands. This natural gas, mostly methane, represents a natural resource on which royalty is not paid and also contributes to greenhouse gases in the atmosphere.

Upon publication of the rule, two industry groups (Western Energy Alliance and the Independent Petroleum Association of America) and three states (Wyoming, North Dakota and Montana) asked the courts for judicial review, and that litigation is now pending in the U.S. District Court for the District of Wyoming. The Administrative Procedures Act provides that when "an agency finds that justice so requires" it may postpone the effective date of regulatory provisions not already in effect, pending judicial review. The Secretary of the Interior has received written requests from the Western Energy Alliance and the American Petroleum Institute to suspend or postpone the compliance dates.

Some provisions of the rule went into effect on January 17, 2017, including a provision that requires operators to submit a "waste minimization plan" with their drilling applications. Other aspects of the rule were not scheduled to go into effect until January 17, 2018, and it is these provisions that the BLM now postpones.

WESTERN ENERGY ALLIANCE

April 4, 2017

The Honorable Ryan Zinke
Secretary
Department of the Interior
1849 C Street N.W.
Washington, D.C. 20240

Dear Secretary Zinke:

Thank you very much for your work regarding the President's Executive Order (EO) on Promoting Energy Independence and Economic Growth. We appreciate that you and President Trump are fulfilling promises to undo the burdensome red tape constraining domestic energy production and killing jobs. We appreciate your leadership on refocusing the Department of the Interior (DOI) back to its core mission of responsibly managing public lands for multiple use and away from prioritizing climate change analysis over all else. The oil and natural gas industry has enabled real U.S. leadership on climate change; by enabling increased natural gas electricity generation, we have delivered more greenhouse gas reductions than any overreaching federal climate change policy, and the United States now leads the world in reducing greenhouse gas emissions.

Western Energy Alliance represents over 300 companies engaged in all aspects of environmentally responsible exploration and production of oil and natural gas in the West. Alliance members are independents, the majority of which are small businesses with an average of fifteen employees.

Thank you also for your efforts to persuade reluctant Senators to vote to overturn the Bureau of Land Management's (BLM) waste prevention rule, otherwise known as the methane rule, using the Congressional Review Act (CRA). While we very much appreciate that the rule was included in the EO for review and rescission, doing so through the EO is of course just the start of a long process of rulemaking and inevitable follow-on litigation by environmental groups that will consume considerable resources of your staff. A clean break using the CRA would free up agency resources from the required rulemaking and messy litigation that will invariably drag on for years. We urge you to continue convincing Senators to use the CRA, and not allow them to hide behind the EO as an excuse to vote against it or never bring it to the Senate floor.

In light of your Secretarial Order 3349 requiring the BLM Director to report within 21 days on the methane rule, we would like to offer our thoughts on next steps. First and foremost, it is clear the methane rule is markedly inconsistent with the EO and we encourage your staff to expeditiously make this determination, ideally far in advance of the 21 day deadline. Because the methane rule has already gone into effect, the proper

1775 Sherman St., Ste 2700 Denver, CO 80203
P 303.623.0987 F 303.893.0709 W WesternEnergyAlliance.org

rulemaking to rescind it and ensure that the repeal can stand up in a court of law must be done in a deliberative manner per the Administrative Procedures Act. In the meantime, our members are beginning to incur significant costs to implement it. The overly prescriptive leak detection and repair, and storage tank, auto igniter, and pneumatic device retrofit provisions require companies to begin purchasing and installing tens of thousands of replacement parts in the very near future. We ask that DOI expeditiously publish a notice in the Federal Register to suspend the rule in light of the fact that the follow-on rulemaking process will likely take several months. Since a suspension requires a thirty-day public notice and comment period, we respectfully request that this first step happen as soon as possible.

In addition, Western Energy Alliance is one of two industry plaintiffs challenging the rule in court. Filing a suspension will help clarify the Administration's position with respect to the litigation, which has been thrown into much uncertainty. Parties to the litigation may either attempt to suspend the litigation in light of the EO, or push to continue the litigation on its current schedule despite its very uncertain future. Should either occur without a suspension of the rule, companies will continue to incur costs for a very burdensome rule which is likely in one way or another to be overturned, without industry and the government being any nearer to getting clarity from the courts.

Thank you again for your leadership on reorienting DOI to promote energy independence, create jobs, and stimulate economic growth. We look forward to working with you as your department implements the Executive and Secretarial Orders, and stand ready to assist you in any way we can.

Sincerely,



Kathleen M. Sgamma
President

cc: Mike Nedd, BLM Director (Acting)

Jack N. Gerard
President and Chief Executive Officer

1220 L Street, NW
Washington, DC 20005-4070
Telephone (202) 682-8000
www.api.org

May 16, 2017

The Honorable Ryan Zinke
Secretary of the Interior
1849 C Street SW
Washington DC 20240

Attention: Request for Filing of Notice to Postpone Compliance Dates in BLM Rule "Waste Prevention, Production Subject to Royalties, and Resource Conservation"

Dear Mr. Secretary:

Thank you for your leadership on advancing American energy security and promoting the expansion of opportunities for domestic oil and natural gas production. The U.S. has risen to a position of prominence as an energy superpower and we now lead the world in the production of oil and natural gas. It is vital to our continued success that we have federal energy policy in place that embraces U.S. energy security and eliminates obstacles to continued and expanded oil and gas development. With this letter, API and its members request that you instruct the Bureau of Land Management (BLM) to issue a proposed rule to postpone by two years each of the compliance dates in the rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 Fed. Reg. 83,008 (Jan. 17, 2017) (referred to herein as the "Final Rule").

API is a national trade association representing over 625 member companies involved in all aspects of the oil and natural gas industry. API's members include producers, refiners, suppliers, pipeline operators, and marine transporters, as well as service and supply companies that support all segments of the industry. API member companies are leaders of a technology-driven industry that supplies most of America's energy, supports more than 9.8 million jobs and 8% of the U.S. economy. Since 2000 the industry has invested nearly $2 trillion in U.S. capital projects to advance all forms of energy, including alternatives. API and its members are dedicated to meeting environmental requirements, while economically developing and supplying energy resources for consumers. Our members explore for and produce oil and natural gas resources owned by the American people on multiple use public lands administered by the BLM. Our industry has a demonstrated and continued commitment to conserving resources and preventing waste, and government data substantiates the success of the industry in increasingly capturing methane during a period of dramatic increases in oil and natural gas production.

An equal opportunity employer

We make this request in view of directives in recent Presidential and Secretarial Orders that may lead to changes to or withdrawal of the Final Rule. On March 29, 2017, you issued Secretarial Order 3349 entitled "American Energy Independence" ("Secretarial Order") to implement Executive Order 13783, signed by the President on March 28, 2017, and entitled "Promoting Energy Independence and Economic Growth" ("Energy Independence E.O."). The Energy Independence E.O. specifically called on you to review the Final Rule and, if appropriate, publish for notice and comment a proposed rule suspending, revising, or rescinding the Final Rule. Carrying out the President's directive, the Secretarial Order in turn called for BLM to review the Final Rule and to report to the Assistant Secretary, Land and Minerals Management on whether the Final Rule is fully consistent with the policy set forth in Section 1 of the Energy Independence E.O. With this work ongoing, postponement of the compliance dates in the Final Rule is critical and immediately necessary so that companies subject to the Rule are relieved not only from the burdens of compliance with currently applicable requirements but also expenditures and other burdensome actions necessary to comply with upcoming requirements, any of which may be changed or withdrawn as a result of the review directed by the Secretarial Order.

With requirements of the Final Rule already applicable and deadlines approaching to initiate a multitude of acts to meet future compliance dates in the Final Rule, swift action from your Department is needed to provide certainty for operators of federal oil and gas leases subject to its terms. Accordingly, we request that you direct the BLM to expeditiously publish a notice in the Federal Register to postpone the compliance dates in the Final Rule in light of the fact that any final determinations from the review and rulemaking processes will likely take several months. In order to accommodate any necessary procedural requirements necessary to implement these postponements, we respectfully request that this action proceed as soon as possible.

Thank you for the leadership you have already demonstrated to return the Department of the Interior to pursuit of policies that balance its differing but complementary missions of conservation and responsible development and use of our nation's natural resource endowment to promote energy security, to create jobs, and to generate economic growth. API and its members look forward to working with you and the Department of the Interior as you continue to pursue the mission outlined in the Energy Independence E.O. and in Secretarial Order 3349 so that these objectives can be achieved.

Sincerely,



Jack N. Gerard
President and CEO
American Petroleum Institute

cc: Acting Director, BLM

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:55 AM

Conversation Contents

Updating the Methane and Waste Prevention Rule Page

"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Tue Jun 13 2017 13:10:02 GMT-0600 (MDT)
To:	Ruth Zimmerman <rmzimmerman@blm.gov>
CC:	Theresa Coleman <tcoleman@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Updating the Methane and Waste Prevention Rule Page

Hi Ruth,
The Federal Register will publish a notice tomorrow (electronically and Thursday in print) postponing some provisions of the venting and flaring rule. Tim and Lonny asked me to provide content to update the page, including a statement about the rule that links to the FRN as well as two letters from industry.
I'll send a another email shortly with the content and a markup of the page so that the web producer (Tyrone?) will know what to do. I am at MIB and can't readily be there to help out.
We were not sure of the publication date until this afternoon, so sorry for the short notice.
Bev

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

"Zimmerman, Ruth" <rmzimmerman@blm.gov>

From:	"Zimmerman, Ruth" <rmzimmerman@blm.gov>
Sent:	Tue Jun 13 2017 13:18:01 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>
CC:	Theresa Coleman <tcoleman@blm.gov>, Steven Wells <s1wells@blm.gov>, "Cook, Catherine" <ccook@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Amy Krause <alkrause@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: Updating the Methane and Waste Prevention Rule Page

Bev,

When you send the information to us, please add Tyrone to the email as well.
Thank you.
Ruth

Ruth Zimmerman,|Deputy Business Manager Business Management Office (WO-302) | Energy, Minerals, & Realty Management |
BLM rmzimmerman@blm.gov | 202-912-7539 Office | 928-302-4128 Mobile

On Tue, Jun 13, 2017 at 3:10 PM, Winston, Beverly <bwinston@blm.gov> wrote:

> Hi Ruth,
> The Federal Register will publish a notice tomorrow (electronically and Thursday in print) postponing some provisions of the venting and flaring rule. Tim and Lonny asked me to provide content to update the page, including a statement about the rule that links to the FRN as well as two letters from industry.
> I'll send a another email shortly with the content and a markup of the page so that the web producer (Tyrone?) will know what to do. I am at MIB and can't readily be there to help out.
> We were not sure of the publication date until this afternoon, so sorry for the short notice.
> Bev
>
> --
>
> Bev Winston
> Bureau of Land Management | Communications
> 202-208-4602 | bwinston@blm.gov

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:55 AM

Conversation Contents

Request: Letters to go with venting and flaring

Attachments:

/4. Request: Letters to go with venting and flaring/3.1 API Letter.pdf
/4. Request: Letters to go with venting and flaring/3.2 Western Energy Alliance Letter on Executive Order and Methane Rule.pdf

"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Mon Jun 12 2017 13:05:29 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Request: Letters to go with venting and flaring

Tim/Lonny,
Do you have the letters that we are supposed to post with the 705 statement on venting and flaring?
Thanks

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Mon Jun 12 2017 13:18:47 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>, Chris Rhymes <christopher.rhymes@sol.doi.gov>
CC:	Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Request: Letters to go with venting and flaring

Chris, can't find two letters on my phone. Will you forward to Bev in prep for the web posting?
Thanks

Sent from my iPhone

On Jun 12, 2017, at 3:05 PM, Winston, Beverly <bwinston@blm.gov> wrote:

> Tim/Lonny,
> Do you have the letters that we are supposed to post with the 705 statement on

venting and flaring?
Thanks

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>

From:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
Sent:	Mon Jun 12 2017 13:30:28 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	"Winston, Beverly" <bwinston@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Request: Letters to go with venting and flaring
Attachments:	API Letter.pdf Western Energy Alliance Letter on Executive Order and Methane Rule.pdf

Here are the two letters.

On Mon, Jun 12, 2017 at 3:18 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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> Thanks
>
> Sent from my iPhone
>
> On Jun 12, 2017, at 3:05 PM, Winston, Beverly <bwinston@blm.gov> wrote:
>
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> Thanks
>
> --
>
> Bev Winston
> Bureau of Land Management | Communications
> 202-208-4602 | bwinston@blm.gov

--
Christopher M. Rhymes | Attorney-Advisor, Division of Mineral Resources
Office of the Solicitor | United States Department of the Interior
1849 C Street NW, #5354 | Washington, DC 20240
Phone: (202) 208-4307 | Email: christopher.rhymes@sol.doi.gov

"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Mon Jun 12 2017 13:34:16 GMT-0600 (MDT)
To:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Request: Letters to go with venting and flaring

Thanks, everyone.

On Mon, Jun 12, 2017 at 3:30 PM, Rhymes, Christopher <christopher.rhymes@sol.doi.gov> wrote:

> Here are the two letters.
>
> On Mon, Jun 12, 2017 at 3:18 PM, Timothy Spisak <tspisak@blm.gov> wrote:
>
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> > --
> > Bev Winston
> > Bureau of Land Management | Communications
> > 202-208-4602 | bwinston@blm.gov
>
> --
> **Christopher M. Rhymes** | Attorney-Advisor, Division of Mineral Resources
> Office of the Solicitor | United States Department of the Interior
> 1849 C Street NW, #5354 | Washington, DC 20240
> Phone: (202) 208-4307 | Email: christopher.rhymes@sol.doi.gov

--
Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

Jack N. Gerard
President and Chief Executive Officer

1220 L Street, NW
Washington, DC 20005-4070
Telephone (202) 682-8000
www.api.org

May 16, 2017

The Honorable Ryan Zinke
Secretary of the Interior
1849 C Street SW
Washington DC 20240

Attention: Request for Filing of Notice to Postpone Compliance Dates in BLM Rule "Waste Prevention, Production Subject to Royalties, and Resource Conservation"

Dear Mr. Secretary:

Thank you for your leadership on advancing American energy security and promoting the expansion of opportunities for domestic oil and natural gas production. The U.S. has risen to a position of prominence as an energy superpower and we now lead the world in the production of oil and natural gas. It is vital to our continued success that we have federal energy policy in place that embraces U.S. energy security and eliminates obstacles to continued and expanded oil and gas development. With this letter, API and its members request that you instruct the Bureau of Land Management (BLM) to issue a proposed rule to postpone by two years each of the compliance dates in the rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 Fed. Reg. 83,008 (Jan. 17, 2017) (referred to herein as the "Final Rule").

API is a national trade association representing over 625 member companies involved in all aspects of the oil and natural gas industry. API's members include producers, refiners, suppliers, pipeline operators, and marine transporters, as well as service and supply companies that support all segments of the industry. API member companies are leaders of a technology-driven industry that supplies most of America's energy, supports more than 9.8 million jobs and 8% of the U.S. economy. Since 2000 the industry has invested nearly $2 trillion in U.S. capital projects to advance all forms of energy, including alternatives. API and its members are dedicated to meeting environmental requirements, while economically developing and supplying energy resources for consumers. Our members explore for and produce oil and natural gas resources owned by the American people on multiple use public lands administered by the BLM. Our industry has a demonstrated and continued commitment to conserving resources and preventing waste, and government data substantiates the success of the industry in increasingly capturing methane during a period of dramatic increases in oil and natural gas production.

An equal opportunity employer

We make this request in view of directives in recent Presidential and Secretarial Orders that may lead to changes to or withdrawal of the Final Rule. On March 29, 2017, you issued Secretarial Order 3349 entitled "American Energy Independence" ("Secretarial Order") to implement Executive Order 13783, signed by the President on March 28, 2017, and entitled "Promoting Energy Independence and Economic Growth" ("Energy Independence E.O."). The Energy Independence E.O. specifically called on you to review the Final Rule and, if appropriate, publish for notice and comment a proposed rule suspending, revising, or rescinding the Final Rule. Carrying out the President's directive, the Secretarial Order in turn called for BLM to review the Final Rule and to report to the Assistant Secretary, Land and Minerals Management on whether the Final Rule is fully consistent with the policy set forth in Section 1 of the Energy Independence E.O. With this work ongoing, postponement of the compliance dates in the Final Rule is critical and immediately necessary so that companies subject to the Rule are relieved not only from the burdens of compliance with currently applicable requirements but also expenditures and other burdensome actions necessary to comply with upcoming requirements, any of which may be changed or withdrawn as a result of the review directed by the Secretarial Order.

With requirements of the Final Rule already applicable and deadlines approaching to initiate a multitude of acts to meet future compliance dates in the Final Rule, swift action from your Department is needed to provide certainty for operators of federal oil and gas leases subject to its terms. Accordingly, we request that you direct the BLM to expeditiously publish a notice in the Federal Register to postpone the compliance dates in the Final Rule in light of the fact that any final determinations from the review and rulemaking processes will likely take several months. In order to accommodate any necessary procedural requirements necessary to implement these postponements, we respectfully request that this action proceed as soon as possible.

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Sincerely,



Jack N. Gerard
President and CEO
American Petroleum Institute

cc: Acting Director, BLM

WESTERN ENERGY ALLIANCE

April 4, 2017

The Honorable Ryan Zinke
Secretary
Department of the Interior
1849 C Street N.W.
Washington, D.C. 20240

Dear Secretary Zinke:

Thank you very much for your work regarding the President's Executive Order (EO) on Promoting Energy Independence and Economic Growth. We appreciate that you and President Trump are fulfilling promises to undo the burdensome red tape constraining domestic energy production and killing jobs. We appreciate your leadership on refocusing the Department of the Interior (DOI) back to its core mission of responsibly managing public lands for multiple use and away from prioritizing climate change analysis over all else. The oil and natural gas industry has enabled real U.S. leadership on climate change; by enabling increased natural gas electricity generation, we have delivered more greenhouse gas reductions than any overreaching federal climate change policy, and the United States now leads the world in reducing greenhouse gas emissions.

Western Energy Alliance represents over 300 companies engaged in all aspects of environmentally responsible exploration and production of oil and natural gas in the West. Alliance members are independents, the majority of which are small businesses with an average of fifteen employees.

Thank you also for your efforts to persuade reluctant Senators to vote to overturn the Bureau of Land Management's (BLM) waste prevention rule, otherwise known as the methane rule, using the Congressional Review Act (CRA). While we very much appreciate that the rule was included in the EO for review and rescission, doing so through the EO is of course just the start of a long process of rulemaking and inevitable follow-on litigation by environmental groups that will consume considerable resources of your staff. A clean break using the CRA would free up agency resources from the required rulemaking and messy litigation that will invariably drag on for years. We urge you to continue convincing Senators to use the CRA, and not allow them to hide behind the EO as an excuse to vote against it or never bring it to the Senate floor.

In light of your Secretarial Order 3349 requiring the BLM Director to report within 21 days on the methane rule, we would like to offer our thoughts on next steps. First and foremost, it is clear the methane rule is markedly inconsistent with the EO and we encourage your staff to expeditiously make this determination, ideally far in advance of the 21 day deadline. Because the methane rule has already gone into effect, the proper

1775 Sherman St., Ste 2700 Denver, CO 80203
P 303.623.0987 F 303.893.0709 W WesternEnergyAlliance.org

rulemaking to rescind it and ensure that the repeal can stand up in a court of law must be done in a deliberative manner per the Administrative Procedures Act. In the meantime, our members are beginning to incur significant costs to implement it. The overly prescriptive leak detection and repair, and storage tank, auto igniter, and pneumatic device retrofit provisions require companies to begin purchasing and installing tens of thousands of replacement parts in the very near future. We ask that DOI expeditiously publish a notice in the Federal Register to suspend the rule in light of the fact that the follow-on rulemaking process will likely take several months. Since a suspension requires a thirty-day public notice and comment period, we respectfully request that this first step happen as soon as possible.

In addition, Western Energy Alliance is one of two industry plaintiffs challenging the rule in court. Filing a suspension will help clarify the Administration's position with respect to the litigation, which has been thrown into much uncertainty. Parties to the litigation may either attempt to suspend the litigation in light of the EO, or push to continue the litigation on its current schedule despite its very uncertain future. Should either occur without a suspension of the rule, companies will continue to incur costs for a very burdensome rule which is likely in one way or another to be overturned, without industry and the government being any nearer to getting clarity from the courts.

Thank you again for your leadership on reorienting DOI to promote energy independence, create jobs, and stimulate economic growth. We look forward to working with you as your department implements the Executive and Secretarial Orders, and stand ready to assist you in any way we can.

Sincerely,



Kathleen M. Sgamma
President

cc: Mike Nedd, BLM Director (Acting)

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:55 AM

Conversation Contents

Fwd: Waste Prevention Delay Proposed Rule -- latest version

Attachments:

/5. Fwd: Waste Prevention Delay Proposed Rule -- latest version/1.1 Waste Prevention Delay Proposed Rule 6.9.17.docx

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Fri Jun 09 2017 12:27:20 GMT-0600 (MDT)
To:	"Spisak, Timothy" <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
Subject:	Fwd: Waste Prevention Delay Proposed Rule -- latest version
Attachments:	Waste Prevention Delay Proposed Rule 6.9.17.docx

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Subject: Waste Prevention Delay Proposed Rule -- latest version
To: "Tichenor, James C" <jtichenor@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, "Senio, Ian J" <isenio@blm.gov>, Jean Sonneman <jesonnem@blm.gov>

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Bureau of Land Management
20 M St., S.E., Rm. 6291
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202-912-7441

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Fri Jun 09 2017 12:30:30 GMT-0600 (MDT)
To:	James Tichenor <jtichenor@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
Subject:	RE: Waste Prevention Delay Proposed Rule -- latest version

Is this in DTS?

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Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
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From: Tichenor, James [mailto:jtichenor@blm.gov]
Sent: Friday, June 09, 2017 2:27 PM
To: Spisak, Timothy; Lonny Bagley; Christopher Rhymes

Subject: Fwd: Waste Prevention Delay Proposed Rule -- latest version

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From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Fri Jun 09 2017 12:43:46 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
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> **Sent:** Friday, June 09, 2017 2:27 PM
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Fri Jun 09 2017 12:56:59 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
Subject:	Re: Waste Prevention Delay Proposed Rule -- latest version

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Sent:	Fri Jun 09 2017 12:59:08 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

Subject: Re: Waste Prevention Delay Proposed Rule -- latest version

Great will do

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4310-84P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3160 and 3170

[17X.LLWO310000.L13100000.PP0000]

1004-AE54

Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Implementation Dates for Certain Requirements

AGENCY: Bureau of Land Management, Interior.

ACTION: Proposed rule.

SUMMARY: On November 18, 2016, the Bureau of Land Management (BLM) published in the *Federal Register* a final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (2016 final rule). The BLM is now proposing to temporarily suspend or delay certain requirements contained in the 2016 final rule until (b) (5) 2019. The BLM is currently reviewing the 2016 final rule and wants to avoid imposing temporary or permanent compliance costs (b) (5) for requirements that may be rescinded or significantly revised in the near future.

DATES: Send your comments on this proposed rule to the BLM on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) (5) [redacted]

ADDRESSES: *Mail:* U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 2134LM, 1849 C St., N.W., Washington, D.C. 20240, Attention: 1004-AE52.

Personal or messenger delivery: U.S. Department of the Interior, Bureau of Land Management, 20 M Street, S.E., Room 2134 LM, Washington, D.C. 20003, Attention: Regulatory Affairs.

Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions at this website.

FOR FURTHER INFORMATION CONTACT: (b) (5) , Division Chief, Fluid Minerals Division, (b) (5) , for information regarding the substance of this proposed rule or information about the BLM's Fluid Minerals program. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1-800-877-8339, 24 hours a day, 7 days a week, to leave a message or question with the above individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

I. Public Comment Procedures

II. Background

III. Discussion of the Proposed Rule

IV. Procedural Matters

I. Public Comment Procedures

If you wish to comment on this proposed rule, you may submit your comments by any of the methods described in the "ADDRESSES" section.

Please make your comments on the proposed rule as specific as possible, confine them to issues pertinent to the proposed rule, and explain the reason for any changes you recommend. Where possible, your comments should reference the specific section or paragraph of the proposal that you are addressing. The BLM is not obligated to consider

or include in the Administrative Record for the final rule comments that we receive after the close of the comment period (see "DATES") or comments delivered to an address other than those listed above (see "ADDRESSES").

Comments, including names and street addresses of respondents, will be available for public review at the address listed under "ADDRESSES: Personal or messenger delivery" during regular hours (7:45 a m. to 4:15 p.m.), Monday through Friday, except holidays. Before including your address, telephone number, email address, or other personal identifying information in your comment, be advised that your entire comment--including your personal identifying information--may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

II. Background

The BLM's onshore oil and gas management program is a major contributor to our nation's oil and gas production. The BLM manages more than 245 million acres of Federal land and 700 million acres of subsurface estate, making up nearly a third of the nation's mineral estate. In fiscal year (FY) 2016, sales volumes from Federal onshore production lands accounted for 9 percent of domestic natural gas production, and 5 percent of total U.S. oil production. Over $1.9 billion in royalty was collected from all oil, natural gas, and natural gas liquids transactions in FY 2016 on Federal and Indian Lands. (b) (5) [redacted].

In response to oversight reviews and a recognition of increased flaring from Federal and Indian leases, the BLM developed a final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," which was published in

the *Federal Register* on November 18, 2016. See 81 FR 83008 (Nov. 18, 2016). The rule replaced the BLM's existing policy at that time, Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). The 2016 final rule was intended to: Reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian (b) (5) leases; and clarify when produced gas lost through venting, flaring, or leaks is subject to royalties, and when oil and gas production may be used royalty-free on-site. The 2016 final rule became effective on January 17, 2017. Many of the final rule's provisions are phased-in over time, and become operative on January 17, 2018.

Immediately after the 2016 final rule was issued, petitions for judicial review of the rule were filed by industry groups and States with significant BLM-managed Federal and Indian minerals. The petitioners in this litigation are the Western Energy Alliance (WEA), the Independent Petroleum Association of America, the State of Wyoming, the State of Montana, the State of North Dakota, and the State of Texas. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. *Wyoming v. U.S. Dep't of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Petitioners assert that the BLM was arbitrary and capricious in promulgating the 2016 final rule and that the rule exceeds the BLM's statutory authority. Shortly after filing petitions for judicial review, petitioners filed motions for a preliminary injunction, seeking a stay of the rule pending the outcome of the litigation. These motions were denied by the court on January 16, 2017, and the rule went into effect the following day. Although the court denied the motions for a preliminary injunction, it did express

concerns that the BLM may have usurped the authority of the Environmental Protection Agency (EPA) and the States under the Clean Air Act, and questioned whether it was appropriate for the 2016 final rule to be justified based on its environmental and societal benefits, rather than on its conservation benefits alone. The next stage in the litigation is the court's consideration of the merits of the petitioner's claims. The court's decision on these claims could result in the 2016 final rule being overturned.

(b) (5) [redacted]

In the Regulatory Impact Analysis (RIA) for the 2016 final rule, the BLM estimated that the requirements of the 2016 final rule would (b) (5) compliance costs, not including potential cost savings for product recovery, of approximately $114 million to $279 million per year (2016 RIA at 4). The BLM had concluded that, while many of the requirements were consistent with EPA regulations for new sources, current industry practice, or similar to the requirements found in some existing State regulations, the 2016 final rule would be an economically significant rule with estimated costs and benefits exceeding $100 million per year (2016 RIA at 138). Comments received by many oil and gas companies and trade associations representing members of the oil and gas industry suggested that the BLM's proposed and final rules were unnecessary and would cause substantial harm to the industry. During the litigation following the issuance of the 2016 final rule, the petitioners argued that the BLM underestimated the compliance costs of the final rule and that the costs would drive the industry away from Federal and Indian lands, thereby reducing royalties and harming State and tribal economies. (b) (5) [redacted]

Since late January 2017, the President has issued several Executive Orders that necessitate the review of the BLM's 2016 final rule. On January 30, 2017, the President issued Executive Order 13771, entitled, "Reducing Regulation and Controlling Regulatory Costs," which requires Federal agencies to take proactive measures to reduce the costs associated with complying with Federal regulations. In addition, on March 28, 2017, the President issued Executive Order 13783, entitled, "Promoting Energy Independence and Economic Growth." Section 7(b) of Executive Order 13783 directs the Secretary of the Interior to review four specific rules, including the 2016 final rule, for "consistency with the policy set forth in section 1 of [the] order and, if appropriate…publish for notice and comment proposed rules suspending, revising, or rescinding those rules." Among other things, section 1 of Executive Order 13783 states that "[i]t is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation."

To implement Executive Order 13783, Secretary of the Interior Ryan Zinke issued Secretarial Order No. 3349, entitled, "American Energy Independence" on March 29, 2017, which, among other things, directs the BLM to review the 2016 final rule to determine whether it is fully consistent with the policy set forth in Section 1 of Executive Order 13783.

III. Discussion of the Proposed Rule

The BLM is proposing to temporarily suspend or delay certain requirements contained in the 2016 final rule until (b) (5), 2019. As directed by the aforementioned

Executive Orders, and by Secretarial Order No. 3349, the BLM is currently reviewing the 2016 final rule and wants to avoid imposing temporary or permanent compliance costs on (b) (5) for requirements that might be rescinded or significantly revised in the near future. The BLM also wishes to avoid expending scarce agency resources on implementation activities (internal training, operator outreach/education, developing clarifying guidance, etc.) for such potentially transitory requirements.

For certain requirements in the 2016 final rule that have yet to be implemented, this proposed rule would temporarily postpone the implementation dates until (b) (5) 2019, or (b) (5). For certain requirements in the 2016 final rule that are currently in effect, this proposed rule would temporarily suspend their effectiveness until (b), 2019. A detailed discussion of the proposed suspensions and delays is provided below. The BLM seeks comment on these proposed suspensions and delays. Issues of particular interest to the BLM include the necessity of the suspensions and delays, (b) (5), and the costs and benefits associated with the suspensions and delays.

43 CFR 3162.3-1(j) - Drilling applications and plans.

In the 2016 final rule, the BLM added a paragraph (j) to 43 CFR 3162.3-1, which presently requires that when submitting an Application for Permit to Drill (APD) for an oil well, an operator must also submit a waste-minimization plan. Submission of the plan is required for approval of the APD, but the plan is not itself part of the APD, and the terms of the plan are not enforceable against the operator. The purpose of the waste-minimization plan is for the operator to set forth a strategy for how the operator will

comply with the requirements of 43 CFR subpart 3179 regarding the control of waste from venting and flaring from oil wells.

The waste-minimization plan must include information regarding: The anticipated completion date(s) of the proposed oil well(s); a description of anticipated production from the well(s); certification that the operator has provided one or more midstream processing companies with information about the operator's production plans, including the anticipated completion dates and gas production rates of the proposed well or wells; and identification of a gas pipeline to which the operator plans to connect. Additional information is required when an operator cannot identify a gas pipeline with sufficient capacity to accommodate the anticipated production from the proposed well, including: A gas pipeline system location map showing the proposed well(s); the name and location of the gas processing plant(s) closest to the proposed well(s); all existing gas trunklines within 20 miles of the well, and proposed routes for connection to a trunkline; the total volume of produced gas, and percentage of total produced gas, that the operator is currently venting or flaring from wells in the same field and any wells within a 20-mile radius of that field; and a detailed evaluation, including estimates of costs and returns, of potential on-site capture approaches.

In the RIA for the 2016 final rule, the BLM estimated that the administrative burden of the waste-minimization plan requirements would be roughly $1 million per year for the industry and $180,000 per year for the BLM (2016 RIA at 96 and 100). The BLM is currently reviewing the requirements of § 3162.3-1(j) in order to determine whether the burden it imposes on operators is necessary and whether this burden can be reduced. The BLM is considering narrowing the required information and is also

considering whether submission of a State waste-minimization plan, such as those required by New Mexico and North Dakota, would serve the purpose of § 3162.3-1(j). While the BLM conducts this review and considers revising § 3162.3-1, the BLM does not believe that generating and reviewing lengthy, unenforceable waste-minimization plans is a prudent use of operator or BLM resources. The BLM is therefore proposing to suspend the waste minimization plan requirement of § 3162.3-1(j) until (b) (5) 2019. This rule would revise § 3162.3-1 by adding "Beginning (b) (5) 2019" to the beginning of paragraph (j). The rest of this paragraph is the same as the final 2016 rule and is repeated here only for context.

43 CFR 3179.7 – Gas capture requirement.

In the 2016 final rule, the BLM sought to constrain routine flaring through the imposition of a "capture percentage" requirement, requiring operators to capture a certain percentage of the gas they produce, after allowing for a certain volume of flaring per well. The capture-percentage requirement would become more stringent over a period of years, beginning with an 85 percent capture requirement (5,400 Mcf per well flaring allowable) in January 2018, and eventually reaching a 98 percent capture requirement (750 Mcf per well flaring allowable) in January 2026. An operator would choose whether to comply with the capture targets on each of the operator's leases, units or communitized areas, or on a county-wide or state-wide basis.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would (b) (5) costs of up to $162 million per year and generate cost savings from product recovery of up to $124 million per year, with both costs and cost savings increasing as the requirements increased in stringency (2016 RIA at 49).

The BLM is currently considering whether the capture-percentage requirement of § 3179.7 is unnecessarily complex and whether it will, in fact, be a significant improvement on the requirements of NTL-4A. The BLM is considering whether the NTL-4A framework can be applied in a manner that addresses (b) (5) [redacted]. Finally, the BLM is considering whether the need for a complex capture-percentage requirement could be obviated through BLM efforts to facilitate pipeline development. Rather than require operators to institute new processes and adjust their plans for development to meet a capture-percentage requirement that may be rescinded or revised as a result of the BLM's review, the BLM is proposing to delay for (b) (5) the compliance dates for § 3179.7's capture requirements. This delay will allow the BLM sufficient time to conduct notice-and-comment rulemaking to determine whether the capture percentage requirements should be rescinded or revised and will prevent operators from being unnecessarily burdened by regulatory requirements that are subject to change. This rule would revise the dates in paragraphs (b)(1) through (b)(4) and (c)(2)(i) through (vii) of § 3179.7. Paragraphs (c), (c)(1), and the introductory text of (c)(2) are the same as the final 2016 rule and are repeated here only for context.

43 CFR 3179.9 - Measuring and reporting volumes of gas vented and flared from wells.

Section 3179.9 requires operators to estimate (using estimation protocols) or measure (using a metering device) all flared and vented gas, whether royalty-bearing or royalty-free. This section further provides that specific requirements apply when the operator is flaring 50 Mcf or more of gas per day from a high-pressure flare stack or

manifold, based on estimated volumes from the previous 12 months, or based on estimated volumes over the life of the flare, whichever is shorter. Beginning on January 17, 2018, (b) (5) this volume threshold is met, § 3179.9(b) would require the operator to measure the volume of the flared gas, or calculate the volume of the flared gas based on the results of a regularly performed gas-to-oil ratio test, so as to allow the BLM to independently verify the volume, rate, and heating value of the flared gas.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would (b) (5) costs of about $4 million to $ 7 million per year (2016 RIA at 52).
The BLM is presently reviewing § 3179.9 to determine whether the additional accuracy associated with the measurement and estimation required by § 3179.9(b) justifies the burden it would place on operators. The BLM is considering whether it would make more sense to allow the BLM to require measurement or estimation on a case-by-case basis, rather than imposing a blanket requirement on all operators. In order to avoid unnecessary compliance costs on the part of operators, the BLM is proposing to delay the compliance date in § 3179.9 until (b) (5) . This rule would revise the date in § 3179.9(b)(1). The rest of paragraph (b)(1) is the same as the final 2016 rule and is repeated here only for context.

43 CFR 3179.10 - Determinations regarding royalty-free flaring.

Section 3179.10(a) provides that approvals to flare royalty free that were in effect as of January 17, 2017, will continue in effect until January 17, 2018. The purpose of this provision was to provide a transition period for operators who were operating under existing approvals for royalty-free flaring. Because the BLM's review of the 2016 final rule could result in rescission or substantial revision of the rule, the BLM believes that

terminating pre-existing flaring approvals in January 2018 would be premature, disruptive, and would introduce needless regulatory uncertainty for operators with existing flaring approvals. The BLM is therefore proposing to extend the transition period provided for in § 3179.10(a) to (b) (5) 2019. This rule would revise the date in paragraph (a) and replace "as of the effective date of this rule" with "(b) (5) as of January 17, 2017," which is the effective date of that rule, for clarity. This rule would not otherwise revise paragraph (a), but the rest of the paragraph is repeated for context.

43 CFR 3179.101 - Well drilling.

Section 3179.101(a) requires that gas reaching the surface as a normal part of drilling operations be used or disposed of in one of four ways: (1) Captured and sold; (2) Directed to a flare pit or flare stack; (3) Used in the operations on the lease, unit, or communitized area; or (4) Injected. Section 3179.101(a) also specifies that gas may not be vented except under the circumstances specified in § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the ways specified above. Section 3179.101(b) states that gas lost as a result of a loss of well control will be classified as avoidably lost if the BLM determines that the loss of well control was due to operator negligence.

The BLM is currently reviewing § 3179.101 to determine whether it is necessary in light of current operator practices. The experiences of BLM field office personnel indicate that operators would typically dispose of gas during well drilling consistent with § 3179.101(a). The primary effect of § 3179.101, therefore, may be to impose a regulatory constraint on operators in exceptional circumstances where the operator must

make a case-specific judgment about how to safely and effectively dispose of the gas. The BLM is therefore proposing to suspend the effectiveness of § 3179.101 until (b) (5) 2019, while the BLM completes its review of § 3179.101 and decides whether to permanently revise or rescind it through notice-and-comment rulemaking. This rule would add a new paragraph (c) making it clear that the operator must comply with § 3179.101 beginning (b) (5) 2019.

43 CFR 3179.102 - Well completion and related operations.

Section 3179.102 addresses gas that reaches the surface during well-completion, post-completion, and fluid-recovery operations, after a well has been hydraulically fractured or refractured. It requires the gas to be used or disposed of in one of four ways: (1) Captured and sold; (2) Directed to a flare pit or stack, subject to a volumetric limitation in § 3179.103; (3) Used in the lease operations; or (4) Injected. Section 3179.102 specifies that gas may not be vented except under the narrow circumstances specified in proposed § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the four ways specified above. Section 3179.102(b) provides that an operator will be deemed to be in compliance with its gas capture and disposition requirements if the operator is in compliance with the requirements for control of gas from well completions established under the EPA's 40 CFR part 60, subparts OOOO or OOOOa regulations, or if the well is not a "well affected facility" under those regulations.

The BLM is currently reviewing § 3179.102 to determine whether it is necessary in light of current operator practices and the analogous EPA regulations in 40 CFR part 60, subparts OOOO and OOOOa. The experiences of BLM field office personnel

indicate that operators would typically dispose of gas during well completions and related operations consistent with § 3179.102(a). The BLM also suspects that most of the well completions and related operations that would otherwise be covered by § 3179.102 are actually exempted under § 3179.102(b). Considering current industry practice and the overlap with EPA regulations, the primary effect of § 3179.102 may be to generate confusion about regulatory compliance during well-drilling and related operations. The BLM is therefore proposing to suspend the effectiveness of § 3179.102 until (b) (5) 2019, while the BLM completes its review of § 3179.102 and decides whether to permanently revise or rescind it through notice-and-comment rulemaking. This rule would add a new paragraph (e) making it clear that operators must comply with § 3179.102 by (b) (5) 2019.

43 CFR 3179.201 - Equipment requirements for pneumatic controllers.

Section 3179.201 addresses pneumatic controllers that use natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease. Section 3179.201 applies to such controllers if the controllers: (1) Have a continuous bleed rate greater than 6 standard cubic feet per hour (scf/hour) ("high-bleed" controllers); and (2) Are not covered by EPA regulations that prohibit the new use of high-bleed pneumatic controllers (40 CFR part 60, subparts OOOO or OOOOa), but would be subject to those regulations if the controllers were new, modified, or reconstructed sources. Section 3179.201(b) requires the applicable pneumatic controllers to be replaced with controllers (including, but not limited to, continuous or intermittent pneumatic controllers) having a bleed rate of no more than 6 scf/hour, subject to certain exceptions. Section 3179.201(d) requires this replacement occur no later than

January 17, 2018, or within 3 years from the effective date of the rule if the well or facility served by the controller has an estimated remaining productive life of 3 years or less.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would (b) (5) costs of about $2 million per year and generate cost savings from product recovery of $3 million to $4 million per year (2016 RIA at 56).

The BLM is currently reviewing § 3179.201 to determine whether it should be revised or rescinded. The BLM is considering whether § 3179.201 is necessary in light of the analogous EPA regulations and the fact that operators (b) (5) to adopt more efficient equipment in cases where it makes economic sense for them to do so. The BLM does not believe that operators should be required to make costly equipment upgrades to comply with § 3179.201 until the BLM has had an opportunity to review its requirements and revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the compliance date stated in § 3179.201 until (b) (5), 2019. This rule would revise the first sentence of paragraph (d) by replacing "no later than 1 year after the effective date of this section" with "by (b) (5), 2019." This rule would also replace "the effective date of this section" with "January 17, 2017" the two times that it appears in the second sentence of paragraph (d). This rule would not otherwise revise paragraph (d), but the rest of the paragraph is repeated for context.

43 CFR 3179.202 - Requirements for pneumatic diaphragm pumps.

Section 3179.202 establishes requirements for operators with pneumatic diaphragm pumps that use natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease. It applies to such

pumps if they are not covered under EPA regulations at 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if they were a new, modified, or reconstructed source. For covered pneumatic pumps, § 3179.202 requires that the operator either replace the pump with a zero-emissions pump or route the pump exhaust to processing equipment for capture and sale. Alternatively, an operator may route the exhaust to a flare or low-pressure combustion device if the operator makes a determination (and notifies the BLM through a Sundry Notice) that replacing the pneumatic diaphragm pump with a zero-emissions pump or capturing the pump exhaust is not viable because: (1) A pneumatic pump is necessary to perform the function required; and (2) Capturing the exhaust is technically infeasible or unduly costly. If an operator makes this determination and has no flare or low-pressure combustor on-site, or routing to such a device would be technically infeasible, the operator is not required to route the exhaust to a flare or low-pressure combustion device. Under § 3179.202(h), an operator must replace its covered pneumatic diaphragm pump or route the exhaust gas to capture or flare no later than January 17, 2018.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would (b) (5) costs of about $4 million per year and generate cost savings from product recovery of $2 million to $3 million per year (2016 RIA at 61).

The BLM is currently reviewing § 3179.202 to determine whether it should be rescinded or revised. (b) (5) [redacted]. In addition, the BLM is concerned that requiring zero-emissions pumps may not conserve gas in some cases. The BLM does not believe that operators should be required to make (b) (5) equipment upgrades to comply with § 3179.202 until the BLM has had an

opportunity to review its requirements and revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the compliance date stated in § 3179.202 until (b) (5) 2019. This rule would revise paragraph (h) by replacing "no later than 1 year after the effective date of this section" in the first sentence with "by (b) (5) 2019" and would also replace "the effective date of this section" with "by January 17, 2017" the two times that it appears later in the same sentence. This rule would not otherwise revise paragraph (h), but the rest of the paragraph is repeated for context.

43 CFR 3179.203 - Storage vessels.

(b) (5) [redacted]

Section 3179.203 applies to crude oil, condensate, intermediate hydrocarbon liquid, or produced-water storage vessels that contain production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, and that are not subject to 40 CFR part 60, subparts OOOO or OOOOa, but would be if they were new, modified, or reconstructed sources. If such storage vessels have the potential for volatile organic compound (VOC) emissions equal to or greater than 6 tons per year (tpy), § 3179.203 requires operators to route all gas vapor from the vessels to a sales line. Alternatively, the operator may route the vapor to a combustion device if it determines that routing the vapor to a sales line is technically infeasible or unduly costly. The operator also may submit a Sundry Notice to the BLM that demonstrates that compliance with the above options would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of compliance. Pursuant to § 3179.203(c), operators must meet these requirements for covered storage vessels by January 17, 2018 (unless the operator will replace the storage vessel in order to comply, in which case it has a longer time to comply).

In the RIA for the 2016 final rule, the BLM estimated that this requirement would (b) (5) costs of about $7 million to $8 million per year and generate cost savings from product recovery of up to $200,000 per year (2016 RIA at 74).

The BLM is currently reviewing § 3179.203 to determine whether it should be rescinded or revised. The BLM is considering whether § 3179.203 is necessary in light of analogous EPA regulations and whether the costs associated with compliance are justified. The BLM does not believe that operators should be required to make (b) (5) upgrades to their storage vessels in order to comply with § 3179.203 until the BLM has had an opportunity to review its requirements and revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the January 17, 2018, compliance date in § 3179.203 until (b) (5) 2019. This rule would revise the first sentence of paragraph (b) by replacing "Within 60 days after the effective date of this section" with "Beginning (b) (5) 2019" and by adding "after (b) (5), 2019" between the words "vessel" and "the operator." This rule would also revise the introductory text of paragraph (c) by replacing "no later than one year after the effective date of this section" with "by (b) (5) 2019." This rule would not otherwise revise paragraphs (b) and (c), but the rest of these paragraphs are repeated for context.

43 CFR 3179.204 - Downhole well maintenance and liquids unloading.

Section 3179.204 establishes requirements for venting and flaring during downhole well maintenance and liquids unloading. It requires the operator to use practices for such operations that minimize vented gas and the need for well venting, unless the practices are necessary for safety. Section 3179.204 also requires that for wells equipped with a plunger lift system or an automated well-control system, the operator

must optimize the operation of the system to minimize gas losses. Under § 3179.204, before an operator manually purges a well for the first time, the operator must document in a Sundry Notice that other methods for liquids unloading are technically infeasible or unduly costly. In addition, during any liquids unloading by manual well purging, the person conducting the well purging is required to be present on-site to minimize to the maximum extent practicable any venting to the atmosphere. This section also requires the operator to maintain records of the cause, date, time, duration and estimated volume of each venting event associated with manual well purging, and to make those records available to the BLM upon request. Additionally, operators are required to notify the BLM by Sundry Notice within 30 days after the following conditions are met: (1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or (2) The estimated volume of gas vented in the process of conducting liquids unloading by manual well purging for a well exceeds 75 Mcf during any production month.

In the RIA for the 2016 final rule, the BLM estimated that these requirements would (b) (5) costs of about $6 million per year and generate cost savings from product recovery of about $5 million to $9 million per year (2016 RIA at 66). In addition, there would be estimated administrative burdens associated with these requirements of $323,000 per year for the industry and $37,000 per year for the BLM (2016 RIA at 98 and 101).

The BLM is currently reviewing § 3179.204 to determine whether it should be rescinded or revised. The BLM does not believe that operators should be burdened with the operational and reporting requirements imposed by § 3179.204 until the BLM has had

an opportunity to review them and, if appropriate, revise them through notice-and-comment rulemaking. In addition, as part of this review, the BLM would want to review how these data could be reported in a consistent manner among operators. The BLM is therefore proposing to suspend the effectiveness of § 3179.204 until (b) (5), 2019. This rule would add a new paragraph (i) making it clear that operators must comply with § 3179.204 by (b) (5), 2019.

43 CFR 3179.301 - Operator responsibility (Leak Detection and Repair).

Sections 3179.301 through 3179.305 establish leak detection, repair, and reporting requirements for: (1) Sites and equipment used to produce, process, treat, store, or measure natural gas from or allocable to a Federal or Indian lease, unit, or communitization agreement; and (2) Sites and equipment used to store, measure, or dispose of produced water on a Federal or Indian lease. Section 3179.302 prescribes the instruments and methods that may be used for leak detection. Section 3179.303 prescribes the frequency for inspections and § 3179.304 prescribes the time frames for repairing leaks found during inspections. Finally, § 3179.305 requires operators to maintain records of their leak detection and repair activities and submit an annual report to the BLM. Pursuant to § 3179.301(f), operators must begin to comply with the leak detection and repair requirements of §§ 3179.301 through 3179.305 before: (1) January 17, 2018, for sites in production prior to January 17, 2017; (2) 60 days after beginning production for sites that began production after January 17, 2017; and (3) 60 days after a site that was out of service is brought back into service and re-pressurized.

In the RIA for the 2016 final rule, the BLM estimated that these requirements would (b) (5) costs of about $83 million to $84 million per year and generate cost savings

from product recovery of about $12 million to $21 million per year (2016 RIA at 91). In addition, there would be estimated administrative burdens associated with these requirements of $3.9 million per year for the industry and over $1 million per year for the BLM (2016 RIA at 98 and 102).

The BLM is currently reviewing §§ 3179.301 through 3179.305 to determine whether they should be revised or rescinded. The BLM is considering whether these requirements are necessary in light of comparable EPA and State leak detection and repair regulations. The BLM is considering whether the reporting burdens imposed by these sections are justified and whether the substantial compliance costs could be mitigated by allowing for less frequent and/or non-instrument-based inspections or by exempting wells that have low potential to leak natural gas. The BLM does not believe that operators should be burdened with the significant compliance costs (b) (5) by these sections until the BLM has had an opportunity to review them and, if appropriate, revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the effective dates for these sections until (b) (5) 2019 by revising § 3179.301(f). This rule would revise paragraph (f)(1) by replacing "Within one year of January 17, 2017 for sites that have begun production prior to January 17, 2017;" with "By (b) (5) 2019, for all existing sites." This rule would also revise paragraph (f)(2) by adding "new" between the words "for" and "sites" and by replacing the existing date with "(b) (5) 2019." Finally, this rule would revise paragraph (f)(3) by adding "an existing" between the words "when" and "site" and by adding "after (b) (5) 2019" to the end of the sentence. This rule would not otherwise revise paragraph (f), but the rest of the paragraph is repeated for context.

IV. Procedural Matters

The BLM reviewed the proposed rule and conducted an RIA and Environmental Assessment (EA) that examine the impacts of the proposed requirements. (b) (5) [redacted]

(b) (5) [redacted]

Estimated Reductions in Compliance Costs (Excluding Cost Savings)

First, we examine the reductions in compliance costs, excluding the savings that would have been realized from product recovery. Suspending or delaying the targeted requirements of the 2016 final rule until (b) (5) 2019, is estimated to substantially reduce compliance costs during the period of the suspension or delay.

Annual Impacts:

- (b) (5), a reduction in compliance costs of $114 million (using a 7 percent discount rate to annualize capital costs) or $110 million (using a 3 percent discount rate to annualize capital costs); and
- (b) (5) [redacted]

Impacts over the 10-year evaluation period:

- Total reduction in compliance costs ranging from (b) (5) [redacted] (net present value (NPV) using a 7 percent discount rate) or (b) (5) [redacted] million (NPV using a 3 percent discount rate).

Estimated Reduction in Benefits

The proposed rule would reduce benefits, since estimated cost savings that would have come from product recovery would be deferred and the emissions reductions would also be deferred.

Annual Impacts:

- (b) (5) reduction in cost savings of (b) (5); and
- (b) (5)

Impacts over the 10-year evaluation period:

- Total reduction in cost savings of (b) (5) (NPV using a 7% discount rate) or (b) (5) (NPV using a 3 percent discount rate).

We estimate that the proposed rule would also result in additional methane emissions of 175,000 tons in 2017, 176,000 tons (b) (5) We also estimate an additional VOC emissions of 250,000 tons in 2017, (b) (5)

(b) (5)

(b) (5) [redacted]

Estimated Net Benefits

The proposed rule is estimated to result in positive net benefits, meaning that the reduction of compliance costs would exceed the reduction in cost savings and the cost of emissions additions.

Annual Impacts:

- (b) (5) [redacted]

Impacts over the 10-year evaluation period:

- (b) (5) [redacted]

(b) (5) [redacted]

Energy Systems

The proposed rule is expected to influence the production of natural gas, natural gas liquids, and crude oil from onshore Federal and Indian oil and gas leases, particularly in the short-term. However, since the relative changes in production are expected to be small, we do not expect that the proposed rule would significantly impact the price, supply, or distribution of energy.

We estimate the following incremental changes in production, noting the representative share of the total U.S. production in 2015 for context.

Annual Impacts:

- A decrease in natural gas production of 9.0 Bcf in (b) (5) (b) (5) (0.03 percent and (b) (5), of the total U.S. production).
- An increase in crude oil production of 91,000 barrels in (b) (5) (0.003 percent of the total U.S. production). There is no estimated change in crude oil production in (b) (5).

(b) (5) [redacted].

Royalty Impacts

In the short-term, the rule is expected to decrease natural gas production from Federal and Indian leases, and likewise, is expected to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners.

Royalty payments are recurring income to Federal or tribal governments and costs to the operator or lessee. As such, they are transfer payments that do not affect the total resources available to society. An important but sometimes difficult problem in cost estimation is to distinguish between real costs and transfer payments. While transfers should not be included in the economic analysis estimates of the benefits and costs of a regulation, they may be important for describing the distributional effects of a regulation.

We estimate a reduction in royalties of (b) (5) million in (b) (5) (b) (5)

Consideration of Alternative Approaches

In developing this proposed rule, the BLM considered alternative timeframes for which it could suspend or delay the requirements (e.g., (b) (5)). Ultimately, the BLM decided to propose a suspension or delay for (b) (5) , which it believes to be the minimum length of time practicable within which to review the 2016 final rule and (b) (5) a notice and comment rulemaking to revise that regulation. We note that, based on the progress of the review during this rulemaking process, the BLM may revise the length of the suspension or delay for the final rule. (b) (5)

A longer (b) (5) suspension or delay of the same 2016 final rule requirements would result in a larger reduction in compliance costs, reduction in cost savings, and (b) (5) .

Employment Impacts

The proposed rule would temporarily suspend or delay certain requirements of the BLM's 2016 final rule on waste prevention and is a temporary deregulatory action. As such, we estimate that it would result in a reduction of compliance costs for operators of oil and gas leases on Federal and Indian lands. Therefore, it is likely that the impact, if any, on the employment would be positive.

In the RIA for the 2016 final rule, the BLM concluded that the requirements were not expected to impact the employment within the oil and gas extraction, drilling oil and gas wells, and support activities industries, in any material way. This determination was based on several reasons. First, the estimated incremental gas production represented only a small fraction of the U.S. natural gas production volumes. Second, the estimated compliance costs represented only a small fraction of the annual net incomes of companies likely to be impacted. Third, for those operations that would have been impacted to the extent that the compliance costs would force the operator to shut in production, the 2016 final rule had provisions that would exempt these operations from compliance. Based on these factors, the BLM determined that the 2016 final rule would not alter the investment or employment decisions of firms or significantly adversely impact employment. The RIA also noted that the requirements would require the one-time installation or replacement of equipment and the ongoing implementation of a leak detection and repair program, both of which would require labor to comply.

We do not believe that the proposed rule would substantially alter the investment or employment decisions of firms for two reasons. First, the RIA for the 2016 final rule determined that that rule would not substantially alter the investment or employment decisions of firms, and so therefore delaying the 2016 final rule would likewise not be expected to impact those decisions. We also recognize that while there might be a small positive impact on investment and employment due to the reduction in compliance burdens, the magnitude of the reductions are relatively small.

Small Business Impacts

The BLM reviewed the Small Business Administration (SBA) size standards for small businesses and the number of entities fitting those size standards as reported by the U.S. Census Bureau. We conclude that small entities represent the overwhelming majority of entities operating in the onshore crude oil and natural gas extraction industry and, therefore, the proposed rule would impact a significant number of small entities.

To examine the economic impact of the rule on small entities, the BLM performed a screening analysis on a sample of potentially affected small entities, comparing the reduction of compliance costs to entity profit margins.

The BLM identified up to 1,828 entities that operate Federal and Indian leases and recognizes that the overwhelming majority of these entities are small business, as defined by the SBA. We estimated the potential reduction in compliance costs to be between about $60,000 (b) (5) per entity during each of the initial years when the requirements would be suspended or delayed. This represents the average maximum amount by which the operators would be positively impacted by the proposed rule.

We used existing BLM information and research concerning firms that have recently completed Federal and Indian wells and the financial and employment information on a sample of these firms, as available in company annual report filings with the Securities and Exchange Commission (SEC). From the original list of companies, we identified 55 company filings. Of those companies, 33 were small businesses.

From data in the companies' 10-K filings to the SEC, the BLM was able to calculate the companies' profit margins for the years 2012, 2013, and 2014. We then calculated a profit margin figure for each company when subject to the average annual reduction in compliance costs associated with this proposed rule. For these 26 small companies, the estimated per-entity reduction in compliance costs would result in an average increase in profit margin of 0.17 (b) (5) percentage points (based on the 2014 company data).

Impacts Associated with Oil and Gas Operations on Tribal Lands

The proposed rule would apply to oil and gas operations on both Federal and Indian leases. In the RIA, the BLM estimates the impacts associated with operations on Indian leases, as well as royalty implications for tribal governments. We estimate these impacts by scaling down the total impacts by the share of oil wells on Indian lands and the share of gas wells on Indian Lands. Please reference the RIA at section 4.4.5 for a full explanation about the estimate impacts.

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs within the Office of Management and Budget (OMB) will review all significant

rules. (b) (5) [redacted].

Executive Order 13563 reaffirms the principles of Executive Order 12866 while calling for improvements in the Nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The Executive Order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. Executive Order 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas.

This proposed rule would temporarily suspend or delay portions of the BLM's 2016 Final Rule while the BLM reviews those requirements. We have developed this proposed rule in a manner consistent with the requirements in Executive Order 12866 and Executive Order 13563.

After reviewing the requirements of the proposed rule, the OMB has determined that it is an economically significant action according to the criteria of Executive Order 12866. The BLM reviewed the requirements of the proposed rule and determined that it will not adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities. For more detailed information, see the RIA prepared for this proposed rule. The RIA has been posted in the docket for the proposed rule on the *Federal eRulemaking Portal*: http://www regulations.gov.

Regulatory Flexibility Act

This proposed rule would not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) The Regulatory Flexibility Act (RFA) generally requires that Federal agencies prepare a regulatory flexibility analysis for rules subject to the notice and comment rulemaking requirements under the Administrative Procedure Act (5 U.S.C. 500 *et seq.*), if the rule would have a significant economic impact, either detrimental or beneficial, on a substantial number of small entities. *See* 5 U.S.C. 601 – 612. Congress enacted the RFA to ensure that government regulations do not unnecessarily or disproportionately burden small entities. Small entities include small businesses, small governmental jurisdictions, and small not-for-profit enterprises.

The BLM reviewed the SBA size standards for small businesses and the number of entities fitting those size standards as reported by the U.S. Census Bureau in the Economic Census. The BLM concludes that the vast majority of entities operating in the relevant sectors are small businesses as defined by the SBA. As such, the proposed rule would likely affect a substantial number of small entities.

However, the BLM believes that the proposed rule would not have a significant economic impact on a substantial number of small entities. Although the rule would affect a substantial number of small entities, the BLM does not believe that these effects would be economically significant. The proposed rule would temporarily suspend or delay certain requirements placed on operators by the 2016 final rule. Operators would not have to undertake the associated compliance activities, either operational or

administrative, that are outlined in the 2016 final rule until (b) (5) 2019, except to the extent the activities are required by State or tribal law, or by other pre-existing BLM regulations. The screening analysis conducted by the BLM estimates that the average reduction in compliance costs would be a small fraction of a percent of the profit margin for small companies, which is not a large enough impact to be considered significant.

Small Business Regulatory Enforcement Fairness Act

(b) (5)

(b) (5)

(b) (5) [redacted] .

Unfunded Mandates Reform Act (UMRA)

This proposed rule would not impose an unfunded mandate on State, local, or tribal governments, or the private sector of $100 million or more per year. The proposed rule would not have a significant or unique effect on State, local, or tribal governments or the private sector. The proposed rule contains no requirements that would apply to State, local, or tribal governments and temporarily suspends or delays requirements that would apply to the private sector. A statement containing the information required by the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1531 *et seq.*) is not required for the proposed rule. This proposed rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments, because it contains no requirements that apply to such governments, nor does it impose obligations upon them.

Governmental Actions and Interference with Constitutionally Protected Property Right - Takings (Executive Order 12630)

This proposed rule would not affect a taking of private property or otherwise have taking implications under Executive Order 12630. A takings implication assessment is not required. The proposed rule would temporarily suspend or delay many of the requirements placed on operators by the 2016 final rule. Operators would not have to undertake the associated compliance activities, either operational or administrative, that are outlined in the 2016 final rule until (b) (5) 2019, and therefore would impact some

operational and administrative requirements on Federal and Indian lands. All such operations are subject to lease terms which expressly require that subsequent lease activities be conducted in compliance with subsequently adopted Federal laws and regulations. This rule conforms to the terms of those leases and applicable statutes and, as such, the rule is not a government action capable of interfering with constitutionally protected property rights. Therefore, the BLM has determined that the rule would not cause a taking of private property or require further discussion of takings implications under Executive Order 12630.

Federalism (Executive Order 13132)

Under the criteria in section 1 of Executive Order 13132, this proposed rule does not have sufficient federalism implications to warrant the preparation of a federalism summary impact statement. A federalism impact statement is not required.

The proposed rule would not have a substantial direct effect on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the levels of government. It would not apply to States or local governments or State or local governmental entities. The rule would affect the relationship between operators, lessees, and the BLM, but it does not directly impact the States. Therefore, in accordance with Executive Order 13132, the BLM has determined that this proposed rule does not have sufficient federalism implications to warrant preparation of a Federalism Assessment.

Civil Justice Reform (Executive Order 12988)

This proposed rule complies with the requirements of Executive Order 12988. More specifically, this rule meets the criteria of section 3(a), which requires agencies to

review all regulations to eliminate errors and ambiguity and to write all regulations to minimize litigation. This rule also meets the criteria of section 3(b)(2), which requires agencies to write all regulations in clear language with clear legal standards.

Consultation and Coordination with Indian Tribal Governments (Executive Order 13175 and Departmental Policy)

The Department strives to strengthen its government-to-government relationship with Indian tribes through a commitment to consultation with Indian tribes and recognition of their right to self-governance and tribal sovereignty. We have evaluated this rule under the Department's consultation policy and under the criteria in Executive Order 13175 and have identified substantial direct effects on federally recognized Indian tribes that would result from this proposed rule. (b) (5) [redacted]. Under this proposed rule, oil and gas operations on tribal and allotted lands would not be subject to many of the requirements placed on operators by the 2016 final rule until (b) (5) 2019.

The BLM believes that temporarily suspending or delaying these requirements would assist in preventing Indian lands from being viewed by oil and gas operators as less attractive than non-Indian lands due to unnecessary and burdensome compliance costs, thereby preventing economic harm to tribes and allottees.

The BLM has also conducted tribal outreach which it believes is appropriate given that the proposed rule would extend the compliance dates of the ~~the~~ 2016 final rule, but would not change the policies of that rule. The BLM notified tribes of the action and

requested feedback and comment through the respective BLM State Office Directors. Future tribal consultation may occur on an ongoing basis.

Paperwork Reduction Act

The Paperwork Reduction Act (PRA) (44 U.S.C. 3501–3521) provides that an agency may not conduct or sponsor, and a person is not required to respond to, a ''collection of information,'' unless it displays a currently valid control number. 44 U.S.C. 3512. Collections of information include requests and requirements that an individual, partnership, or corporation obtain information, and report it to a Federal agency. 44 U.S.C. 3502(3); 5 CFR 1320.3(c) and (k). (b) (5) [redacted]

Placeholder...

National Environmental Policy Act

(b) (5) [redacted]

The BLM has prepared a draft EA to determine whether this rule would have a significant impact on the quality of the human environment under the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*). If the final EA supports the issuance of a Finding of No Significant Impact (FONSI) for the rule, the preparation of an environmental impact statement pursuant to the NEPA would not be required.

The draft EA and FONSI have been placed in the file for the BLM's Administrative Record for the rule at the address specified in the "ADDRESSES" section. The EA and FONSI have also been posted in the docket for the rule on the *Federal eRulemaking Portal*: http://www.regulations.gov. The BLM invites the public to

review these documents and suggests that anyone wishing to submit comments on the EA and FONSI should do so in accordance with the instructions contained in the "Public Comment Procedures" section above.

Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use (Executive Order 13211)

This proposed rule is not a significant energy action under the definition in Executive Order 13211. A statement of Energy Effects is not required.

Section 4(b) of Executive Order 13211 defines a "significant energy action" as "any action by an agency (normally published in the *Federal Register*) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of rulemaking, and notices of rulemaking: (1)(i) That is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) Is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) That is designated by the Administrator of [OIRA] as a significant energy action."

The rule temporarily suspends or delays certain requirements in the 2016 final rule and would reduce compliance costs in the short-term. The BLM determined that the 2016 final rule would not have impacted the supply, distribution, or use of energy and so the suspension or delay of many of the 2016 final rule's requirements until (b) (5) 2019, will likewise not have an impact on the supply, distribution, or use of energy. As such, we do not consider the proposed rule to be a "significant energy action" as defined in Executive Order 13211.

Clarity of this Regulation (Executive Orders 12866)

We are required by Executive Orders 12866 (section 1(b)(12)), 12988 (section 3(b)(1)(B)), and 13563 (section 1(a)), and by the Presidential Memorandum of June 1, 1988, to write all rules in plain language. This means that each rule must:

(a) Be logically organized;

(b) Use the active voice to address readers directly;

(c) Use common, everyday words and clear language rather than jargon;

(d) Be divided into short sections and sentences; and

(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the "ADDRESSES" section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that you find unclear, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Authors

The principal authors of this rule are: James Tichenor and Michael Riches of the BLM Washington Office; Sheila Mallory of the BLM New Mexico State Office, Eric Jones of the BLM Moab, Utah Field Office; David Mankiewicz of the BLM Farmington, New Mexico Field Office; and Beth Poindexter of the BLM Dickinson, North Dakota Field Office; assisted by Faith Bremner of the BLM's division of Regulatory Affairs and by the Department of the Interior's Office of the Solicitor.

List of Subjects

43 CFR part 3160

Administrative practice and procedure; Government contracts; Indians-lands; Mineral royalties; Oil and gas exploration; Penalties; Public lands--mineral resources; Reporting and recordkeeping requirements.

43 CFR part 3170

Administrative practice and procedure; Flaring; Government contracts; Incorporation by reference; Indians-lands; Mineral royalties; Immediate assessments; Oil and gas exploration; Oil and gas measurement; Public lands--mineral resources; Reporting and record keeping requirements; Royalty-free use; Venting.

Dated: _____

_____

Katharine S. MacGregor

Delegated the Authority of the

Acting Assistant Secretary for Land and Minerals Management

43 CFR Chapter II

For the reasons set out in the preamble, the Bureau of Land Management proposes to amend 43 CFR parts 3160 and 3170 as follows:

PART 3160 – ONSHORE OIL AND GAS OPERATIONS

1. The authority citation for part 3160 continues to read as follows:

AUTHORITY: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

2. Amend § 3162.3-1 by revising paragraph (j) introductory text to read as follows:

§ 3162.3-1 Drilling applications and plans.

* * * * *

(j) Beginning (b) (5) 2019, when submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well. The waste minimization plan must accompany, but would not be part of, the Application for Permit to Drill. The waste minimization plan must set forth a strategy for how the operator will comply with the requirements of 43 CFR subpart 3179 regarding control of waste from venting and flaring, and must explain how the operator plans to capture associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture of the associated gas would be required. Failure to submit a complete and adequate waste minimization plan is grounds for denying or disapproving an Application for Permit to Drill. The waste minimization plan must include the following information:

* * * * *

PART 3170—ONSHORE OIL AND GAS PRODUCTION

3. The authority citation for part 3170 continues to read as follows:

Authority: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

4. Amend § 3179.7 by revising paragraphs (b) and (c) to read as follows:

§ 3179.7 Gas capture requirement.

* * * * *

(b) Beginning (b) (5) 2019, the operator's capture percentage must equal:

(1) For each month during the period from (b) (5) 2019, to (b) (5) : 85 percent;

(2) For each month during the period from (b) (5) 2021, to (b) (5) 90 percent;

(3) For each month during the period from (b) (5) 2024, to (b) (5) : 95 percent; and

(4) For each month beginning (b) (5) 2027: 98 percent.

(c) The term “capture percentage” in this section means the “total volume of gas captured” over the “relevant area” divided by the “adjusted total volume of gas produced” over the “relevant area.”

(1) The term “total volume of gas captured” in this section means: for each month, the volume of gas sold from all of the operator's development oil wells in the relevant area plus the volume of gas from such wells used on lease, unit, or communitized area in the relevant area.

(2) The term “adjusted total volume of gas produced” in this section means: the total volume of gas captured over the month *plus* the total volume of gas flared over the month from high pressure flares from all of the operator's development oil wells that are in production in the relevant area, *minus*:

(i) For each month from (b) (5) 2019, to (b) (5) : 5,400 Mcf times the total number of development oil wells “in production” in the relevant area;

(ii) For each month from (b) (5), 2020, to (b) (5) : 3,600 Mcf times the total number of development oil wells in production in the relevant area;

(iii) For each month from (b) (5) 2021, to (b) (5) : 1,800 Mcf times the total number of development oil wells in production in the relevant area; and

(iv) For each month from (b) (5) 2022, to (b) (5) : 1,500 Mcf times the total number of development oil wells in production in the relevant area;

(v) For each month from (b) (5) 2023, to (b) (5) : 1,200 Mcf times the total number of development oil wells in production in the relevant area;

(vi) For each month from (b) (5) 2025, to (b) (5) : 900 Mcf times the total number of development oil wells in production in the relevant area; and

(vii) For each month after (b) (5) 2026: 750 Mcf times the total number of development.

* * * * *

5. Amend § 3179.9 by revising paragraph (b)(1) introductory text to read as follows:

§ 3179.9 Measuring and reporting volumes of gas vented and flared.

* * * * *

(b) * * *

(1) If the operator estimates that the volume of gas flared from a high pressure flare stack or manifold equals or exceeds an average of 50 Mcf per day for the life of the flare, or the previous 12 months, whichever is shorter, then, beginning (b) (5), 2019, the operator must either:

* * * * *

6. Amend § 3179.10 by revising paragraph (a) to read as follows:

§ 3179.10 Determinations regarding royalty-free flaring.

(a) Approvals to flare royalty free, which are in effect as of January 17, 2017, will continue in effect until (b) (5) 2019.

* * * * *.

7. Amend § 3179.101 by adding paragraph (c) to read as follows:

§ 3179.101 Well drilling.

* * * * *

(c) The operator must comply with this section beginning (b) (5) 2019.

8. Amend § 3179.102 by adding paragraph (e) to read as follows:

§ 3179.102 Well completion and related operations.

*** * * * ***

(e) The operator must comply with this section beginning (b) (5) 2019.

9. Amend § 3179.201 by revising paragraph (d) to read as follows:

§3179.201 Equipment requirements for pneumatic controllers.

*** * * * ***

(d) The operator must replace the pneumatic controller(s) by (b) (5) 2019, as required under paragraph (b) of this section. If, however, the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from January 17, 2017, then the operator may notify the BLM through a Sundry Notice and replace the pneumatic controller no later than 3 years from January 17, 2017.

* * * * *

10. Amend § 3179.202 by revising paragraph (h) to read as follows:

§ 3179.202 Requirements for pneumatic diaphragm pumps.

* * * * *

(h) The operator must replace the pneumatic diaphragm pump(s) or route the exhaust gas to capture or to a flare or combustion device by (b) (5), 2019, except that if the operator will comply with paragraph (c) of this section by replacing the pneumatic diaphragm pump with a zero-emission pump and the well or facility that the pneumatic diaphragm

pump serves has an estimated remaining productive life of 3 years or less from January 17, 2017, the operator must notify the BLM through a Sundry Notice and replace the pneumatic diaphragm pump no later than 3 years from January 17, 2017.

* * * * *

11. Amend § 3179.203 by revising paragraphs (b) and (c) introductory text to read as follows:

§ 3179.203 Storage vessels.

* * * * *

(b) Beginning (b) (5) 2019, and within 30 days after any new source of production is added to the storage vessel after (b) (5), 2019, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority that limit the VOC emissions to less than 6 tpy.

(c) If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy under paragraph (b) of this section, by (b) (5) 2019, (b) (5) if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

* * * * *

12. Amend § 3179.204 by adding paragraph (i) to read as follows:

§ 3179.204 Downhole well maintenance and liquids unloading.

* * * * *

(i) The operator must comply with this section beginning (b) (5) 2019.

13. Amend § 3179.301 by revising paragraph (f) to read as follows:

§ 3179.301 Operator responsibility.

* * * * *

(f) The operator must make the first inspection of each site:

(1) By (b) (5) 2019, for all existing sites;

(2) Within 60 days of beginning production for new sites that begin production after (b) (5) 2019; and

(3) Within 60 days of the date when an existing site that was out of service is brought back into service and re-pressurized after (b) (5), 2019.

* * * * *

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:55 AM

Conversation Contents

Venting and Flare FRN statement for review/approval

Attachments:

/6. Venting and Flare FRN statement for review/approval/1.1 Statement on Venting and Flaring.docx

"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Tue Jun 06 2017 13:32:09 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Venting and Flare FRN statement for review/approval
Attachments:	Statement on Venting and Flaring.docx

Tim and Lonny,
Attached and below is a statement on the Federal Register notice pending with department on the V&F rule. It does not say anything more than the draft notice, but I'm sharing for your review and approval.
Thanks!
Bev

STATEMENT ON FEDERAL REGISTER NOTICE POSTPONING COMPLAINCE DATES
FOR PARTS OF METHANE WASTE PREVENTION RULE
Draft – June 5, 2017

Because of several legal questions raised about the implementation of the recently adopted Methane Waste Prevent Rule, the BLM today announced in the Federal Register that it is suspending the implementation of provisions of the rule that have not yet gone into effect.

The BLM published its final rule on November 18, 1016, with some provisions going into effect in January 2017 and others in January 2018. The rule is intended to limit the loss through venting, flaring or leaks of natural gas from oil and gas wells on Public and Indian lands. The loss of the gas represents a natural resource on which royalty is not paid and also contributes to greenhouse gases in the atmosphere. Upon publication of the rule, two industry groups and three states asked the courts for judicial review, and that litigation is now pending in the U.S. District Court for the District of Wyoming. The Administrative Procedures Act provides that when "an agency finds that justice so requires" it may postpone the effective date of provisions not already in effect pending judicial review.

Some provisions of the rule went into effect on January 17, 2017, including provision that operates submit a "waste minimization plan" with their drilling applications. Other aspects of the rule were not to go into effect until January 17, 2018, and it is these provisions that are postponed.

--

Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed Jun 07 2017 06:13:30 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	RE: Venting and Flare FRN statement for review/approval

Looks fine. On a related matter, the Notice apparently will not be published on Regs.gov. The SOL is needing to have a couple of letters that promoted this action to be posted on our website. Where might they go? Could they be located where this statement is to be posted?

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

From: Winston, Beverly [mailto:bwinston@blm.gov]
Sent: Tuesday, June 06, 2017 3:32 PM
To: Timothy Spisak; Lonny Bagley
Subject: Venting and Flare FRN statement for review/approval

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Bev Winston
Bureau of Land Management | Communications
202-208-4602 | bwinston@blm.gov

"Winston, Beverly" <bwinston@blm.gov>

From:	"Winston, Beverly" <bwinston@blm.gov>
Sent:	Wed Jun 07 2017 06:17:19 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Matthew Allen <mrallen@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, Amy Krause <alkrause@blm.gov>, "Senio, Ian" <isenio@blm.gov>
Subject:	Re: Venting and Flare FRN statement for review/approval

This statement was intended to be used for press if we get any calls. There is not proactive press planned.
I'm copying Matthew and Patrick for their advice on this, which came up in staff meeting yesterday.
I suppose we could post the statement "in the spotlight" with the letters linked at the end.
Bev

On Wed, Jun 7, 2017 at 8:13 AM, Timothy Spisak <tspisak@blm.gov> wrote:

> Looks fine. On a related matter, the Notice apparently will not be published on Regs.gov. The SOL is needing to have a couple of letters that promoted this action to be posted on our website. Where might they go? Could they be located where this statement is to be posted?
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>
> **********
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> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
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> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** Winston, Beverly [mailto:bwinston@blm.gov]

Sent: Tuesday, June 06, 2017 3:32 PM
To: Timothy Spisak; Lonny Bagley
Subject: Venting and Flare FRN statement for review/approval

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Thanks!
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STATEMENT ON FEDERAL REGISTER NOTICE POSTPONING COMPLAINCE DATES
FOR PARTS OF METHANE WASTE PREVENTION RULE
Draft – June 5, 2017

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"Senio, Ian" <isenio@blm.gov>

From:	"Senio, Ian" <isenio@blm.gov>
Sent:	Wed Jun 07 2017 06:30:48 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>
	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Matthew Allen <mrallen@blm.gov>, Patrick

CC: Wilkinson <p2wilkin@blm.gov>, Amy Krause <alkrause@blm.gov>

Subject: Re: Venting and Flare FRN statement for review/approval

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> > **From:** Winston, Beverly [mailto:bwinston@blm.gov]
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed Jun 07 2017 08:06:59 GMT-0600 (MDT)
To:	"Senio, Ian" <isenio@blm.gov>, "Winston, Beverly" <bwinston@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, "Tichenor, James C" <jtichenor@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Matthew Allen <mrallen@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, Amy Krause <alkrause@blm.gov>
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From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed Jun 07 2017 09:38:16 GMT-0600 (MDT)
To:	"Winston, Beverly" <bwinston@blm.gov>
CC:	"Senio, Ian" <isenio@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Catherine Cook <ccook@blm.gov>, "Tichenor, James C" <jtichenor@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Matthew Allen <mrallen@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, Amy Krause <alkrause@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Tyrone Weaver <tweaver@blm.gov>
Subject:	RE: Venting and Flare FRN statement for review/approval

Yes, once all text and PDFs are final, I understand that Tyrone can do the posting.

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Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:56 AM

Conversation Contents

TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

Attachments:

/7. TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule/1.1 2017.06.05 FR draft 705 notice of BLM postponement of waste prevention rule (1).docx
/7. TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule/2.1 Waste Prevention Delay FRN WO630 edits 6.6.17.docx
/7. TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule/6.1 Waste Prevention Delay FRN WO630 edits 6.6.17.docx
/7. TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule/9.1 2017.06.06 Waste Prevention 705 Postponement FRN WO630 edits 6.6.17.docx
/7. TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule/10.1 2017.06.06 BLM VF 705 Notice - Note to Reviewer.docx

"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>

From:	"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
Sent:	Mon Jun 05 2017 15:13:51 GMT-0600 (MDT)
To:	Faith Bremner <fbremner@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, "Purdy, Mark" <mpurdy@blm.gov>, Charles Yudson <cyudson@blm.gov>, "Noe, Jennifer" <jnoe@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule
Attachments:	2017.06.05 FR draft 705 notice of BLM postponement of waste prevention rule (1).docx

Faith, We've a prepared a notice that will serve to postpone the January 2018 deadlines in the venting and flaring rule pending the ongoing judicial review, as is provided for in the Administrative Procedure Act under 5 U.S.C. 705. Tim Spisak, Mike Nedd, Rich Cardinale and Kate MacGregor have all reviewed this draft notice and are okay with the content. Jack has asked me to send this to Julie Lillie in Exec Sec by tomorrow morning, so that Julie can send this to the Federal Register by 4 pm tomorrow. Could I ask you to take a very quick look at whether the format is correct? We have modeled this on a similar type of notice that EPA issued relying on section 705 authority. Thank you. -- Karen

"Bremner, Faith" <fbremner@blm.gov>

From:	"Bremner, Faith" <fbremner@blm.gov>
Sent:	Tue Jun 06 2017 06:52:26 GMT-0600 (MDT)
To:	"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov> Timothy Spisak <tspisak@blm.gov>, Steven Wells

CC:	<s1wells@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule
Attachments:	Waste Prevention Delay FRN WO630 edits 6.6.17.docx

Here are our edits.

Please let me know if you have any questions.

Thanks!

Faith Bremner
Division of Regulatory Affairs
Bureau of Land Management
20 M St., S.E., Rm. 6291
Washington DC 20003
202-912-7441

On Mon, Jun 5, 2017 at 5:13 PM, Hawbecker, Karen <karen.hawbecker@sol.doi.gov> wrote:

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From:	Karen Hawbecker <karen.hawbecker@sol.doi.gov>
Sent:	Tue Jun 06 2017 07:14:57 GMT-0600 (MDT)
To:	"Bremner, Faith" <fbremner@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

Thanks so much, Faith!

Chris, Could you double check the RIA title on page 4? (b) (5) [redacted] --Karen

Sent from my iPad

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"Senio, Ian" <isenio@blm.gov>

From:	"Senio, Ian" <isenio@blm.gov>
Sent:	Tue Jun 06 2017 07:16:27 GMT-0600 (MDT)
To:	Karen Hawbecker <karen.hawbecker@sol.doi.gov>
CC:	"Bremner, Faith" <fbremner@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

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Karen Hawbecker <karen.hawbecker@sol.doi.gov>

From:	Karen Hawbecker <karen.hawbecker@sol.doi.gov>
Sent:	Tue Jun 06 2017 07:17:35 GMT-0600 (MDT)
To:	"Senio, Ian" <isenio@blm.gov>
CC:	"Bremner, Faith" <fbremner@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

Thanks, Ian. (b) (5) [redacted]. --Karen

Sent from my iPad

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"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>

From:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
Sent:	Tue Jun 06 2017 07:30:51 GMT-0600 (MDT)
To:	Karen Hawbecker <karen.hawbecker@sol.doi.gov>
	"Bremner, Faith" <fbremner@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley

CC: <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>

Subject: Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

Attachments: Waste Prevention Delay FRN WO630 edits 6.6.17.docx

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Christopher M. Rhymes | Attorney-Advisor, Division of Mineral Resources
Office of the Solicitor | United States Department of the Interior
1849 C Street NW, #5354 | Washington, DC 20240
Phone: (202) 208-4307 | Email: christopher.rhymes@sol.doi.gov

"Bremner, Faith" <fbremner@blm.gov>

From:	"Bremner, Faith" <fbremner@blm.gov>
Sent:	Tue Jun 06 2017 07:47:03 GMT-0600 (MDT)
To:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
CC:	Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

Chris:

Your addition of a "(sic)" after 3600 looks good to me.

Just a reminder, Katharine MacGregor needs to sign three signature pages for this notice.

Thanks

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Division of Regulatory Affairs
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"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>

From:	"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
Sent:	Tue Jun 06 2017 08:53:50 GMT-0600 (MDT)
To:	"Bremner, Faith" <fbremner@blm.gov>
CC:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

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"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>

From:	"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
Sent:	Tue Jun 06 2017 08:58:23 GMT-0600 (MDT)
To:	"Bremner, Faith" <fbremner@blm.gov>
CC:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule
Attachments:	2017.06.06 Waste Prevention 705 Postponement FRN WO630 edits 6.6.17.docx

Here is the clean copy.

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"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>

From:	"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
Sent:	Tue Jun 06 2017 12:10:56 GMT-0600 (MDT)
To:	"Bremner, Faith" <fbremner@blm.gov>
CC:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule
Attachments:	2017.06.06 BLM VF 705 Notice - Note to Reviewer.docx

FYI--Here is the Note to Reviewer that will be traveling with the package.

On Tue, Jun 6, 2017 at 10:58 AM, Hawbecker, Karen <karen.hawbecker@sol.doi.gov> wrote:

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"Bremner, Faith" <fbremner@blm.gov>

From:	"Bremner, Faith" <fbremner@blm.gov>
Sent:	Tue Jun 06 2017 12:43:53 GMT-0600 (MDT)
To:	"Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
CC:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>, Timothy Spisak <tspisak@blm.gov>, Steven Wells <s1wells@blm.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>, "Senio, Ian J" <isenio@blm.gov>, Stephen Clutter <sclutter@blm.gov>
Subject:	Re: TIME SENSITIVE: Section 705 Notice re: Venting and Flaring Rule

Thanks. I added it to the DTS file. The DTS number in the FRN-Federal Register Notice database is 1628.

Faith Bremner
Division of Regulatory Affairs
Bureau of Land Management
20 M St., S.E., Rm. 6291
Washington DC 20003
202-912-7441

On Tue, Jun 6, 2017 at 2:10 PM, Hawbecker, Karen <karen.hawbecker@sol.doi.gov> wrote:

> FYI--Here is the Note to Reviewer that will be traveling with the package.
>
> On Tue, Jun 6, 2017 at 10:58 AM, Hawbecker, Karen <karen.hawbecker@sol.doi.gov> wrote:
>
> > Here is the clean copy.
> >
> > On Tue, Jun 6, 2017 at 10:53 AM, Hawbecker, Karen <karen.hawbecker@sol.doi.gov> wrote:
> >
> > > Thank you both. I'll accept all changes and send this on to Julie Lillie now with the instruction that Kate needs to sign three signature pages for this notice. --Karen
> > >
> > > On Tue, Jun 6, 2017 at 9:47 AM, Bremner, Faith <fbremner@blm.gov> wrote:
> > >
> > > > Chris:
> > > >
> > > > Your addition of a "(sic)" after 3600 looks good to me.
> > > >
> > > > Just a reminder, Katharine MacGregor needs to sign three signature pages for this notice.
> > > >
> > > > Thanks

Faith Bremner
Division of Regulatory Affairs
Bureau of Land Management
20 M St., S.E., Rm. 6291
Washington DC 20003
202-912-7441

On Tue, Jun 6, 2017 at 9:30 AM, Rhymes, Christopher <christopher.rhymes@sol.doi.gov> wrote:

I made two edits and responded to Faith's comment about the RIA title. (b) (5) [redacted]

On Tue, Jun 6, 2017 at 9:14 AM, Karen Hawbecker <karen.hawbecker@sol.doi.gov> wrote:

Thanks so much, Faith!

Chris, Could you double check the RIA title on page 4? (b) (5) [redacted] --Karen

Sent from my iPad

On Jun 6, 2017, at 8:52 AM, Bremner, Faith <fbremner@blm.gov> wrote:

Here are our edits.

Please let me know if you have any questions.

Thanks!

Faith Bremner
Division of Regulatory Affairs
Bureau of Land Management
20 M St., S.E., Rm. 6291
Washington DC 20003
202-912-7441

On Mon, Jun 5, 2017 at 5:13 PM, Hawbecker, Karen <karen.hawbecker@sol.doi.gov> wrote:

> Faith, We've a prepared a notice that will serve to postpone the January 2018 deadlines in the venting and flaring rule pending the ongoing judicial review, as is provided for in the Administrative Procedure Act under 5 U.S.C. 705. Tim Spisak, Mike Nedd, Rich Cardinale and Kate MacGregor have all reviewed this draft notice and are okay with the content. Jack has asked me to send this to Julie Lillie in Exec Sec by tomorrow morning, so that Julie can send this to the Federal Register by 4 pm tomorrow. Could I ask you to take a very quick look at whether the format is correct? We have modeled this on a similar type of notice that EPA issued relying on section 705 authority. Thank you. --Karen

<Waste Prevention Delay FRN WO630 edits 6.6.17.docx>

--
Christopher M. Rhymes | Attorney-Advisor, Division of Mineral Resources
Office of the Solicitor | United States Department of the Interior
1849 C Street NW, #5354 | Washington, DC 20240
Phone: (202) 208-4307 | Email: christopher.rhymes@sol.doi.gov

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3100, 3160 and 3170

[Docket No. XXXXXXXXXXX]

RIN XXXX-XXXX

Postponement of Compliance Dates for Certain Sections of the Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule

AGENCY: Bureau of Land Management (BLM), Interior.

ACTION: Notice.

SUMMARY: On November 18, 2016, the Bureau of Land Management (BLM) issued a final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (the "Waste Prevention Rule" or "Rule"). (b) (5) Immediately after the Waste Prevention Rule was issued, petitions for judicial review of the Rule were filed by industry groups and states with significant BLM-managed Federal and Indian minerals. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. (b) (5) In light of the existence and potential consequences of the pending litigation, BLM has concluded that justice requires it to postpone the compliance dates for certain sections of the Rule pursuant to (b) (5) the Administrative Procedure Act, pending judicial review.

DATE: [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

FOR FURTHER INFORMATION CONTACT: Timothy Spisak at the BLM Washington Office, 20 M Street SE, Room 2134 LM, Washington, D.C. 20003, or by telephone at 202-912-

7311. For questions relating to regulatory process issues, contact Faith Bremner at 202-912-7441.

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SUPPLEMENTARY INFORMATION:

I. Background

On November 18, 2016, the BLM published the Waste Prevention Rule. 81 FR 83008. The Rule addresses, among other things, the loss of natural gas through venting, flaring, and leaks during the production of Federal and Indian oil and gas. The Rule replaced Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (1980) ("NTL-4A"), which governed the venting and flaring of Federal and Indian gas for more than three decades. In addition to updating and revising the requirements of NTL-4A, the Rule contained new requirements that operators capture a certain percentage of the gas they produce (43 C.F.R. § 3179.7), measure flared volumes (43 C.F.R. § 3179.9), upgrade or replace pneumatic equipment (43 C.F.R. §§ 3179.201 – .202), capture or combust storage tank vapors (43 C.F.R. § 3179.203), and implement leak detection and repair (LDAR) programs (43 C.F.R. § 3179.301 – .305). The Rule did not obligate operators to comply with these new requirements until January 17, 2018. Certain other provisions of the Rule have already gone into effect, including the requirement that operators submit a "waste minimization plan" with applications for permits to drill (43 C.F.R. § 3162.3-1), new regulations for the royalty-free use of production (43 C.F.R. subpart 3178), new regulatory definitions of

"unavoidabaly lost" and "avoidably lost" oil and gas (43 C.F.R. § 3179.4), limits on venting and flaring during drilling and production operations (43 C.F.R. §§ 3179.101 – .105), and requirements for downhole well maintenance and liquids unloading (43 C.F.R. § 3179.204).

Immediately after the Rule was issued, petitions for judicial review of the Rule were filed by industry groups and states with significant BLM-managed Federal and Indian minerals. The petitioners in this litigation are the Western Energy Alliance (WEA), the Independent Petroleum Association of America, the State of Wyoming, the State of Montana, the State of North Dakota, and the State of Texas. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. *Wyoming v. U.S. Dep't of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Petitioners assert that the BLM was arbitrary and capricious in promulgating the Rule and that the Rule exceeds the BLM's statutory authority.

On March 28, 2017, the President issued Executive Order No. 13783 ("EO 13783") entitled, "Promoting Energy Independence and Economic Growth." EO 13783 directed the Secretary of the Interior (Secretary) to review the Rule for consistency with the policies set forth in Section 1 of EO 13783 and, if appropriate, publish for notice and comment a proposed rule suspending, revising, or rescinding the Rule. EO 13783 Sec. 7(b). On March 29, 2017, the Secretary issued Secretarial Order 3349 implementing EO 13783. The Department's review of the Rule is ongoing.

The Secretary has received written requests from WEA and the American Petroleum Institute (API) that the BLM suspend the Rule or postpone its compliance dates in light of the regulatory uncertainty created by the pending litigation and the ongoing administrative review of the Rule. Letter from Kathleen M. Sgamma to Secretary Zinke (April 4, 2017); letter from Jack N. Gerard to Secretary Zinke (May 16, 2017). Both API and WEA stated that operators face the

prospect of significant expenditures to comply with provisions of the Rule that will become operative in January 2018. WEA specifically noted that the LDAR, storage tank, and pneumatic device provisions will require operators to begin purchasing and installing tens of thousands of replacement parts in the near future.

Section 705 of the Administrative Procedure Act (APA), 5 U.S.C. 705, provides that, "[w]hen an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review." The Rule obligates operators to comply with its "capture percentage," flaring measurement, pneumatic equipment, storage tank, and LDAR provisions beginning on January 17, 2018. This compliance date has not yet passed and is within the meaning of the term "effective date" as that term is used in Section 705 of the APA.

Considering the substantial cost that complying with these requirements poses to operators (see U.S. Bureau of Land Management, Regulatory Impact Analysis for: Revisions to 43 CFR 3100 (Onshore Oil and Gas Leasing) and 43 CFR 3600 (Onshore Oil and Gas Operations), Additions of 43 CFR 3178 (Royalty-Free Use of Lease Production) and 43 CFR 3179 (Waste Prevention and Resource Conservation) (November 10, 2016)), and the uncertain future these requirements face in light of the pending litigation and administrative review of the Rule, the BLM finds that justice requires it to postpone the future compliance dates for the following sections of the Rule: 43 C.F.R. §§ 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301–305. While the BLM believes the Waste Prevention Rule was properly promulgated, the petitioners have raised serious questions concerning the validity of certain provisions of the Rule. Given this legal uncertainty, operators should not be required to expend substantial time and resources to comply with regulatory requirements that may prove short-lived as a result of pending litigation or the administrative review that is already under way. Postponing these

compliance dates will help preserve the regulatory status quo while the litigation is pending and the Department reviews and reconsiders the Rule.

(b) (5) [redacted] Separately, the BLM intends to conduct notice-and-comment rulemaking to suspend or extend the compliance dates of the Rule.

II. Postponement of Compliance Dates

Pursuant to Section 705 of the APA, the BLM hereby postpones the future compliance dates for the following sections of the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (b) (5) [redacted] pending judicial review: 43 C.F.R. §§ 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301–305.

_____ _____

Date

Katharine MacGregor
Delegated the Authority of the
Assistant Secretary for Land and Minerals Management

4310-84

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3100, 3160 and 3170

[~~Docket No. XXXXXXXXXXXX~~17X.LLWO310000.L13100000.PP0000]

RIN ~~XXXX-XXXX~~1004-AE14

Postponement of Compliance Dates for Certain Sections of the Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule

AGENCY: Bureau of Land Management ~~(BLM)~~, Interior.

ACTION: Notice.

SUMMARY: On November 18, 2016, the Bureau of Land Management (BLM) issued a final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (the "Waste Prevention Rule" or "Rule"). (b) (5) Immediately after the Waste Prevention Rule was issued, petitions for judicial review of the Rule were filed by industry groups and ~~s~~States with significant BLM-managed Federal and Indian minerals. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming (b) (5) [redacted]. In light of the existence and potential consequences of the pending litigation, the BLM has concluded that justice requires it to postpone the compliance dates for certain sections of the Rule pursuant to (b) (5) [redacted] the Administrative Procedure Act, pending judicial review.

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(b) (5) [redacted]

DATES: (b) (5) [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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tank vapors (43 C.F.R. § 3179.203), and implement leak detection and repair (LDAR) programs (43 C.F.R. § 3179.301 – .305). The Rule did not obligate operators to comply with these new requirements until January 17, 2018. Certain other provisions of the Rule have already gone into effect, including the requirement that operators submit a "waste minimization plan" with applications for permits to drill (43 C.F.R. § 3162.3-1), new regulations for the royalty-free use of production (43 C.F.R. subpart 3178), new regulatory definitions of "unavoidably lost" and "avoidably lost" oil and gas (43 C.F.R. § 3179.4), limits on venting and flaring during drilling and production operations (43 C.F.R. §§ 3179.101 – .105), and requirements for downhole well maintenance and liquids unloading (43 C.F.R. § 3179.204).

Immediately after the Rule was issued, petitions for judicial review of the Rule were filed by industry groups and sStates with significant BLM-managed Federal and Indian minerals. The petitioners in this litigation are the Western Energy Alliance (WEA), the Independent Petroleum Association of America, the State of Wyoming, the State of Montana, the State of North Dakota, and the State of Texas. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. *Wyoming v. U.S. Dep't of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Petitioners assert that the BLM was arbitrary and capricious in promulgating the Rule and that the Rule exceeds the BLM's statutory authority.

On March 28, 2017, the President issued Executive Order No. 13783 ("EO 13783") entitled, "Promoting Energy Independence and Economic Growth." EO 13783 directed the Secretary of the Interior (Secretary) to review the Rule for consistency with the policies set forth in Section 1 of EO 13783 and, if appropriate, publish for notice and

comment a proposed rule suspending, revising, or rescinding the Rule. EO 13783 Sec. 7(b). On March 29, 2017, the Secretary issued Secretarial Order 3349 implementing EO 13783. The Department's review of the Rule is ongoing.

The Secretary has received written requests from WEA and the American Petroleum Institute (API) that the BLM suspend the Rule or postpone its compliance dates in light of the regulatory uncertainty created by the pending litigation and the ongoing administrative review of the Rule. Letter from Kathleen M. Sgamma to Secretary Zinke (April 4, 2017); letter from Jack N. Gerard to Secretary Zinke (May 16, 2017). Both API and WEA stated that operators face the prospect of significant expenditures to comply with provisions of the Rule that will become operative in January 2018. WEA specifically noted that the LDAR, storage tank, and pneumatic device provisions will require operators to begin purchasing and installing tens of thousands of replacement parts in the near future.

Section 705 of the Administrative Procedure Act (APA), 5 U.S.C. 705, provides that, "[w]hen an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review." The Rule obligates operators to comply with its "capture percentage," flaring measurement, pneumatic equipment, storage tank, and LDAR provisions beginning on January 17, 2018. This compliance date has not yet passed and is within the meaning of the term "effective date" as that term is used in Section 705 of the APA. ——Considering the substantial cost that complying with these requirements poses to operators (see U.S. Bureau of Land Management, Regulatory Impact Analysis for: Revisions to 43 CFR 3100 (Onshore Oil and Gas Leasing) and 43 CFR 3600 (Onshore Oil and Gas Operations), Additions of 43 CFR 3178 (Royalty-Free

(b) (5) [redacted]

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(b) (5) [redacted]

While the BLM believes the Waste Prevention Rule was properly promulgated, the petitioners have raised serious questions concerning the validity of certain provisions of the Rule. Given this legal uncertainty, operators should not be required to expend substantial time and resources to comply with regulatory requirements that may prove short-lived as a result of pending litigation or the administrative review that is already under way. Postponing these compliance dates will help preserve the regulatory status quo while the litigation is pending and the Department reviews and reconsiders the Rule.

(b) (5) [redacted] Separately, the BLM intends to conduct notice-and-comment rulemaking to suspend or extend the compliance dates of the Rule.

II. Postponement of Compliance Dates

Pursuant to Section 705 of the APA, the BLM hereby postpones the future compliance dates for the following sections of the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (b) (5) [redacted], pending judicial review: 43 C.F.R. §§ 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301–305.

_____	_____
Date	Katharine MacGregor Delegated the Authority of the Assistant Secretary for Land and Minerals Management

4310-84

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3100, 3160 and 3170

[~~Docket No. XXXXXXXXXXXX~~17X.LLWO310000.L13100000.PP0000]

RIN ~~XXXX-XXXX~~1004-AE14

Postponement of Compliance Dates for Certain Sections of the Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule

AGENCY: Bureau of Land Management ~~(BLM)~~, Interior.

ACTION: Notice.

SUMMARY: On November 18, 2016, the Bureau of Land Management (BLM) issued a final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (the "Waste Prevention Rule" or "Rule"). (b) (5) Immediately after the Waste Prevention Rule was issued, petitions for judicial review of the Rule were filed by industry groups and ~~s~~States with significant BLM-managed Federal and Indian minerals. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming (b) (5) In light of the existence and potential consequences of the pending litigation, the BLM has concluded that justice requires it to postpone the compliance dates for certain sections of the Rule pursuant to (b) (5) the Administrative Procedure Act, pending judicial review.

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(b) (5)

DATES: (b) (5) [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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_____	_____
Date	Katharine MacGregor Delegated the Authority of the Assistant Secretary for Land and Minerals Management

4310-84

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3100, 3160 and 3170

[17X.LLWO310000.L13100000.PP0000]

RIN 1004-AE14

Postponement of Compliance Dates for Certain Sections of the Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: On November 18, 2016, the Bureau of Land Management (BLM) issued a final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (the "Waste Prevention Rule" or "Rule"). Immediately after the Waste Prevention Rule was issued, petitions for judicial review of the Rule were filed by industry groups and States with significant BLM-managed Federal and Indian minerals. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. In light of the existence and potential consequences of the pending litigation, the BLM has concluded that justice requires it to postpone the compliance dates for certain sections of the Rule pursuant to the Administrative Procedure Act, pending judicial review.

DATES: (b) (5) [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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On November 18, 2016, the BLM published the Waste Prevention Rule. 81 FR 83008. The Rule addresses, among other things, the loss of natural gas through venting, flaring, and leaks during the production of Federal and Indian oil and gas. The Rule replaced Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (1980) ("NTL-4A"), which governed the venting and flaring of Federal and Indian gas for more than three decades. In addition to updating and revising the requirements of NTL-4A, the Rule contained new requirements that operators capture a certain percentage of the gas they produce (43 CFR 3179.7), measure flared volumes (43 CFR 3179.9), upgrade or replace pneumatic equipment (43 CFR 3179.201 – .202), capture or combust storage tank vapors (43 CFR 3179.203), and implement leak detection and repair (LDAR) programs (43 CFR 3179.301 – .305). The Rule did not obligate operators to comply with these new

requirements until January 17, 2018. Certain other provisions of the Rule have already gone into effect, including the requirement that operators submit a "waste minimization plan" with applications for permits to drill (43 CFR 3162.3-1), new regulations for the royalty-free use of production (43 CFR subpart 3178), new regulatory definitions of "unavoidably lost" and "avoidably lost" oil and gas (43 CFR 3179.4), limits on venting and flaring during drilling and production operations (43 CFR 3179.101 – .105), and requirements for downhole well maintenance and liquids unloading (43 CFR 3179.204).

Immediately after the Rule was issued, petitions for judicial review of the Rule were filed by industry groups and States with significant BLM-managed Federal and Indian minerals. The petitioners in this litigation are the Western Energy Alliance (WEA), the Independent Petroleum Association of America, the State of Wyoming, the State of Montana, the State of North Dakota, and the State of Texas. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. *Wyoming v. U.S. Dep't of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Petitioners assert that the BLM was arbitrary and capricious in promulgating the Rule and that the Rule exceeds the BLM's statutory authority.

On March 28, 2017, the President issued Executive Order No. 13783 (EO 13783) entitled, "Promoting Energy Independence and Economic Growth." EO 13783 directed the Secretary of the Interior (Secretary) to review the Rule for consistency with the policies set forth in Section 1 of EO 13783 and, if appropriate, publish for notice and comment a proposed rule suspending, revising, or rescinding the Rule. EO 13783 Sec. 7(b). On March 29, 2017, the Secretary issued Secretarial Order 3349 implementing EO 13783. The Department's review of the Rule is ongoing.

The Secretary has received written requests from WEA and the American Petroleum Institute (API) that the BLM suspend the Rule or postpone its compliance dates in light of the regulatory uncertainty created by the pending litigation and the ongoing administrative review of the Rule. Letter from Kathleen M. Sgamma to Secretary Zinke (April 4, 2017); letter from Jack N. Gerard to Secretary Zinke (May 16, 2017). Both API and WEA stated that operators face the prospect of significant expenditures to comply with provisions of the Rule that will become operative in January 2018. WEA specifically noted that the LDAR, storage tank, and pneumatic device provisions will require operators to begin purchasing and installing tens of thousands of replacement parts in the near future.

Section 705 of the Administrative Procedure Act (APA), 5 U.S.C. 705, provides that, "[w]hen an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review." The Rule obligates operators to comply with its "capture percentage," flaring measurement, pneumatic equipment, storage tank, and LDAR provisions beginning on January 17, 2018. This compliance date has not yet passed and is within the meaning of the term "effective date" as that term is used in Section 705 of the APA. Considering the substantial cost that complying with these requirements poses to operators (see U.S. Bureau of Land Management, Regulatory Impact Analysis for: Revisions to 43 CFR 3100 (Onshore Oil and Gas Leasing) and 43 CFR 3600 (sic) (Onshore Oil and Gas Operations), Additions of 43 CFR 3178 (Royalty-Free Use of Lease Production) and 43 CFR 3179 (Waste Prevention and Resource Conservation) (November 10, 2016)), and the uncertain future these requirements face in light of the pending litigation and administrative review of the Rule, the BLM finds that

justice requires it to postpone the future compliance dates for the following sections of the Rule: 43 CFR 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301–305.

While the BLM believes the Waste Prevention Rule was properly promulgated, the petitioners have raised serious questions concerning the validity of certain provisions of the Rule. Given this legal uncertainty, operators should not be required to expend substantial time and resources to comply with regulatory requirements that may prove short-lived as a result of pending litigation or the administrative review that is already under way. Postponing these compliance dates will help preserve the regulatory status quo while the litigation is pending and the Department reviews and reconsiders the Rule.

(b) (5) [redacted]. Separately, the BLM intends to conduct notice-and-comment rulemaking to suspend or extend the compliance dates of the Rule.

II. Postponement of Compliance Dates

Pursuant to Section 705 of the APA, the BLM hereby postpones the future compliance dates for the following sections of the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (b) (5) [redacted], pending judicial review: 43 CFR 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301–305.

_____ _____

Date

Katharine MacGregor
Delegated the Authority of the
Assistant Secretary for Land and Minerals Management

NOTE TO REVIEWER:

On November 18, 2016, the Bureau of Land Management (BLM) published a final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (the Rule). The Rule addresses, among other things, the loss of natural gas through venting, flaring, and leaks during the production of Federal and Indian oil and gas. The Rule became effective on January 17, 2017. However, many of the Rule's requirements do not become operative until January 17, 2018.

Immediately after the Rule was issued, industry groups and States with significant BLM-managed Federal and Indian oil and gas resources brought lawsuits seeking to have the Rule invalidated by the courts. This litigation has been consolidated in the U.S. District Court for the District of Wyoming and is ongoing.

Through this notice, the BLM is postponing the compliances dates for the provisions of the Rule that have not yet come into effect. The BLM is postponing these compliance dates under the Administrative Procedure Act (5 U.S.C. 705), which provides that, "[w]hen an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review."

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Created: 10-20-2017 at 06:56 AM

Conversation Contents

Final Bernhardt QFRs

Attachments:

/8. Final Bernhardt QFRs/1.1 Bernhartd Answers_BLM Index_06052017 (1).xlsx
/8. Final Bernhardt QFRs/1.2 Bernhardt QFRs (1).pdf

"Ralston, Jill" <jralston@blm.gov>

From:	"Ralston, Jill" <jralston@blm.gov>
Sent:	Mon Jun 05 2017 13:50:07 GMT-0600 (MDT)
To:	BLM_WO_100 <blm_wo_100@blm.gov>, Kristin Bail <kbail@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Karen Kelleher <kkelleh@blm.gov>, Steve Tryon <stryon@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, Janine Velasco <jvelasco@blm.gov>, Ann DeBlasi <amdeblas@blm.gov>, Nikki Moore <nmoore@blm.gov>, Matthew Allen <mrallen@blm.gov>, Patrick Wilkinson <p2wilkin@blm.gov>
Subject:	Final Bernhardt QFRs
Attachments:	Bernhartd Answers_BLM Index_06052017 (1).xlsx Bernhardt QFRs (1).pdf

Just FYI - Attached below are the Questions for the Record from David Bernhardt's May 18 Confirmation Hearing for Deputy Secretary of the Interior. These QFRs have been delivered to the hill, and were linked in an E&E story this morning. The primary BLM-related topics included: Cadiz, BLM's Methane Rule, selling or transferring public lands, and LWCF funding levels. An index of the questions BLM-related questions is also attached.

The Committee vote is scheduled tomorrow. Following the Committee vote, we anticipate a floor vote will be scheduled.

Thanks!

SENR Confirmation Hearing QFRs for DOI Nominee David Bernhardt
BLM Related Questions

Senator	Topic	Question Number
Murkowski	NO BLM Qs	
	Cadiz	1, 4
	Antiquities Act	6
	Use of Public Lands	9
	Hardrock Mining	11
	Coal Moratorium / Coal	12, 13
	Oil and Gas Permitting	14
Cantwell	onshore Oil and Gas Royalties	15
	Master Leasing Plans	16
	Taylor Energy	17
	Sell or Transfer Public Lands	20

Barrasso	Methane	21
	Wilderness	22
	Coal Self Bonding	32
	Venting and Flaring Rule / Methane	1
	Mitigation	3,4
Wyden	Secure Rural Schools	1
	Resource Advisory Council meetings	2
	Monument Review	3
	Recreational Fishing	5
	Climate Change	1
	Critical Habitat / ESA	10
	Invasive Species / Asian Carp	19
Sanders	National Monuments	32, 33
	National Historic Trails	38, 39, 40
	Transferring of Public Lands	41, 42
	Recreation / Economic Benefit	46
	LWCF	48, 49, 50, 51
	Wild Horses	59
Franken	NEPA/Climate Change	12, 13
	Renewable on Public Lands	14
	LWCF	15
	Sell or Transfer Public Lands	16
	State Management of Public Lands	17
	BLM Oil and Gas Program Management	18
Daines	NO BLM Qs	
Manchin	LWCF	1
Heinrich	Hiring Freeze / BLM offices	1
King	No BLM Qs	
Cortez Masto	Antiquities Act	4
	Review of Monuments	5, 6, 7
	Resource Advisory Council meetings	8
	Gold Butte Public Information Meeting/Delay	10
	State input on Monuments	12
	Sell or Transfer Public Lands	14
	BLM Methane Rule	15

Jill Ralston
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SENR Confirmation Hearing QFRs for DOI Nominee David Bernhardt		
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	Master Leasing Plans	16
	Taylor Energy	17
	Sell or Transfer Public Lands	20
	Methane	21
	Wilderness	22
	Coal Self Bonding	32
Barrasso	Venting and Flaring Rule / Methane	1
	Mitigation	3,4
Wyden	Secure Rural Schools	1
	Resource Advisory Council meetings	2
	Monument Review	3
	Recreational Fishing	5
Sanders	Climate Change	1
	Critical Habitat / ESA	10
	Invasive Species / Asian Carp	19
	National Monuments	32, 33
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	Resource Advisory Council meetings	8
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	Sell or Transfer Public Lands	14
	BLM Methane Rule	15

U.S. Senate Committee on Energy and Natural Resources
May 18, 2017 Hearing
The Nomination of Mr. David Bernhardt to be Deputy Secretary of the Interior

Questions from Chairman Lisa Murkowski

Question 1: I appreciated your answer to my question on consultation with Alaska Natives and American Indians during today's hearing, and have a few brief follow-ups.

a. Do you believe that tribal consultation is a requirement?

b. What will you do to ensure meaningful consultation with tribal governments?

Response to a. and b.: Chairman Murkowski as I indicated at the hearing, I appreciate the importance of tribal consultation, take consultation seriously, and commit to consult with Alaskan Natives and American Indian Tribes. I will work with Secretary Zinke to implement a culture at the Department of the Interior that ensures opportunities for consultation, where appropriate.

Question 2: What is your view of compacting programs (other than programs in the Bureau of Indian Affairs) within the Department of the Interior? What would you do, if anything, to move forward with those efforts in this administration?

Response: I am strong supporter of efforts of self-governance and self-determination and believe that compacting can help facilitate meaningful economic improvement. However, I would need to learn more about any specific efforts before describing specific steps the Department should take. I would be happy to do so, if confirmed.

U.S. Senate Committee on Energy and Natural Resources
May 18, 2017 Hearing
The Nomination of Mr. David Bernhardt to be Deputy Secretary of the Interior

Questions from Ranking Member Maria Cantwell

Question 1: Cadiz Inc.

Regarding Cadiz Inc., please answer the following:

A. Your financial disclosure forms indicate that you have been providing legal services to a company called Cadiz Inc. Have you provided any services to Cadiz Inc. in the last 6 months? If so, what has been the nature of those services?

Response: Yes. The nature of the services, as described in the OGE 278e Form that was provided to the Committee after undergoing review by the Office of Government Ethics, is identified as legal services.

B. Please explain the extent to which your firm's compensation from Cadiz is based on agency or judicial actions and milestones.

Response: I am not the lead attorney for Cadiz Inc. at my firm. While my private law firm does not publically discuss fee agreements, it is my understanding that the stock arrangement you reference is freely available on the world wide web as part of 8-K filings by Cadiz Inc.

C. Since November of 2016 have you discussed or otherwise communicated about any issue or project that Cadiz Inc. has an interest in with any member of the following:

1. The Presidential Transition Team, and if so who?

Response: No

2. Executive branch employees (including political officials), and if so who?

Response: No.

3. Members of Congress or their staff, and if so who?

Response: No

D. Did you or members of your firm advise or in any way have involvement in the appearance of the Cadiz Water Conveyance Project on the Preside-Elect's Priority List of Emergency and National Security Projects?

Response: I had no involvement with the appearance of the Cadiz Water Conveyance Project on the "Preside-Elect's Priority List of Emergency and National Security Projects," and I do not know if that is a document developed by the Presidential transition.

E. Do you believe that you or your firm's advocacy or work on behalf of Cadiz Inc. in any way influenced the Bureau of Land Management's issuance of the Instruction Memorandum on March 29, 2017, rescinding the Washington Office Instruction Memorandum No. 2014-122—either directly or indirectly?

Response: The nature of my services to Cadiz Inc is addressed in the materials that I have provided to the Committee that were reviewed and certified by the Office of Government Ethics. I did not engage in regulated lobbying for this client under the Lobbying Disclosure Act of 1995, however, to the extent members of my firm did, their activities are disclosed and publically available at www.House.gov.

F. Have you or your firm received any compensation of any kind from Cadiz Inc., including additional shares of stock, since November of 2016? If so, is this compensation in any way reflected in the pay, equity, or bonuses you have received from Brownstein to date? Will the *pro rata* partnership distribution you receive upon your withdrawal from your firm reflect any fees or other form of compensation paid by Cadiz?

Response: As previously stated, my private law firm does not publically discuss the fee agreements of our clients. To the extent that any revenues were received at our firm, expenses are paid and then funds are saved for contingencies and bonus pools, and a monthly distribution to partners is determined. If a monthly distribution is determined, I receive a pro-rata share of the distribution based upon my placement in the firm. Any pro-rata distribution would not include any value from any stock identified in Cadiz Inc's stock price.

G. Will you recuse yourself from working on any matter in which Cadiz Inc. has as interest or on which you have worked on behalf of Cadiz Inc., for the duration of your service, if confirmed?

Response: I believe that public trust is a public responsibility, that maintaining an ethical culture is important, and that it starts at the top. I will fully comply with the ethics agreement that I signed. In addition, as we discussed at the hearing, for the duration of my service at the Department, I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding any particular matters involving specific parties of former clients or

entities represented by my former firm. I will install a robust screening process, should one not exist within the office.

In addition, on May 4, 2017, the Committee received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

Mr. Apol's correspondence included an enclosure of the "ethics agreement outlining the actions that the nominee [David Bernhardt] will undertake to avoid conflicts of interest." Further, General Counsel Apol explained, "we [the Office of Government Ethics] believe that this nominee [David Bernhardt] is in compliance with the applicable laws and regulations governing conflicts of interest."

Finally, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement that I provided to and that was certified by Mr. Apol, and the agreements provided by other nominees to positions within the Department of the Interior who also worked in large private law firms representing similar clients, and in some cases the same clients. Indeed, nominees with very similar ethics agreements were favorably reported out of the Committee subsequent to the publication of the Inspector General's Report you referenced in your recent letter to me. Copies of two such ethics agreements are attached to this document.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those previously found by the Committee to be sufficiently clear to proceed with the nominations, with your personal support, I reaffirm to you that I will comply with the ethics agreement that I have signed.

Question 2: Westlands Water District

Regarding the Westlands Water District, please answer the following:

A. In what court cases and litigation have you represented the Westlands Water District? Please list the cases and their subject matter.

Response:

Case Name	**Case #**	**Subject**
Westlands Water District v. United Sates	109 Fed. Cl. 177 12-cv-0012	Water district's claims against the government for alleged breaches of purported contractual obligation to provide drainage to the district.
San Luis & Delta-Mendota Water Authority; Westlands Water District v. Locke	776 F.3d 971 09-cv-1053-LJO-DLB US Dist. Court of Eastern CA Appeal: 12-15144, 15289, 15290, 15291, 15293, 15296	Action pertaining to a formal Biological Opinion ("BiOp") developed by the Commerce Department's National Marine Fisheries Services pursuant to the Endangered Species Act.

B. During what dates were you registered as a lobbyist for the Westlands Irrigation District?

Response: This information is addressed in the response I have provided to question 20 of the Statement for Completion by Presidential Nominees. In addition, this information is publically available at www.house.gov.

C. On what matters did you lobby for on behalf of the Westlands Water District?

Response: Potential legislation related to the Bureau of Reclamation.

D. Did you lobby or otherwise advise on any legislative language pertaining to the operation of the Central Valley Project or any related Biological Opinions on behalf of the Westlands Water District in 2016?

Response: I was a registered lobbyist for Westlands Water District until November 2016. I was one of many attorneys across the United States who responded to technical drafting requests made by offices in the U.S. House of Representatives and U.S. Senate from members of both political parties. In that capacity, and upon their request, I provided technical drafting assistance.

E. Did you advise any Members of Congress or their staff on such language after November 18, 2016?

Response: I have not engaged in regulated lobbying on behalf of Westlands Water District after November 18th, 2016.

F. Please provide complete records to the Committee on Energy and Natural Resources of any communications you had with any employee of Congress, the Presidential transition team or executive branch after November 18, 2016.

Response: I am in full compliance with all disclosures and requirements required by the U.S. Senate for consideration as a presidential nominee, including the form entitled Statement for Completion by Presidential Nominees for the Senate Energy and Natural Resources Committee, the clearances required by the Office of Government Ethics and the ethics experts with the Department of the Interior's Ethics Office, and the background investigation by the Federal Bureau of Investigation. It is my understanding that these disclosures are entirely consistent with the past practice for nominees considered and reported favorably by this Committee on a bipartisan basis with the same background in a private law practice, including those who participated on a voluntary basis in presidential transitions.

G. As an employee and shareholder in Brownstein, have you or will you receive any compensation or financial benefits of any kind from the fees collected from Westlands Water District since November 18, 2016?

Response: As previously stated, my private law firm does not publically discuss the fee agreements of our clients. To the extent that any revenues were received at our firm, expenses are paid and then funds are saved for contingencies and bonus pools, and a monthly distribution to partners is determined. If a monthly distribution is determined, I receive a pro-rata share of the distribution based upon my placement in the firm.

H. Will you recuse yourself from working on any matter in which the Westlands Water District has an interest or on which you have worked on for Westlands for the duration of your service, if confirmed?

Response: I believe that public trust is a public responsibility and that maintaining an ethical culture is important. I will fully comply with the ethics agreement that I have signed. As I explained at the hearing, for the duration of my service I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding any particular matters involving specific parties of former clients or entities represented by my former firm. I will install a robust screening process, should one not exist within the office.

That said, on May 4, 2017, the Committee on Energy and Natural Resources received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

Mr. Apol's correspondence included an enclosure of the "ethics agreement outlining the actions that the nominee [David Bernhardt] will undertake to avoid conflicts of interest." Further, General Counsel Apol explained, "we [the Office of Government Ethics] believe that this nominee [David Bernhardt] is in compliance with the applicable laws and regulations governing conflicts of interest."

In addition, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement that I provided to, and that was certified by, Mr. Apol and the agreements provided by other nominees to positions within the Department of the Interior who also worked in large private law firms representing similar clients, and in some cases the same clients. Indeed, nominees with very similar ethics agreements were favorably reported out of the Committee subsequent to the publication of the Inspector General's Report you referenced in your recent letter to me. Copies of two such ethics agreements are attached to this correspondence.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those previously found by the Committee to be sufficiently clear to proceed with the nomination, with your personal support, I reaffirm to you that I will comply with the ethics agreement that I have signed.

I. Will you recuse yourself from working on any matter pertaining to the Central Valley Project for the duration of your service, if confirmed?

Response: As I have stated above, I believe that public trust is a public responsibility and that maintaining an ethical culture is important. I will fully comply with the ethics agreement that I have signed. For the duration of my service, I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding particular matters involving specific parties of former clients or entities represented by my former firm. In addition, I will install a robust screening process, should one not exist within the office.

J. Will you recuse yourself from working on any matter pertaining to the Endangered Species Act and any relevant Biological Opinions that relate to the operation of the Central Valley Project for the duration of your service, if confirmed?

Response: I believe that public trust is a public responsibility. I believe that maintaining an ethical culture is important. I will fully comply with the ethics agreement that I signed. For the duration of my service, I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding particular matters involving specific parties of former clients or entities represented by my former firm. In addition, I will install a robust screening process, should one not exist within the office.

Question 3: **Conflicts of Interest**

On May 11, 2016, I sent you a letter asking you to clarify what steps you will take to avoid conflicts of interest. You have not responded. Please provide a written response to the questions contained in that letter, which were:

A. Please identify, with specificity, which particular matters involving your clients are currently pending before the Department, and any additional ones you believe may come before the Department within the next two years, which you understand your ethics agreement commits you to not participate in.

B. With respect to each of these matters, please identify "precisely what measure will be undertaken" to avoid an actual or apparent conflict of interest.

Response to A. and B.: Seven days before you sent your correspondence to me asking these questions, the Committee on Energy and Natural Resources had received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

Mr. Apol's correspondence included an enclosure of the "ethics agreement outlining the actions that the nominee [David Bernhardt] will undertake to avoid conflicts of interest."

Further, General Counsel Apol explained, "we [the Office of Government Ethics] believe that this nominee [David Bernhardt] is in compliance with the applicable laws and regulations governing conflicts of interest."

In addition, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement that I provided to, and that was certified by, Mr. Apol and the agreements provided by other nominees to positions within the Department of the Interior who worked in large private law firms representing similar clients, and in some cases the same clients. Indeed, nominees with very similar ethics agreements were favorably reported out of the Committee subsequent to the publication of the cited Inspector General's Report you referenced in your recent letter to me. Copies of two such ethics agreements are attached to this correspondence.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those the Committee previously found sufficiently clear to proceed with the nomination, with your personal support, I reaffirm that I will comply with the ethics agreement that I have signed.

In addition, as a general matter, it is my experience that the focus of the chief operating officer of the Department of the Interior will generally not be on particular matters involving specific parties. However, I intend to implement a robust screening process and work closely with the Designated Agency Ethics Official to ensure that I am implementing best practices in my office for the duration of my tenure, should I be confirmed.

C. You reserve the right, in your ethics agreement, to seek a waiver from your recusals in accordance with 5 C.F.R. § 2635.502(d). Under what circumstances would you seek such a waiver? Would you commit to making any such waiver request public?

Response: I do not know under what circumstances I might seek a waiver because I do not anticipate doing so. However, should I seek a waiver from the Designated Agency Ethics Official, I will discuss whether such a request should be made public.

D. You were widely reported in the press as heading President-elect Trump's transition team for the Department of the Interior, but make no mention of it in your questionnaire.

1. **Did you serve on President-elect Trump's transition team for the Department of the Interior? If so, in what capacity? Beginning when and ending when?**

2. **Were you compensated for your service on the transition team?**

3. **Were you still employed by your law firm while serving on the transition team? Were you still receiving compensation from your law firm while working for the transition team?**

4. **Did you sign the transition team's ethics pledge? If so, please provide a copy.**

Response to D1-4: I served on the President's transition team throughout the transition as a part-time, unpaid volunteer from approximately September 19th through the inauguration.

Question number 8 of the Committee's Statement for Completion by Presidential Nominees, which I was asked by the Committee to complete, requests material related to employment positions held since college. I fully responded to that question. In addition, my response is consistent with the personal statement of other nominees who have come before this Committee, reported participation in the transition activities of prior administrations, but did not cite any transition activities in response to the employment question.

While I am unable to provide you copy of any ethics agreement I signed for that service, it is my understanding that one version of a Trump For America Ethical Code of Conduct is publically available through the world wide web at http://www.wsj.com/public/resources/documents/ethicscode.pdf.

Question 4: **Recusals from Conflicts of Interest**

A. Do you believe that your representation of some of your clients—like Westlands or Cadiz—has been so substantial that a reasonable person might question your impartiality beyond the one-year period in your recusal agreement and the two-year period in your ethics pledge under President's Trump executive order?

Response: No, nor do I believe would a reasonable person, after a 2 year period.

B. Would you be willing to recuse yourself from particular matters involving those clients for the <u>duration</u> of your tenure at the Interior Department?

Response: I believe that public trust is a public responsibility and that maintaining an ethical culture is important. I will fully comply with the ethics agreement that I signed. As I stated at the hearing, for the duration of my service I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding particular matters involving specific parties of former clients or entities represented by my former firm. In addition, I will install a robust screening process, should one not exist within the office.

That said, on May 4, 2017, the Committee on Energy and Natural Resources received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

Mr. Apol's correspondence included an enclosure of the "ethics agreement outlining the actions that the nominee [David Bernhardt] will undertake to avoid conflicts of interest." Further, General Counsel Apol explained, "we [the Office of Government Ethics] believe that this nominee [David Bernhardt] is in compliance with the applicable laws and regulations governing conflicts of interest."

In addition, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement that I provided to, and that was certified by, Mr. Apol and the prior agreements provided by other nominees to positions within the Department of the Interior who worked in large private law firms representing similar clients, and in some cases the same clients. Indeed, nominees with very similar ethics agreements were favorably reported out of the Committee subsequent to the publication of the Inspector General's Report you referenced in your recent letter to me.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those the Committee previously found sufficiently clear to proceed with the nomination, with your personal support, I reaffirm that I will comply with the ethics agreement that I have signed.

Question 5: **Service on the Presidential Transition Team**

Regarding your service on the Presidential Transition Team for Donald J. Trump, please answer the following questions:

A. Did you discuss any matter or issue for which you or your firm provide legal or lobbying services with the Presidential Transition Team? If so, what matters or issues? Please list them.

Response: I was not involved in any particular transition matter for which I or my firm provided legal or lobbying services.

B. As a lawyer, do you believe that a Presidential transition team's non-disclosure agreement authorizes the withholding of information from Congress?

Response: No.

Question 6: **Antiquities Act**

Do you agree with President Trump that the use of the Antiquities Act to designate national monuments is an "egregious abuse of federal power?" If so, please provide specific examples of national monuments designations that you believe reflect an abuse of federal power.

Response: As I stated at my hearing, any decisions on monument designations will be made by President Trump. He has stated that public outreach and proper coordination with state, tribal, and local officials and other relevant stakeholders are key elements of any designation, and I agree with this view. I understand that Secretary Zinke is currently reviewing certain monument designations made since 1996. If confirmed, I will support the Secretary and President as appropriate.

Question 7: **Offshore Drilling**

A. Please provide a list of the clients for which you have provided lobbying or litigation services since January 2009, on matters pertaining to federal leasing policies on the Outer Continental Shelf. Please identify the matters on which you lobbied and the litigation in which you represented each client.

Response: Please see question 20 of the Statement of Completion by Presidential Nominees, which references Cobalt International Energy Incorporated. I have also represented the National Oceans Industry Association as a defendant intervenor in a federal district court case in the United States District Court for the District of Columbia, where judgement was

entered on March 12, 2014.

B. Please identify which clients lobbied or litigated on each of the following:

(1) The rule entitled "Oil and Gas and Sulfur Operations in the Outer Continental Shelf-Blowout Preventer Systems and Well Control" 81 *Fed. Reg.* 25888 (April 29, 2016);

(2) The proposed rule entitled "Air Quality Control, Reporting, and Compliance," 81 *Fed. Reg.*19718 (April 5, 2016);

(3) NOAA's Technical Memorandum NMFS-OPR-55 of July 2016 (Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing); and

(4) The Final Rule entitled "Oil and Gas and Sulfur Operations on the Outer Continental Shelf—Requirements for Exploratory Drilling on the Arctic Outer Continental Shelf," 81 *Fed. Reg*. 46478 (July 15, 2016).

Response: As described in my Statement for Completion by Presidential Nominees, I have not engaged in regulated lobbying activities regarding such issues since 2013, nor have I litigated on any of the matters described in 1-4.

C. Did you advise the Presidential Transition Team on matters pertaining to Federal Offshore Leasing policy? If so, please provide any written documentation associated with the policies you advocated.

Response: My role did not include advocacy.

D. Given your previous activities lobbying and litigating on matters relevant to federal offshore leasing policies, will you recuse yourself from activities undertaken by the Department pursuant to the Executive Order issued April 28, 2017, entitled "Implementing an America-First Offshore Energy Strategy"?

Response: I believe that public trust is a public responsibility and that maintaining an ethical culture is important. If I am confirmed, I will seek the guidance of the Designated Agency Ethics Official regarding all actions that I must take to comply with my ethics agreement. I will fully comply with the ethics agreement I signed. Moreover, for the duration of my service I intend to actively seek and consult with the Department's Designated Agency Ethics Official, regarding particular matters involving specific parties of former clients or entities represented by my former firm. In addition, I will install a robust screening process, should one not exist within the office.

That said, on May 4, 2017, the Committee on Energy and Natural Resources received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

Mr. Apol's correspondence included an enclosure of the "ethics agreement outlining the actions that the nominee [David Bernhardt] will undertake to avoid conflicts of interest." Further, General Counsel Apol explained, "we [the Office of Government Ethics] believe that this nominee [David Bernhardt] is in compliance with the applicable laws and regulations governing conflicts of interest."

In addition, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement that I provided to, and that was certified by, Mr. Apol and the prior agreements provided by other nominees to positions within the Department of the Interior who worked in large private law firms representing similar clients, and in some cases the same clients. Indeed, nominees with very similar ethics agreements were favorably reported out of the Committee subsequent to the publication of the Inspector General's Report you referenced in your recent letter to me.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those the Committee previously found sufficiently clear to proceed with the nomination, with your personal support, I reaffirm that I will comply with the ethics agreement that I have signed.

E. Do you support the current moratorium in relation to offshore drilling in the Eastern Gulf of Mexico?

Response: I am aware that, in response to the President's recent Executive Order on the Outer Continental Shelf, Secretary Zinke issued a Secretarial Order 3350 directing the Bureau of Ocean Energy Management to review and develop a new five-year plan. I support the President's and Secretary's actions to examine new leasing opportunities within the OCS in order to advance the Administration's energy agenda.

F. Do you support extending this moratorium?

Response: As discussed in the response to the previous question, I support the President's and Secretary's actions aimed at increasing offshore production while balancing conservation objectives.

Question 8: Congressional Requests

I would like to clarify how you intend to treat Congressional requests for information. When you were the Director of the Office of Congressional and Legislative Affairs under President Bush, in 2003 you responded to the committee's ranking member that you were processing his request for information in accordance with the Freedom of Information Act, and that you were withholding information not subject to disclosure under that Act.

A. If confirmed as Deputy Secretary, what standard will you use in determining how to handle requests for information from Members of Congress? What kinds of information do you believe are exempt from disclosure when responding to Congressional requests for information?

Response: The Department itself needs to carefully weigh every request from Congress and ensure it is meeting the needs of Congress to facilitate harmonious relationships with you and this Committee. As I stated in 2006, my personal view is that the Department of the Interior needs to provide full disclosure to Members of Congress, subject to the Department of Justice's guidelines. In 1998, the Chief of Staff for the Secretary of the Interior promulgated guidance for the Department and stated in that guidance that was to treat requests from individual members under FOIA. Since that time, I have reviewed the Department of Justice's guidelines and I think that the Department's 1998 guidance missed a number of caveats that were contained within the Department of Justice's guidelines.

B. Does the Administration have a formal or informal policy of not responding to requests for information from Democratic Members of Congress?

Response: Not to my knowledge.

C. Will you commit to responding in a timely manner to all Congressional questions or informational requests, whether submitted by a Republican or Democratic member?

Response: I expect the Office of Congressional Affairs to make its best efforts to do so.

Question 9: Use of Public Lands

A. Do you believe that extractive development (such as oil, gas, mining etc.) is inherently a better use of our public lands than using those lands for conservation or outdoor recreation use? Can you provide any specific examples of where you have advocated conservation or recreation purposes over development of specific public lands?

Response: I do not believe that extractive development is an inherently better use. A specific example of advocating for conservation was the resolution of the National Park Service claims for the Black Canyon of the Gunnison reserved water rights.

B. Is there any case of suspending energy or mineral extraction on federal lands that you would support, and, if so, what would be an appropriate case for a Secretary or President to do so?

Response: I am in agreement with Secretary Zinke that development can and should be conducted in accordance with the principles of multiple use. If confirmed, I will work with the Secretary to balance uses, including hunting, fishing, hiking, and other forms of recreation, which play an important role on public lands.

Question 10: Impact of Trump Budget Proposal

The President's initial budget request for the Department of the Interior is $11.6 billion for FY 2018, a $1.5 billion or 12 percent decrease from the currently enacted spending level. If confirmed as Deputy Secretary, you will be the chief operating officer for the department. What would the impact be of a 12 percent budget cut be on the department, including on tribal programs, on national park operations, and other key agency programs?

Response: The impact of such a cut would depend on how the 12 percent cut was allocated or structured, which is information that I do not have access to at this time.

Question 11: Hardrock Mining

Hardrock mines pay no federal reclamation fee, unlike coal mines. Nor do they pay any royalty. In his confirmation hearing, Secretary Zinke stated that "this is where we need to have the discussion. […] And I'll be glad to work with you on it because it needs to be fair." Do you agree with Secretary Zinke that hardrock mines on federal land should get a similar treatment to keep our policies fair?

Response: I agree with Secretary Zinke that we should have the discussion and that it needs to be fair.

Question 12: Coal Moratorium

On March 29, Secretary Zinke ended a moratorium on federal coal leasing and all work on a programmatic environmental impact statement (EIS) begun under Secretary Jewell. Last week, a group of states sued the Department for violating the National Environmental Policy Act, given the Secretary's claim that "the public interest is not served" by continuing the BLM's scientific review. Given your experience with the Department's alternation of scientific conclusions under Secretary Norton, do you think it is credible or legally defensible for the Department to ignore the science already reviewed by the BLM in its January scoping report?

Response: I reject the premise of your question, and I have not reviewed the referenced report. Should I be confirmed, I would be happy to opine. I am skeptical that "science" was ignored.

Question 13: **Coal**

On March 29, 2016, Secretary Zinke announced that a comprehensive review of the federal coal program would be terminated, along with lifting a moratorium on significant new coal leases pending the outcome of that review.

A. Do you agree that the federal coal leasing program is flawed and needs to be modernized, consistent with two decades or more of independent audits and evaluations?

Response: I believe that most programs, including the coal program, could be modernized and improved, but I have not reviewed the mentioned reports.

B. Will you commit to addressing these long-standing problems and ensure that Americans receive a fair economic return for these public resources before significant new leasing occurs?

Response: I am committed to ensuring that American taxpayers receive a fair return for public resources.

Question 14: Improving BLM Oil and Gas Permitting Practices

In a recently published report, the GAO identified insufficiencies in the BLM's practices with respect to the development of oil and gas on Federal lands. In particular, after investigating 42 BLM offices, the GAO found that the extent to which the BLM approves requests for exceptions to environmental lease and permit requirements is unknown. The BLM doesn't keep records of who actually submits exception requests, nor does it keeps records of request determinations – which raises the question of whether the agency can meet its statutory environmental responsibilities. The same is true for inspections. The GAO found that the BLM didn't use data from site inspections to evaluate whether its permit process was protecting the environment. The BLM doesn't have procedures or guidance on how inspections should be documented and how inspection data should be used. Further, the BLM doesn't always include the public during the permitting stage of development. The GAO found that by not allowing the public to participate in drilling decisions derived from the prior public planning process, the BLM created a set of conditions that allow poor drilling practices to continue to go unchecked. Will you commit to continuing the Department's work to implement the recommendations of the GAO with respect to these issues and improving these processes?

Response: If I am confirmed, I can commit that the Department will consider the GAO's recommendations and incorporate them, as appropriate.

Question 15: Onshore Oil and Gas Royalties

A. Do you believe that Americans are getting a fair return under the current valuation rules for production of oil and gas on federal lands?

Response: I am informed that Secretary Zinke has tasked the Royalty Policy Committee to determine whether taxpayers are getting a fair return and I look forward to the results.

B. Can you tell me how, if confirmed, you will work with Secretary Zinke to achieve a common goal of ensuring a fair return to taxpayers?

Response: I agree that we must ensure taxpayers are getting a fair return. As stated previously, if confirmed I look forward to learning the results of the Royalty Policy Committee's efforts.

Question 16: BLM Master Leasing Plans

Master leasing plans (MLPs) were designed to provide a legal framework for evaluating oil and gas proposals, in particular because as recently as 2009, BLM staff "believed they were required by law to give greater deference to mineral leasing proposals than to the protection of other land uses..." Do you agree that MLPs are necessary in removing ambiguity around multiple land use?

Response: I agree that clear guidance is a necessary component of successful policies. I would need to learn more about the framework to provide a meaningful response to this question. If I am confirmed I would be happy to get up to speed on the issue and meet with you to discuss it further.

Question 17: **Taylor Energy**

A. If confirmed, will you ensure that Taylor Energy will remain financially responsible to respond to the ongoing oil discharge from the well?

B. Since your firm worked directly with Taylor Energy, will you recuse yourself from all future work on this topic since you advocated for one particular outcome in the past?

Response to A and B: I believe that public trust is a public responsibility and that maintaining an ethical culture is important. If I am confirmed, I intend to seek the guidance of the Designated Agency Ethics Official regarding all actions that I need to take to comply with my ethics agreement. I will fully comply with the ethics agreement I signed. Moreover, for the duration of my service, I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding particular matters involving specific parties of former clients or entities represented by my former firm. In addition, I will install a robust screening process, should one not exist within the office.

That said, on May 4, 2017, the Committee on Energy and Natural Resources received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

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In addition, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement that I provided to, and that was certified by, Mr. Apol and the agreements provided by other nominees to positions within the Department of the Interior who worked in large private law firms representing similar clients, and in some cases the same clients. Indeed, nominees with very similar ethics agreements were favorably reported out of the Committee subsequent to the publication of the Inspector General's Report you referenced in your recent letter to me. Copies of two such ethics agreements are attached to this correspondence.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those the Committee previously found sufficiently clear to proceed with the nomination, with your personal support, I reaffirm that I will comply with the ethics agreement that I have signed.

Question 18: **Arctic**

You recently served as Counsel to the State of Alaska in State of Alaska v. Jewell, et al, which challenged the Department of the Interior's decision to deny the state a permit for exploratory oil and gas studies in the 1002 section of the Arctic National Wildlife Refuge. Due to your inability to maintain impartiality on this issue, will you recuse yourself from issues relating to drilling in the Arctic National Wildlife Refuge?

Response: I reject the premise of your question, which appears to be that litigation on a particular legal question regarding whether the lawfulness of Department of the Interior actions creates a presumption of permanent partiality on different matters. I believe that public trust is a public responsibility and that maintaining an ethical culture is important. If I am confirmed, I will seek the guidance of the Designated Agency Ethics Official regarding all actions that I need to take to comply with my ethics agreement. I will fully comply with the ethics agreement I have signed. For the duration of my service, I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding particular matters involving specific parties of former clients or entities represented by my former firm. In addition, I will install a robust screening process, should one not exist within the office.

Moreover, on May 4, 2017, the Committee on Energy and Natural Resources received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

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In addition, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement I provided to, and that was certified by, Mr. Apol and the prior agreements provided by other nominees to positions within the Department of the Interior who worked in large private law firms representing similar clients, and in some cases the same clients. Indeed, nominees with very similar ethics agreements were favorably reported out of the Committee subsequent to the publication of the Inspector General's Report you referenced in your recent letter to me. Copies of two such ethics agreements are attached to this correspondence.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those the Committee previously found sufficiently clear to proceed with the nomination, with your personal support, I reaffirm that I will comply with the ethics agreement that I have signed.

Question 19: **Bush Administration Scandals**

During your time as Solicitor at the Department of the Interior under President George W. Bush, the Deputy Assistant Secretary for Fish, Wildlife and Parks—Julie MacDonald—resigned her position after being found to have committed unethical activities, specifically pressuring Fish and Wildlife Service scientists to alter findings and data to suit political ends in regards to Endangered Species Act determinations. In the Inspector General's report on this scandal, it was pointed out that you had been very involved in ESA decisions and were the person who would make final decisions on such matters should a dispute arise. Can you give an account of your involvement in tampering with scientific findings and in the Julie MacDonald issue on the whole? Do you currently work with Ms. MacDonald in her role with Westlands Water District?

Response: I became involved with matters related to the Endangered Species Act because the listing, critical habitat, and litigation defense process seemed broken as I evaluated the work of the Office of the Solicitor. The implementation program, from a legal review process, was a mess. Indeed, it is demonstrated in the report you reference that some lawyers

in the Solicitor's Office had found packages drafted in the field and region to be not legally sufficient for years – and not merely as result of the actions of the Deputy Assistant Secretary. I thought this was a serious problem, and I knew improvements to the Office of the Solicitor's role were necessary to support these decisions. As a result of reaching this conclusion, I took various steps to address the challenges shortly after I was sworn in as Solicitor. For example, one of my first acts as Solicitor was to provide clear direction on what it meant to complete a legal review as an office of the Solicitor attorney, and my expectations as to how issues should be elevated to reach resolution if the bureau's client representatives were not accepting the legal advice that was provided. In addition, I began an effort to evaluate certain questions to evaluate the defensibility of legal positions that did not appear successful and to address other questions the U.S. Fish and Wildlife Service seemed to be grappling with.

I was not involved in tampering with scientific findings, and any such inference is wrong.

As I explained, I put in place mechanisms to ensure that lawyers' comments on flawed packages were elevated through the ranks all the way to the Deputy Secretary, if necessary, to ensure such matters were resolved. It is concerning that such mechanisms appear to have not remained in place in recent years.

I am not aware of any referenced role Ms. MacDonald has with Westlands Water District.

Question 20: **Maintaining Public Lands**

Secretary Zinke has stated plainly to this committee that he will not sell or transfer our public lands. Will you also commit to keeping our public lands in the federal estate?

Response: I share Secretary Zinke's opposition to the sale or wide scale transfer of federal lands. As the Secretary offered in his written responses to this Committee, "…there are some situations in which commitments have previously been made, inholdings need to be swapped or exchanged, or land banks are well situated to address the needs of growing urban areas, where limited transfer is appropriate." I would need to review such proposals before making any decisions.

Question 21: Methane

As you know, the BLM Methane and Natural Gas Waste Prevention rule is in effect after some in Congress failed last week to nullify the rule under the Congressional Review Act.

A. Prior to your service on the President-elect's transition team, did you engage in lobbying on behalf of oil and gas clients on this rule?

Response: No, I have not engaged in regulated lobbying on this issue.

B. What are your plans for effectively implementing this rule to ensure producers do not waste valuable energy resources we all own, while exercising the considerable flexibility built into the rule to contain the costs of compliance.

Response: I echo the Secretary's commitment to ensuring that the American taxpayers get a fair return from natural resource development on federal lands. If confirmed, I will support the Secretary's efforts to review this regulation, in addition to other programs at the Department, and to evaluate whether there are opportunities to ensure that fair return is captured.

Question 22: **Wilderness**

Our nation's public lands are incredible assets to the country that support a booming outdoor recreation economy as well as clean air, clean water, and healthy ecosystems for wildlife. At the core of these public lands are the designated wilderness areas across the country that provide the most rugged, wild, outdoor experiences one can have.

Will you commit as Deputy Secretary of Interior to protecting and enhancing these incredible places so that their wilderness values are upheld for all future generations of Americans to enjoy?

Response: Like you, in general, I find wilderness areas to provide the most rugged wild outdoor experiences one can have, and I believe they provide special solitude and enjoyment today and into the future.

Question 23: Tribal Consultation

Tribal Consultation is governed by Executive Order 13175 and requires consultation with tribes on all "Policies that have tribal implications,'' including "regulations, legislative comments or proposed legislation, and other policy statements or actions that have substantial direct effects on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes." Will you fully comply with and Tribal consultation requirements and ensure that the Department will conduct meaningful tribal consultation on all policies that have tribal implications?

Response: As I indicated at the hearing, I appreciate the importance of tribal consultation, take consultation seriously, and commit to consult with tribes.

Question 24: **Trust responsibility to Tribes**

The federal government has moral and legal obligations to uphold its treaty and trust responsibilities to Native Americans and engage with tribes on a government-to-government basis. This government-to-government relationship is the basis for tribal consultation, the process by which the United States engages in a meaningful, good-faith dialogue with tribes. Interior, by virtue of its role in Native American affairs, plays a prominent part in how the government engages in tribal consultation.

A. If confirmed, will you uphold the federal trust responsibility and ensure that tribes are provided with adequate government-to-government consultation on any issue that may affect them?

B. In the wake of the Dakota Access Pipeline, three federal agencies, including Interior, published a report in January 2017 entitled, "Improving Tribal Consultation and Tribal Involvement in Federal Infrastructure Decisions." The subject of months-long consultation across Indian country, this report sets forth a number of recommendations to improve the process for permitting and infrastructure development. What steps do you intend to take to incorporate this report into the agency's decision-making process?

Response to A. and B.: Before I was out of law school, I was receiving lessons outside class on the meaning of the federal government's trust responsibility from a remarkable tribal leader and his longtime attorney, as they tried to advocate their interests in Congress. They both had a very a significant impact on the development of my perspective of the trust responsibility and self-determination. I am not familiar with the report published by the previous Administration, but as I indicated at the hearing, I appreciate the importance of tribal consultation and take it and the trust responsibility seriously.

More important than my views, however, are the words of Tribes who know me, such as the Southern Ute Tribe, which has stated its belief that I "am well positioned to help lead the Department of the Interior in a manner that respects the federal trust responsibility to Indian tribes and empowers tribal communities to exercise greater self-determination."

Question 25: Co-management with Tribes

Do you believe in co management when tribes have a significant interest in cultural preservation of an area?

Response: I think co-management can be appropriate. From my perspective, it is appropriate to consider such matters on a case-by-case basis. I believe it is worth looking at and accommodating, where appropriate.

Question 26: Tribal Trust

Secretary Zinke recently stated that tribes should have an "off-ramp" with regard to the Indian Reorganization Act – that tribes should "have a choice of leaving Indian trust lands and becoming a corporation . . ." The last time an administration attempted to privatize Indian lands was nearly seventy years, when Congress terminated more than one hundred tribes and small bands, depriving nearly 1.4 million acres of land of federal trust protections. In most cases, the impact of termination on a tribe was to increase poverty.

A. Can you please clarify the Secretary's remarks regarding privatizing Indian country?

Response: I am not aware of the remarks.

B. Can you please share your views on the importance the Administration will place on the land to trust process?

Response: I have not discussed this issue with the Secretary or anyone in the Administration and thus have not formed a view.

Question 27: Tribal Land into Trust

Restoring tribal homelands rebuilds tribal land bases and strengthens the relationship between tribes and the federal government. It also makes administering justice and engaging in economic development easier by reducing checkerboard landholdings. During your time at the Department of the Interior, it is reported that the Department imposed a de facto moratorium on land into trust acquisitions through agency

memorandums.

A. Can I get a commitment from you that the Interior Department will not put in place a land into trust moratorium? If you can't make that commitment, would you at least commit to a transparent process that prioritizes meaningful consultation with tribes and tribal organizations - on an open and fair basis – so their voices can be heard on any proposed changes to the Department's land into trust procedures?

Response: I will commit to learning more about the matter and talking to your staff.

B. In 2008, the Department of the Interior, through then-Assistant Secretary Carl Artman, finalized guidance for restricting land to be taken into trust related to gaming. The Department did not consult with tribes in drafting this guidance. Can I get a commitment from you that the Interior Department will consult with tribes on a government-to-government basis when developing any additional guidance or regulations as it pertains to land into trust acquisitions?

Response: I am not sure what, if any, actions have been taken regarding this matter, but in general, I support consultation.

Question 28: **Tribal Sovereignty**

Well-settled principals of tribal sovereignty provide that tribes be free from interference of state and local jurisdictions. While you were Solicitor, however, you spearheaded sweeping changes to Interior's off-reservation trust acquisitions by requiring memoranda of understanding between local governments and the tribal applicants, effectively giving localities veto authority over trust acquisitions.

A. What role do you believe is appropriate for state and local governments to play in a tribe's economic development vis-à-vis the land into trust process?

B. Please state the bases of authority—contained within the Indian Reorganization Act or elsewhere in law—that authorizes Interior to elevate the concerns of states over that of tribes.

Response: Because I am not currently at the Department, I would need to review the current land into trust procedures and process, if confirmed.

Question 29: **Tribal Energy**

As the Department of Energy laid out during a recent Tribal Energy summit, the potential for renewable energy in Indian Country is enormous. While reservations account for 2% of the nation's land mass, they hold 5% of the nation's potential renewable energy resources. The Department of Energy also estimates that wind power from tribal lands could satisfy 32% of the total U.S. electricity demand. And solar production from Indian lands could generate enough energy to power the country two times over.

We've also heard from the GAO that the Department of the Interior is turning its attention to conventional fossil fuels for development, this despite the upward trajectory of renewables.

What role do you think renewable energy should play in energy development in Indian Country?

Response: I believe it can play a significant role. The Secretary has made it one of his highest priorities that tribes should be able to make their own decisions regarding what type of resource development, including renewable energy, will best benefit each individual tribe. I support the President's and the Secretary's goals.

Question 30: **Tribal Gaming**

While you were with the Department of the Interior, the agency implemented a number of sweeping regulatory changes that had the effect of slowing down gaming approvals. Yet the Indian Gaming Regulatory Act provides tribes, states, and the surrounding counties with billions of dollars nationally.

A. Do you intend to seek changes to implementation of the Indian Gaming Regulatory Act, either by regulation or through official or unofficial agency guidance??

Response: Because I am not at the Department, I cannot speak to the Department of the Interior's plans on this matter or whether changes might be considered for this program.

B. Do you commit to engaging in meaningful consultation with tribes on any changes this Department makes to how it implements the Indian Gaming Regulatory Act?

Response: As I have indicated previously, I support consultation.

Question 31: **Federal Recognition**

The Executive branch has recognized tribes through executive orders and other federal action for more than a century, and Interior first promulgated regulations on this process more than forty years ago, in 1978. Federal recognition is extremely powerful: it allows a tribe to exercise its sovereign status on equal footing with states, with the full panoply of associated rights, such as the right to tax and assert civil and criminal jurisdiction. Also with federal recognition comes eligibility for federally-funded services such as health care and housing assistance. Given the importance of the decision to recognize a tribe, Interior has put in place a process intended to be free of political considerations.

As Deputy, what steps will you take to ensure the process is free from political interference?

Response: I am not familiar with the current state of the federal recognition process and will examine the current regulations, visit with career staff, and meet with you to discuss appropriate steps.

Question 32: Coal self-bonding

A significant number of coal companies filed for bankruptcy last Congress. These bankruptcies highlighted the fact that federal and state coal reclamation performance bonding requirements are inadequate. In response, the Department took important steps to begin address its financial assurance rules under the Surface Mining Control and Reclamation Act, including implementation by states of those rules. Earlier this year, the GAO concluded that across a range of federal energy and natural resources, coal alone benefits from being able to "self-bond" in order to meet reclamation performance requirements.

Will you commit to continuing the Department's important work to reform the financial assurance rules for coal in light of lessons learned from the recent slate of bankruptcies?

Response: I am not familiar with the current status of the Department's financial assurance regulations under the Surface Mining Control and Reclamation Act. If confirmed, I will commit to becoming better acquainted with the issue.

U.S. Senate Committee on Energy and Natural Resources
May 18, 2017 Hearing
The Nomination of Mr. David Bernhardt to be Deputy Secretary of the Interior

Questions from Senator John Barrasso

Question 1: **Among the Obama Administration's particularly harmful regulations is the Bureau of Land Management's "Waste Prevention, Production Subject to Royalties, and Resource Conservation" rule regarding venting and flaring of methane on federal and Indian lands. I believe this rule is unnecessary, costly, and duplicative of existing state and federal regulations. Please explain the steps you will take to address this rule and similar duplicative rules, and to prevent future duplicative regulations from being issued.**

Response: I have not yet had any substantive interaction with the Department on implementing the President's America First Energy Plan. However, closely examining regulations to eliminate those that are duplicative and burdensome will be a start. A brighter future depends on energy policies that stimulate our economy, ensure our security, and protect our health.

Question 2: **In Wyoming, there are plans underway to expand surface water storage capacity. For too long, the permitting review process at the Department of the Interior has proven to be more timely and costly than necessary. This uncertainty threatens project funding and completion. If confirmed, will you commit to improving and streamlining the process to insure that timely communications with applicants occur and decisions on water storage facility permits are made?**

Response: If confirmed, I will look into this matter. I recognize the need to streamline and expedite the consideration of water storage projects, as these projects have the potential to provide numerous benefits, including reliable water supplies, flood control, hydropower, and water quality improvements.

Question 3: **Permitting on federal lands frequently requires mitigation of some kind. The Obama Administration took many liberties with the concept of mitigation, including issuing a revised Department-wide strategy and suggesting that advanced mitigation should be the future standard. What guidance would you give the Department to ensure there are clear, consistent guidelines for mitigation in the future?**

Response: If confirmed, I would work to ensure that program authorizations are examined to confirm whether the Department's legal mandates establish when and how mitigation could be charged, along with appropriate sideboard.

Question 4: **What roles do you believe public land and private land/private investment should have in the future of mitigation, and are these roles different?**

Response: I want to ensure that the Department's actions regarding on or off site mitigation requirements are well grounded in the law, if confirmed I will review the Department's statutes and regulations and discuss the matter with Secretary Zinke before offering an opinion.

Question 5: **While the Forest Service is housed in the Department of Agriculture, cohesive and coordinated management between the Forest Service and the Department of Interior is critical in addressing the risk of catastrophic wildfire. How would you work with Secretary Perdue, and staff at the Department of Agriculture to improve forest and fire management on multi-agency fires?**

Response: I agree that maximizing coordination between the Department of the Interior and the Department of Agriculture on multi-agency fires is an important approach, and if confirmed I will support pursuing ways of improving cohesive and coordinated fire management between the agencies**.**

U.S. Senate Committee on Energy and Natural Resources
May 18, 2017 Hearing
The Nomination of Mr. David Bernhardt to be Deputy Secretary of the Interior

Questions from Senator Ron Wyden

Question 1: On Secure Rural Schools, I expect you to be engaged and helpful in getting a long-term solution on this important issue. As you know, I coauthored the original Secure Rural Schools bill because counties were struggling, and it is just as important today as it was then. Faced with continued budget shortfalls, rural counties are forced to make difficult cuts to libraries, schools, and infrastructure projects, and do more with less. I understand that many of my colleagues will need to see forest management reforms as part of any long-term SRS solution. I want to be clear that I take a back seat to no one when it comes to tackling tough forestry issues, including increasing timber harvest, which is what my O&C bill did. But it must be done in a sustainable way that does not stomp on our bedrock environmental laws. Tying the well-being of rural economies to unsustainable logging levels is a dead-end, leading the counties to exactly the same gridlock they are facing now while depleting our nation's forests.

Mr. Bernhardt, short-term reauthorizations of SRS are simply not adequate for rural counties working to manage budgets each year. Will you commit to working with Congress towards a long-term solution for SRS?

> **Response:** Yes, I will commit to working with you and other Members of Congress on the issue.

Question 2: I have long said that land management decisions are best made through a deliberative process that includes broad stakeholder engagement and thorough consideration of local concerns. Recently there have been reports that the Department has suddenly postponed meetings of Resource Advisory Councils (RACs) until September. RACs are a great example of bottom-up land management, and should serve as a model for stakeholder engagement.

As Deputy Secretary, what steps will you take to ensure local voices, including RACs, have opportunities to provide input and take part in the process at all times, not just when those local voices align with the goals of the administration?

> **Response:** Like you, I believe collaboration and listening to varied views are important. I would need to learn more about the specific issues here to have specific steps to recommend.

Question 3: I was very disappointed to see the President's Executive Order calling for a review of national monument designations and to learn that Secretary Zinke will be reviewing the Cascade-Siskiyou National Monument's recent expansion. The original monument designation in 2000 and its expansion both received significant and broad local support, and the public was given the opportunity in both designations to be a part of the process.

As Deputy Secretary, what will be your role in reviewing and evaluating monuments?

Response: If confirmed, I do not know if I will have any role in this process.

Will your review of monument designations ensure the overwhelming public support for monuments like Cascade-Siskiyou are respected, even if that public support is in opposition to the Administration's goals?

Response: I believe that where a monument has the support of its local community, state, and congressional delegation, the Administration would be wise to listen to such consensus.

Question 4: Mr. Bernhardt, the Department of the Interior's Land Buy-Back Program for Tribal Nations implements the land consolidation component of the *Cobell* Settlement, a component that provided $1.9 billion for tribes to consolidate tribal homelands. This program is vital for the economic development of Tribal communities across the United States, works to promote self-sufficiency, and is a necessary step in repairing years of injustice committed against Tribes in Oregon and throughout the United States.

The Administration recently sent a letter to tribal leaders on May 9 of this year, in which the Administration expressed its intent to undertake a "brief strategy review period" regarding this important program. Please walk me through how you intend to implement the Buy-Back Program.

Response: I am not aware of the letter, and I have limited knowledge of this program. If confirmed, I would be happy to learn more about the issue and meet with you.

Should the Department of Interior propose changes to the Buy-Back Program, how will Interior ensure Tribes are provided opportunities for meaningful input?

Response: As I indicated in the previous response, I am not aware of the letter, and I have limited knowledge of this program. If confirmed, I would be happy to learn more about the issue and meet with you.

What do you believe are appropriate steps the Department of the Interior should take to address the issue of fractionalization once the Buy-Back program exhausts the fund?

Response: I have limited knowledge of this program. If confirmed, I would be happy to learn more about the issue and meet with you.

Question 5: Recreational, commercial, and tribal fishing groups in Oregon are very concerned about how water allocation will affect salmon and steelhead runs, especially in the Klamath river basin. In fact, due to extremely low numbers of Chinook salmon returning to the Klamath drainage, the Pacific Fisheries Management Council closed entire salmon fishery south of Humbug Mountain to Eureka, CA for the entire 2017 season.

Citing your previous work for the Westlands Water District and the risk that excess pumping of water during drought years poses to both endangered species as well as fishermen reliant on adequate river flows, how will you balance the needs of agro-businesses with those of the fishing community and the environment?

Response: First, I will follow my recusals. That said, I will enter questions with an open mind. More important, if appropriate, I would be interested in meeting with your constituents, who are concerned, to learn more about their perspective, their concerns, and the impact these closures have on them, and their suggested solutions.

U.S. Senate Committee on Energy and Natural Resources
May 18, 2017 Hearing
The Nomination of Mr. David Bernhardt to be Deputy Secretary of the Interior

Questions from Senator Bernard Sanders

Climate change

Question 1: President Trump has suggested in the past that climate change is a hoax. Is the President correct? Is climate change a hoax?

Response: As I indicated at the hearing, I believe that man is an influence on climate change.

Question 2: Do you agree with the vast majority of scientists that climate change is real, it is caused by human activity, and that we must aggressively transition away from fossil fuels toward energy efficiency and sustainable energy like wind, solar, and geothermal?

Response: As I indicated at my hearing, I believe that man is an influence on climate change. I agree we need to produce renewable energy.

Question 3: **Do you agree with the vast majority of scientists that the combustion of fossil fuels contributes to climate change?**

Response: Yes.

Question 4: **Do you believe that the Department of the Interior has a role in reducing the extraction and use of fossil fuels?**

Response: I am not aware that Congress has ever provided that direction to the Department of the Interior.

Question 5: **If confirmed, how will you work to address climate change?**

Response: I will work to understand it better and pursue adaptive management strategies, as appropriate.

Congressional Relations

Question 6: While you were the Director of Congressional Relations for the Department of the Interior under President George W. Bush, you took the position that you did not need to be responsive to Democratic Congressional Members and Staff. Do you commit that, if confirmed, you will respond to all relevant inquiries from all Members of Congress, regardless of party or position?

Response: I do not believe your depiction is accurate. The Department itself needs to carefully weigh every request from Congress and insure it is meeting the needs of Congress to ensure harmonious relationships with you and this committee. As I stated in my 2006, my personal view is that the Department of the Interior needs to provide full disclosure to Members of Congress, subject to the Department of Justice's guidelines. In 1998, the Chief of Staff for the Secretary of the Interior promulgated guidance for the Department and stated in that guidance that was to treat requests from individual members under FOIA. Since that time, I have reviewed the Department of Justice's guidelines and I think that the Department's 1998 guidance missed a number of caveats that were contained within the Department of Justice guidelines.

Question 7: If confirmed, do you commit to assuring staff in the Office of the Secretary, including the Office of Congressional and Legislative Affairs, will respond to all relevant inquiries from all Members of Congress, regardless of party or position?

Response: I expect the Office of Congressional and Legislative Affairs to make its best efforts to do so.

Conservation Cooperatives

Question 8: **In Vermont, the North Atlantic Landscape Conservation Cooperative and University of Vermont's Cooperative Fish and Wildlife Research Unit provide critical scientific information used by natural resource managers, communities, and citizens. Do you support these types of programs, and if so, how will you ensure they are strengthened at the Department of Interior?**

Response: As I indicated at the hearing, the Department and its bureaus should base decisions on available science. Regarding the specific programs that you mention, I would need to learn more about them to provide a meaningful response to this question.

Energy Policy

Question 9: **What are the policy implications of the President's America First Energy Plan for the Department of Interior? How will you implement the plan?**

Response: Greater energy independence. If confirmed, I look forward to helping the Secretary implement the President's vision, and to engaging in policy discussions and implementation efforts.

Endangered Species Act

Question 10: **In the past, including during your testimony to the House Natural Resources Committee on April 19, 2016, you advocated for weakening protections for critical habitat of endangered species. If confirmed, will you continue your earlier efforts to roll back critical-habitat protections for imperiled species?**

Response: I did not advocate weakening protections for critical habitat of endangered species. Instead, my testimony advocated following the law. If confirmed, my focus in recommending decisions pertaining to critical habitat and ESA implementation will be on minimizing conflict and controversy associated with the Act in a manner that is consistent with the law.

Question 11: **As Solicitor at the Department of the Interior, you authored a controversial opinion, "The Meaning of 'In Danger of Extinction Throughout All or a Significant Portion of its Range,'" that was widely criticized by scientists for its failure to grasp the biological realities of extinction and whose central premise was rejected by multiple courts. Do you stand by the assertions made in the opinion? If confirmed, will you continue in your earlier efforts to curtail conservation measures that seek to protect and recover endangered species throughout their geographic range?**

Response: My efforts to address the meaning of the phrase "*all or a significant portion of its range*" had nothing to do with any effort of curtailing conservation measures. Instead, it had everything to do with helping the U.S. Fish and Wildlife Service develop a policy that might withstand legal review. The laws in our country are written not by a council of scientists but by Congress, and sometimes the agencies struggle within them. I think it is possible I will need to continue my review of these issues because on March 28th of this year, a federal district court vacated and remanded the Obama Administration's "Final Policy on Interpretation of the Phrase 'Significant Portion of Its Range' in the Endangered Species Act's Definitions of 'Endangered Species' and 'Threatened Species,'" 79 Fed. Reg. 37,578 (July 1, 2014), as it considered the agency's decision related to the pygmy owl. In that case, the court explained that the Obama's administration's

> … interpretation set forth in the Final SPR Policy impermissibly clashes with the rule against surplusage and frustrates the purposes of the ESA. *Cf. Pac. Nw. Generating Coop*, 580 F.3d at 812. Accordingly, it is not a permissible administrative construction of the ESA's SPR language. The Final SPR Policy is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," in violation of the APA. 5 U.S.C. § 706(2)(A).

It is my view that my opinion's central premise was that in this phrase "*all or a significant portion of its range*" the word "significant" could not have the same meaning as the word "all", which should be obvious.

Question 12: **In regard to the implementation of the Endangered Species Act, do you support designating critical habitat for species, and do you believe these decisions should be based on the best scientific data available?**

Response: I support faithfully executing the laws that have been enacted and, if confirmed, this will include actions under the Endangered Species Act. As I indicated at the hearing, decisions should be based on sound science, however, the inclusion of section 4(b)2 of the act also specifically provides the Secretary the authority to exclude certain areas from designation under certain conditions.

Question 13: **Do you support Fish and Wildlife Service guidelines to ensure that science is the driving force behind Endangered Species Act implementation?**

Response: As I indicated at the hearing, decisions should be based on sound science and fall within the rubric of applicable law. I am not certain what specific guidelines your question refers to.

Question 14: **Do you support relying on independent scientists with relevant expertise to evaluate and review the data that the Fish and Wildlife Service uses when making decisions related to the implementation of the Endangered Species Act?**

Response: As I stated at my hearing, my view is that policy decisions should be predicated on the evaluation of science and application of the law. This view applies to my approach to ESA implementation. I believe when scientific data is evaluated on its merits and used as an information base to make policy decisions that are honest to the science, conflicts will likely be reduced and those decisions will be reliable and legally sound.

Question 15: **Are you confident that the current process for selecting contractors and independent scientists to conduct scientific peer reviews related to the implementation of the Endangered Species Act sufficiently guards against political bias, and/or the appearance of political bias? Why or why not?**

Response: I am not sufficiently familiar with the current process for selecting peer reviewers and would need to learn more about the program to provide a meaningful response to your question.

Question 16: **Based on your interpretation of the Endangered Species Act and Department of the Interior policies, what are the requirements for consultation with federally recognized Native American tribes in making rulings under the Act?**

Response: If confirmed, I would need to evaluate the Department's current policies on consultation prior to offering my interpretation. That said, as I have stated previously I believe in consultation and need to balance consultation within the confines of the Act.

Question 17: **How could the Department of the Interior's consultation with Native American tribes concerning Endangered Species Act enforcement be improved?**

Response: As I am not at the Department nor up to speed on existing consultation policies, I would need to review those materials, if confirmed.

Fisheries

Question 18: **Many fish populations in both marine and freshwater environments are threatened. What actions would you take to address these issues?**

Response: As a fisherman and former member of the Board of Game and Inland Fisheries for the Commonwealth of Virginia, I am sensitive ecological and economic value of our nation's fish populations. Much of my career has focused on finding durable solutions to the many challenges associated with threatened and endangered species recovery through the lens of the ESA both from public and private sector perspectives. Should I be confirmed, I would apply this experience and the knowledge gained through it to making recommendations that comport with the law and advance Secretary Zinke's conservation agenda.

Question 19: **What additional actions should Department of the Interior take to prevent invasive Asian carp from invading the Great Lakes and potentially destroying the ecosystem?**

Response: I recognize the risk to the Great Lakes associated with the introduction of Asian carp and, if confirmed, I look forward to evaluating ongoing activities at the Department to prevent, detect and control Asian carp in order to protect the Great Lakes.

Question 20: **Will you support full funding of fisheries management activities that result in many hundreds of millions of dollars flowing through the recreational sector of the United States economy?**

Response: As a fisherman and former member of the Board of Game and Inland Fisheries for the Commonwealth of Virginia, I am keenly aware of the ecological and economic value of effective and informed fishery management as well as its importance for subsistence to Alaska communities. I know the U.S. Fish and Wildlife Service, working with state and local governments and other partners, maintains a network of fisheries that spans the country. Should I be confirmed, I commit to working with Secretary Zinke, the Administration, and the Congress to facilitate appropriate funding for fisheries consistent with the President's budget and priorities.

Question 21: **What are your specific priorities for the management of the Great Lakes and Lake Champlain fisheries?**

Response: My view is that effective resource management decisions hinge on sound science applied within the contours of the law. Within this framework, my priorities will be to advance Secretary Zinke's conservation agenda in a manner that is rooted in and supported by input from a wide array of stakeholders, particularly those state and local communities most directly affected by the decisions the Department makes.

Fossil Fuels

Question 22: **According to recent studies, the quantity of federal fossil fuels already under lease exceeds the amount that can be burned and still meet our commitments to reduce domestic greenhouse gas emissions, keeping average global temperature below 2 degrees Celsius. The Department of the Interior is responsible for managing fossil fuel development on public lands and waters. Would you take action to ensure federal fossil fuel leasing decisions are consistent with our national and international climate commitments? Do you support a moratorium on fossil fuels extraction on federally-owned public lands and waters?**

Response: I am a believer in an all-of-the-above energy strategy and, if confirmed as Deputy Secretary, I would support the Secretary's efforts to foster responsible development of wind, solar, hydro, coal, oil, and natural gas on federal and tribal lands.

Question 23: **President Trump campaigned on the promise of bringing the coal industry back and restoring thousands of coal jobs. Many economic and policy analysts agree that the decline in coal production has more to do with the increase in natural gas production than environmental regulations. What is your assessment?**

Response: The Energy Information Administration has projected that coal will remain an important part of the American fuel mix for decades.

Question 24: **What role do you think the Department of the Interior can play in transitioning our country away from fossil fuels?**

Response: The role of the Department of the Interior is to make energy resources on federal lands available for development, as appropriate; it is not to select winners and losers among energy sources.

Question 25: **Will you encourage wind and solar generation on lands managed by the Department of the Interior?**

Response: I support an all-of-the-above energy approach, which includes wind and solar.

Question 26: **Do you agree that there are places that are too unique, either for historical, cultural, environmental, wildlife, or similar reasons, to open up to fossil fuel development?**

Response: Yes, along with other important factors, the characteristics your question references are among those it is appropriate to consider when making decisions about where and how development takes place.

Question 27: President Obama withdrew significant portions of the Arctic and Atlantic Oceans from oil and gas development. The reasons he cited for this action include the irreplaceable value of these waters for Indigenous, Alaska Native, and local communities' subsistence activities, economies, and cultures; protection of wildlife and wildlife habitat; promotion of scientific research; and the vulnerability of these ecosystems to an oil spill, which would present significant logistical, operational, safety and scientific challenges for extraction and spill response. In addition, President Obama noted that by the time oil production could begin in these areas, our nation needed to be well on our way to transitioning to clean, renewable energy sources.

In President Trump's Executive Order of April 28, 2017 on Offshore Energy Strategy for the Five Year Offshore Leasing Program, President Trump modified President Obama's withdrawal, and opened these areas for leasing consideration. This Executive Order directs the Department of the Interior to review the Five Year Offshore Leasing Program. **Notwithstanding DOI's statutory requirement to analyze all available leasing areas, if confirmed, will you commit to the highest environmental protections for the Atlantic Region, Pacific Region, and Alaska Region, including the Beaufort, Chukchi, and North Aleutian Basin Planning Areas commensurate with those provided by the Obama Administration?**

Response: Because I am not at the Department, I am unaware of the details regarding the ongoing review of the Five Year Offshore Leasing Program.

Question 28: **The Gulf of Mexico and Gulf Coast communities are on the front lines of climate disruption and fossil fuel extraction. Many communities, primarily low-income and communities of color, suffer daily from environmental injustices related to the fossil fuel industry. If confirmed, would you support action to extend or make permanent the drilling moratorium in the Eastern Gulf of Mexico? If confirmed, will you commit to further action to phase out fossil fuel development and promote a just transition to a clean, renewable energy-based economy along the Gulf Coast?**

Response: I am committed to the president's energy plan.

National Heritage Areas

Question 29: **Congressionally designated National Heritage Areas (NHAs) are special places where natural, cultural, historic, and recreational resources combine to form a distinctive landscape arising from patterns of human activity shaped by geography. All NHAs tell nationally important stories through the physical features of the area and the traditions that have evolved within them. Each of the 49 NHAs in the United States is governed by separate authorizing legislation and operates under provisions unique to its resources and desired goals. As Deputy Secretary of the Interior, will you continue to support National Park Service's National Heritage Area program?**

Response: Yes. I understand that National Heritage Areas have provided many positive benefits to local communities.

Question 30: **All NHAs interpret and highlight nationally important stories. Heritage areas are representative of the national experience through both the physical features that remain and the traditions that have evolved within them. In recent years, funding to these heritage areas have been unequally distributed with older heritage areas receiving twice the amount of $300,000 awarded to heritage areas created after 2006. If confirmed, will you support equal funding among all NHAs, so that decade-old heritage areas might start to meet their potential?**

Response: If confirmed, I commit to working with Secretary Zinke, the Administration and the Congress to ensure appropriate funding consistent with the President's budget and priorities.

Question 31: **If confirmed, will you defend the National Heritage Area program against unwarranted and harmful budget cuts?**

Response: Again, if confirmed, I commit to working with Secretary Zinke, the Administration and the Congress to advocate for appropriate funding consistent with the President's budget and priorities.

National Monuments

Question 32: **The 1906 Antiquities Act allows the president to proclaim "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States" to be national monuments. At his nomination hearing, Secretary Zinke said of rescinding a national monument, "legally, it's untested." Do you believe that the President has the legal authority to overturn an existing national monument designation?**

Response: As I noted during the hearing, the exercise of the President's authority under the Antiquities Act is a matter that will be evaluated by the White House Counsel. As I also noted, I am familiar with conflicting legal opinions interpreting the President's authority under the Antiquities Act but, again, this is a matter for the White House to decide.

Question 33: **Earlier this month, the Department of the Interior revealed its list of National Monument designations that it would review under Executive Order 13792 to determine whether each designation or expansion conforms to the policy set forth in 82 FR 20429, Section 1. This section states that designations should "appropriately balance the protection of landmarks, structures, and objects against the appropriate use of Federal lands and the effects on surrounding lands and communities." How will you instruct the Department to balance these considerations in conducting the designation reviews?**

Response: If confirmed, I do not know what role, if any, I will have in the monument designation review that is currently underway at the Department.

National Parks

Question 34: **Do you believe we should privatize the National Parks Service?**

Response: No. I believe that our parks are our national treasures and should serve and inspire all Americans.

Question 35: **How would you describe the economic and environmental value of the National Parks?**

Response: National parks provide many tangible economic benefits to our economy and to local communities, benefits that I observed growing up in a small town in Colorado.

Question 36: **If confirmed, how will you initiate policy reforms to make the National Parks more accessible and relevant to communities of color, low-income families and people with disabilities?**

Response: If confirmed, I will work with the Secretary and Congress to ensure that our parks serve and inspire all Americans.

National Wildlife Refuges

Question 37: **How will you ensure that our National Wildlife Refuges are adequately maintained for the benefit of current and future generations of Americans?**

Response: As a sportsman, I understand and appreciate the importance of fish and wildlife conservation. I have applied this stewardship ethic throughout my career, from my time at Interior to my service on Virginia's Board of Game and Inland Fisheries. Should I be confirmed, I will continue my commitment to working with a wide array of stakeholders and partners, in particular states and local communities, to find solutions to conflicts; to advance Secretary's Zinke's agenda for conservation stewardship; to improve game and habitat management; and to increase outdoor recreational opportunities for this and future generations.

National Scenic and Historic Trails

Question 38: **Will you commit to protecting National Scenic and Historic Trails lands from fossil fuels and mineral extraction?**

Response: I will commit to looking into the issue. I am in agreement with Secretary Zinke that development can and should be conducted in accordance with the principles of multiple use. If confirmed, I will work with the Secretary to find a balance for all uses, including hunting, fishing, hiking, and other forms of recreation, which play an important role on public lands.

Question 39: **Will you commit to preventing fossil fuel pipelines from crossing National Scenic and Historic Trail systems?**

Response: I am in agreement with Secretary Zinke that development can and should be conducted in accordance with the principles of multiple use. If confirmed, I will work with the Secretary to find a balance for all uses, including hunting, fishing, hiking, and other forms of recreation, which play an important role on public lands.

Question 40: **National Scenic and Historic Trails drive local recreation economies. What is your plan for ensuring that National Park Service funding is sufficient to maintain critical trail infrastructure such as trails, shelters, and bridges?**

Response: If confirmed, I commit to working with the Secretary, the President, and Members of Congress to address the many infrastructure needs of our communities.

Public Lands

Question 41: Under what conditions do you believe it is appropriate to transfer federal lands to private ownership?

Response: I share Secretary Zinke's opposition to the sale or wide scale transfer of federal lands. As the Secretary offered in his written responses to this Committee, "…there are some situations in which commitments have previously been made, inholdings need to be swapped or exchanged, or land banks are well situated to address the needs of growing urban areas, where limited transfer is appropriate." I would need to review such proposals before making any decisions.

Question 42: **Under what conditions do you believe it is appropriate to transfer federal lands to state ownership?**

Response: As I stated above, I support Secretary Zinke's commitment to federal lands.

Question 43: **You have a long career advocating and/or lobbying for big oil, gas, coal and mining corporations that operate on public lands. How can you be effective in protecting federal public lands when you will have to recuse yourself from so many of these issues?**

Response: I can be effective protecting public lands. For example, I resolved contentious claims on the Black Canyon of the Gunnison, protecting the National Park's assets. I believe that public trust is a public responsibility, and believe maintaining an ethical culture is important. I will fully comply with the ethics agreement I signed. Moreover, it is not my experience that the that the primary focus of the chief operating officer of the Department of the Interior is directed at particular matters involving specific parties, but rather larger policy and organization issues. In addition, for the duration of my service, I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding particular matters involving specific parties of former clients or entities represented by my former firm. Finally, I will install a robust screening process, should one not exist within the office.

Question 44: **If confirmed, how will you address issues of inequality in access to public lands?**

Response: Secretary Zinke and I both believe public lands should be available for the enjoyment of all. If confirmed, I look forward to working with the Secretary to increase recreational access to public lands.

Question 45: **How would you describe the economic and environmental value of public lands?**

Response: Having grown up in a small town in Colorado, I understand firsthand the economic impact our public lands have on local communities across the country. From energy development to recreational access, these lands offer invaluable resources to locals and tourists alike.

Question 46: **According to the Outdoor Industry Association, the outdoor recreation economy generates $887 billion in economic activity and 7.6 million American jobs. The association claims that it is a stronger economic sector than oil and gas, motor vehicles and accessories, and pharmaceuticals. Do you concur with this economic assessment? Does the economic significance of outdoor recreation affect your support for maintaining public lands for recreation purposes in contrast to other uses?**

Response: I grew up in Colorado, where some communities benefitted significantly from an outdoor recreation economy. Access to federal lands creates jobs and bolsters local economies, so I believe there is great merit in supporting these opportunities for quality access.

Land and Water Conservation Fund

Question 47: **Created by Congress in 1965, the Land and Water Conservation Fund (LWCF) was a bipartisan commitment to safeguard natural areas, water resources and our cultural heritage, and to provide recreation opportunities to all Americans. National parks like Rocky Mountain, the Grand Canyon, and the Great Smoky Mountains, as well as National Wildlife Refuges, national forests, rivers and lakes, community parks, trails, and ball fields in every one of our 50 states were set aside for Americans to enjoy thanks to federal funds from the Land and Water Conservation Fund (LWCF). The LWCF is critical to the protection and preservation of the many landscapes that drive the $887 billion outdoor recreation economy.**

Question 48: **The Administration's "skinny" budget included a direct attack on federal land conservation, proposing to drastically slash funding for this bipartisan priority. The temporary extension of the LWCF expires September 30, 2018. If confirmed, will you support the LWCF, and continuing to expand public access to parks, forests and trails?**

Response: Since 1965, the LWCF has been a successful program that has benefitted both Vermont and my home state of Colorado. It has my support and the support of Secretary Zinke. Should I be confirmed, I look forward to working with you and your colleagues to reauthorize the program.

Question 49: **The LWCF makes incredibly important investments in my state, protecting federal units like the Appalachian Trail and the Conte National Fish and Wildlife Refuge and working in public-private partnership through the Forest Legacy Program to preserve working forests and keep jobs in the woods. If confirmed, will you commit to supporting permanent reauthorization and full, dedicated funding of this program, as Secretary Zinke did in his confirmation hearing?**

Response: I share Secretary Zinke's support for the LWCF and look forward to working with you and your colleagues to reauthorize the program.

Question 50: **Natural and recreational infrastructure is critical to clean water, healthy families, safe neighborhoods and continued growth and jobs in our extremely productive outdoor recreation economy. Our National Parks and public lands are in need of continued investment in conservation as well as maintenance. Do you agree that the LWCF represents an infrastructure investment necessity that drives economic production, growth, and employment in America every bit as much as do road and bridge construction, water resource development, and other public works projects?**

Response: Our public lands and national parks hold some of our nation's greatest treasures. As I said at my hearing, I grew up surrounded by public lands and know the many benefits

they have to offer. The outdoor industry is an integral part of our economy. Should I be confirmed, I will continue to support programs like LWCF that incentivize and preserve necessary investments in outdoor and recreational opportunities.

Question 51: **Should you be confirmed, will you commit to an annual budget that allocates all of the annual $900 million from the LWCF account to the programs identified by Congress each year in the appropriations bill?**

Response: The LWCF has my support and should I be confirmed I look forward to working with you and your colleagues to protect and bolster this important program. As a native Coloradan and outdoorsman, I have seen the good work LWCF does for local communities, sportsmen, recreationists, and conservation as a whole. As the budget process moves forward, I look forward to working with President Trump, Secretary Zinke and Congress to support LWCF's critical work.

Science

Question 52: While you were with the Department of the Interior, there were allegations that you manipulated scientific data for political outcomes. In order to protect scientific integrity, the Department of the Interior created a Scientific Integrity Policy, which all career, political, and contract employees must adhere. There are now designated Scientific Integrity officers, who are career employees in each bureau to review and adjudicate any discrepancies. Do you commit to maintaining this policy?

Response: As I indicated at my hearing, I did not manipulate scientific data. I am not yet familiar with this policy, but I agree that scientific integrity should underpin agency actions.

Question 53: Do you commit to respecting all decisions that come from these Scientific Integrity Officers?

Response: I will support decisions, but I will not support arbitrary or capricious decisions, so I cannot say yes to all decisions.

Question 54: Do you commit to personally signing the Scientific Integrity Policy, and sharing with this committee a copy of that document?

Response: As I indicated in response to a previous question, I am not yet familiar with this policy, but I agree that scientific integrity should underpin agency actions.

Tribal Issues

Question 55: **Indian Affairs is the oldest bureau of the Department of the Interior. Throughout history and even today, the United States government has treated the Native American people with disrespect, abrogating treaty obligations and its trust responsibility. As a result, there are Native American communities living in unbelievable poverty with high unemployment rates and unspeakably high youth suicide rates. Do you agree with these assertions? If so, what do you propose to do at the Department to improve life for the Native American people throughout this country?**

> **Response:** Secretary Zinke and I both believe the Department of the Interior has an important trust responsibility in Indian Country. If confirmed, I look forward to working with him to promote tribal sovereignty and self-determination.

Question 56: **The federal government's moral and legal obligations to tribes in light of the trust responsibility carry immense moral and legal force. This trust relationship serves as an underlying basis for tribal consultation, the process by which the government engages in a meaningful, good-faith dialogue with all tribes. The Department of the Interior, by virtue of its role in Native American affairs, plays a prominent part in how the government engages in tribal consultation.**

In the wake of the Dakota Access Pipeline, three federal agencies, including the Department of the Interior, published a report in January 2017 entitled, "Improving Tribal Consultation and Tribal Involvement in Federal Infrastructure Decisions." The subject of months-long consultation across Indian country, this report sets forth a number of recommendations to improve the process for permitting and infrastructure development. What steps do you intend to take to incorporate this report into the agency's decision-making process?

> **Response:** I am not familiar with the January 2017 report and therefore cannot comment on its proposals. I do share Secretary Zinke's commitment to building and maintaining mutual trust among tribes to build consensus on infrastructure or permitting issues.

Question 57: **As the Department of Energy laid out during a recent Tribal Energy summit, the potential for renewable energy in Indian Country is enormous. While reservations account for 2% of the nation's land mass, they hold 5% of the nation's potential renewable energy resources. The Department of Energy also estimates that wind power from tribal lands could satisfy 32% of the total U.S. electricity demand. And solar production from Indian lands could generate enough energy to power the country two times over. Nevertheless, the Department of the Interior is turning its attention to conventional fossil fuels for development, this despite the upward trajectory of renewables. What role do you think renewable energy should play in energy development in Indian Country?**

Response: Similar to the President and Secretary Zinke, I support an all-of-the-above energy approach, which includes renewable energy. There are tribes that choose not to develop energy resources, and I agree with the Secretary that we must respect that position, which is a true reflection of tribal sovereignty.

USGS and Water

Question 58: **If confirmed, how will you support critical water information services including the United States Geological Survey (USGS) water-gauging infrastructure?**

Response: Yes.

Question 59: **Please describe your approach to ensuring that USGS matching funds used to complement state- and locally-sponsored water measurement gauges and associated information technology are not diverted to other Agency activities.**

Response: Generally, collaboration among our local and State partners benefits Interior. I am not currently at the Department and cannot offer further insight until briefed, if confirmed.

Wild horse management

Question 60: Do you have plans to change or modify the Bureau of Land Management's wild horse management plan? If so, what changes would you recommend?

Response: I intend to work with Congress on finding a solution to this problem.

U.S. Senate Committee on Energy and Natural Resources
May 18, 2017 Hearing
The Nomination of Mr. David Bernhardt to be Deputy Secretary of the Interior

Questions from Senator Al Franken

Question 1: I understand that under the new Administration the Department of Interior is undertaking a brief review of Cobell buy-back program strategies. It is also my understanding that the Department has made commitments to a number of tribes, including the Leech Lake Band of Ojibwe and other tribes in Minnesota, that they will be included in the next round of implementation. Should you be confirmed, would you be in a position to ensure a quick review of implementation strategies and ensure that the commitments made to tribes on this matter be maintained?

Response: Because I am not at the Department, I do not know if I will have any role in this process.

Question 2: Restoring tribal homelands rebuilds tribal land bases and strengthens the relationship between tribes and the federal government. It also makes administering justice and engaging in economic development easier by reducing checkboard landholdings. During your time at the Department of the Interior, many tribes were of the opinion that the Department had imposed what was essentially a moratorium on land into trust acquisitions.

a. **Can I get a commitment from you that your Interior Department will not put in place a land into trust moratorium?**
b. **If you cannot make the commitment requested in part (a), would you at least commit to a transparent process that prioritizes meaningful consultation with tribes and tribal organizations—on an open and fair basis—so their voices can be heard on any proposed changes to Interior's land into trust procedures?**
c. **Can you please share your views on the importance the Administration will place on the land to trust process?**
d. **In 2008, the Department of the Interior, through then-Assistant Secretary Carl Artman, finalized guidance for restricting land to be taken into trust related to gaming. Yet the Department did not consult with tribes in drafting this guidance. Can I get a commitment from you that the Interior Department will consult with tribes on a government-to-government basis when developing any additional guidance or regulations as it pertains to land into trust acquisitions?**

Response: As I indicated in the hearing, I take consultation seriously and commit to consult with tribes on a government-to-government basis. I am not at the Department and therefore am unaware of the Administration's current work on the land into trust process. If confirmed, I will need to be briefed on the state of land into trust procedures, and after that I would be happy to visit with you or your staff.

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Question 3: If you are confirmed as Deputy Secretary of the Interior, you will be responsible for overseeing the Bureau of Indian Affairs (BIA). With the multitude of problems in Indian Country today, from disturbingly high rates of youth suicide to a lack of sufficient economic opportunity and many others, we need a bipartisan commitment to address the living conditions on tribal lands. One of the most frustrating issues with the BIA has been the chronic underfunding of important programs and general lack of support from the federal government.

a. As Deputy Secretary of the Interior, would you advocate for strong funding for federal programs that support American Indians?

Response: As we discussed in your office, I know this is an issue you care about and so do I. I am committed to working with you to find ways to address these chronic challenges in Indian country.

b. Do you have a timeline for filling BIA positions?

Response: No, I am not aware of a timeline.

c. Will you expand on your ideas for improving living conditions in Indian Country?

Response: See my response to question 3a, above.

Question 4: **As we discussed at the hearing, the federal government has moral and legal obligations to uphold its treaty and trust responsibilities to Native Americans and engage with tribes on a government-to-government basis. This government-to-government relationship is the basis for tribal consultation, the process by which the United States engages in a meaningful, good-faith dialogue with tribes. The Department of the Interior, by virtue of its role in Native American affairs, plays a prominent part in how the government engages in tribal consultation.**

a. You stated that you would "unequivocally commit" to consult with tribes. Yet as a part of the Administration's review of Bears Ears National Monument, Secretary Zinke spent a total of one-hour meeting with tribal leaders. What would you consider meaningful consultation?
b. If confirmed, will you uphold the federal trust responsibility and ensure that Interior provides tribes with adequate government-to-government consultation on Bears Ears National Monument and any other lands issue that may affect them?

Response to a. and b.: I am not at the Department, so I am unaware of the Secretary's ongoing consultations. As I said in the hearing, I appreciate the importance of tribal consultation, take consultation seriously, and commit to consult with tribes, if confirmed.

Question 5: **At a recent tribal energy summit, Secretary Zinke made several statements that raised concerns to tribes including reexamining the Indian Reorganization Act and treating tribes like corporations. In a clarifying letter to the National Congress of American Indians, Acting Deputy Secretary James Cason stated that "at this time there are no plans to alter the Department's current management of our trust responsibilities."**

Statements such as these have created uncertainty in Indian Country about this Administration's view on the trust responsibility and whether there are plans to diminish the trust relationship among tribes and the federal government. Do you share the view that the trust relationship is up for reconsideration, and if so, in what areas would you seek changes to that relationship?

Response: I am not aware of these statements.

Question 6: Each agency head has been instructed to undertake a review of their agency to determine how to reorganize the departments. What will you do to ensure proper consultation is conducted with tribal governments prior to any decisions or actions regarding reorganization?

Response: I appreciate the importance of tribal consultation, take consultation seriously, and commit to consult with tribes as appropriate, if confirmed

Question 7: Economic development is vital for improving Indian Country, and one area of opportunity is the energy sector. For example, there is significant potential for clean energy development in Indian Country—like wind, solar, and biomass. I have been working to fund the Tribal Energy Loan Guarantee Program (TIELGP), which was included in the Energy Policy Act of 2005 but received its first funding in Fiscal Year 2017. This program would allow the DOE to guarantee up to 90 percent of the principal and interest of a loan issued to an Indian tribe for energy development. By leveraging federal resources, this program would encourage borrowers to partner with the private sector to develop energy projects. Will you commit to working with me to boost renewable energy generation on tribal lands, which would bring important funds and jobs to these communities?

Response: If confirmed, I commit to learning more about this program and working with you and Secretary Zinke, as appropriate.

Question 8: A recent National Institute of Justice report found that more than half of American Indian and Alaska Native women—and more than one in four men—have experienced sexual violence in their lifetime. And among those who have experienced sexual violence, almost all—96% of women and 89% of men—have been victimized by a non-Indian partner. That is a horrific statistic. And despite their prevalence, crimes of sexual violence committed by non-Indians in Indian Country often go unprosecuted and unpunished, leaving victims without justice and offenders on the loose. So last Congress, Senator Murkowski and I introduced the Justice for Native Survivors of Sexual Violence Act, which would recognize and reaffirm Indian tribes' inherent power to exercise criminal jurisdiction over non-Indians who commit crimes of sexual violence in Indian Country. This commonsense legislation will lay the groundwork for tribes to address sexual violence in their communities in a meaningful way, and I'm looking forward to reintroducing the bill soon.

Mr. Bernhardt, I want to know from you how the Interior Department will work with tribes to strengthen their tribal justice systems and ensure that they have the resources they need to take on this critical work. I also understand that the Department of Justice has the primary responsibility for investigating and prosecuting crime in much of Indian country. When Senator Sessions came before the Judiciary Committee, I asked him about his views on these issues and was concerned by how much he has to learn about law enforcement in Indian Country. Can you assure me that you will coordinate and share information with the DOJ to ensure that there is a comprehensive understanding of how these crimes impact Indian Country?

Response: I completely agree these are horrible statistics and the situation is appalling. I will do everything I can to facilitate the sharing and coordination of information with the Department of Justice to ensure a better understanding of the impacts of these crimes.

Question 9: You spent nearly eight years at the Department of the Interior during the Bush Administration, and during that time you played key roles in overseeing the Department's relationship with Congress and in monitoring the ethical culture at the Department. Given your senior role in the Bush Department of the Interior, you had a front row seat to the numerous scandals that plagued the Department.

a. Can you describe your relationship with lobbyist Jack Abramoff? On what occasions did you meet him and what were the purposes of those meetings?

Response: I have no relationship and do not believe I ever met him.

b. Can you describe your relationship with then-Deputy Secretary Steven Griles? At what point did you become aware of his involvement with illegal activities?

Response: He was the Deputy Secretary of the Department of the Interior. I became aware of his illegal activities when he was indicted.

c. Robert McCarthy was a DOI employee who became a whistleblower, exposing mismanagement of Indian Trust funds. Mr. McCarthy subsequently was forced to resign. Can you describe your role, if any, with regards to his resignation? How do you plan to deal with whistleblowers who reveal corruption at the agency if you are confirmed?

Response: I believe that anyone who reveals corruption up their chain of command or to the Inspector General should be protected, consistent with applicable law and practice. However, in general I do not believe Mr. McCarthy's actions were proper. Lawyers and auditors who have an additional set of ethical duties should take inappropriate matters up their chain of command or to the Office of Inspector General before they go to media. I understand that in a settlement of a challenge to his dismissal, he was allowed to resign.

d. When Senator Stabenow asked about the allegations that scientific information provided by USFWS scientists was altered in preparing Senate Testimony for Secretary Norton, you responded that you had not altered the science. Can you please elaborate?

Response: Yes, to the extent any documentation was modified, it was not modified by me, and I do not believe I was aware of it until it had been disseminated.

Question 10: While you were at the Department, the DOI Executive Resources Board, or ERB, recommended salary increases for top level employees. The ERB also gave out awards, called STAR awards, designed to recognize particularly outstanding accomplishments by DOI employees.

During the Bush Administration, the ERB distributed a substantial number of STAR awards to senior officials at the Department of the Interior, including several members of ERB itself. It appears that STAR awards, which were supposed to be used to reward exceptional work, were essentially used as a tool whereby DOI political appointees enriched themselves with taxpayer money. One particularly egregious example was a nearly $10,000 award for Deputy Assistant Secretary Julie MacDonald in 2004. Routinely, these awards were given to political appointees without any written justification and without formal nomination.

a. Were you on the ERB in 2004?

Response: I am not sure of the dates, but I did serve on the ERB for certain years.

b. Were you in any way involved in the awarding of the award to Ms. MacDonald? If so, what was your justification?

Response: If I was on the ERB when she received a reward, I could have been part of that process, along with others on the ERB and her supervisors. I do not recall the justification, but I believe there would be a written justification associated with the award, if it occurred.

c. You, yourself, received a $7,000 STAR award in 2004. The guidance in place at the time capped awards at $5,000. Did the size of your award surprise you?

Response: I have no recollection of my reaction. Money has not been motivating factor for my experience with public service.

Question 11: With a changing climate, we are seeing longer wildfire seasons and more extreme fires. At the same time, more and more people in the United States are living in and around forests, grasslands, shrublands, and other vegetated natural areas – places commonly referred to as the wildland-urban interface (WUI). Approximately 70,000 communities nationwide are considered to be at high risk from wildland fire, including some in Minnesota. Defense of private property – much of which is located in the WUI – accounts for a large percentage of fire suppression costs. How will you work with the United States Forest Service to mitigate the costs of these fires while ensuring the safety of vulnerable communities?

Response: The issues surrounding the prevention of forest fires and funding for fire suppression efforts are important. If I am confirmed, I will evaluate the Department's current role in fire prevention and suppression and work closely with USDA, the Forest Service, states, and Congress to ensure that these programs are appropriately managed**.**

Question 12: Do you believe that climate change impacts should be included in environmental reviews under the National Environmental Policy Act (NEPA)?

Response: As I indicated at my hearing, I will consider the science on climate change and the applicable law in recommending policy decisions that are consistent with the Administration's agenda and the law, should I be confirmed.

Questions 13: Do you believe that climate change has a cost to society and that this social cost of carbon should be used in regulatory analyses?

Response: As I indicated at my hearing, I will consider the science on climate change and the applicable law in recommending policy decisions that are consistent with the Administration's agenda, should I be confirmed.

Question 14: If confirmed, what will do you do to promote renewable electricity generation—including wind and solar—on public lands?

Response: I am a supporter of an all-of-the-above energy policy that includes the development of renewable energy projects and transmission projects on federal lands.

Question 15: The Land and Water Conservation Fund has been a critical tool over the past 50 years to secure America's natural and historical treasures. In my state, LWCF has helped protect national icons like the Boundary Waters Canoe Area Wilderness and Voyageurs National Park as well as local parks and playgrounds. The Fund is paid for by a small portion of receipts collected from offshore energy extraction. Indeed the Fund was conceived with the understanding that we would permanently protect our outdoor recreation heritage for all Americans to use, in exchange for the depletion of another non-renewable national asset.

The Fund is supposed to receive $900 million each year, but typically it receives substantially less than that. When the Secretary testified before this committee in January, he stated his support for full funding of LWCF. However, the initial budget release from the administration in March suggests that LWCF will likely be severely cut once the full budget is released.

Should you be confirmed, will you commit to an annual budget that allocates all of the annual $900 million from the LWCF account to the programs identified by Congress each year in the appropriations bill?

Response: I share Secretary Zinke's support for the LWCF and look forward to working with you and your colleagues on the program, if confirmed.

Question 16: Under what circumstances would you support or oppose the transfer of public land to state governments? For example, if Congress passed a bill transferring large sections of public lands to the states, would you recommend that the President veto it?

Response: I support the Secretary's views.

Question 17: Do you support allowing state and local governments to manage federal public lands? From a practical standpoint, how is this different from transferring federal lands to states?

Response: I share the Secretary's view that federal lands need to be managed with particular consideration of the people in local communities whose lives and livelihoods depend on the land**.**

Question 18: According to the Bureau of Land Management's statistics for Fiscal Year 2015, there are 32.1 million acres of public lands (approximately the size of Alabama) currently under lease for oil and gas activities. However, merely one-third of these acres are actually producing fuel. In fact, the United States has a record high 7,500 approved drilling permits that industry has yet to put to use.

a. **In light of this overcapacity, do you believe it is necessary for United States to open up additional public land for oil and gas production? If so, why?**
b. **How do you balance this with the need to maintain public access to federal lands?**

Response to a. and b.: If confirmed as Deputy Secretary, I would support the Secretary's efforts to foster responsible development of coal, oil, gas, and renewable energy on federal and tribal lands.

Question 19: The United States has been chronically underfunding our National Parks for years. As you know, the parks currently face a more than $12 billion backlog in deferred maintenance, including $47 million in Minnesota. I appreciate that you have committed to working with Congress to solve this unacceptable deferred maintenance backlog.

a. **What do you feel would be the best way to approach this issue?**
b. **Will you advocate to include deferred maintenance in any infrastructure package the new administration is planning?**

Response to a. and b.: I know Secretary Zinke is committed to prioritize and find innovative ways to address the maintenance backlog and enhance our parks' infrastructure.

Question 20: Many of the communities in my home state of Minnesota cannot safely rely on the water currently supplied to their homes. These communities and my state have worked tirelessly, investing millions of dollars, in a tristate water system known as the Lewis & Clark Regional Water System. A successful state and federal partnership, Lewis & Clark is funded by local communities, states and expected annual funds from the federal government. Like two water projects in your home state of Montana, federal funding for Lewis & Clark is allocated through the Department of Interior's Bureau of Reclamation. Nearly completed, all communities and states involved have paid their share of the project and in numerous cases, prefunded the necessary dollars to complete this critical water project. However, the federal share of the project has fallen short year-after-year, putting the project far behind construction schedule causing an increase in cost to the project. Will you support prioritizing the Lewis & Clark Regional Water System through the water funds allocated by the Bureau of Reclamation?

Response: While I am not familiar with the specific details of the funding concerns pertaining to the Lewis & Clark Regional Water System, I am familiar with Bureau of Reclamation's rural water projects. These projects benefit rural communities and are important to supporting the livelihood of local economies. If confirmed, I look forward to learning more about the particular details of this project.

Question 21: Mr. Bernhardt, when we met, you told me that you will sign the ethics pledge required by the Trump Administration under Executive Order 13770. The ethics pledge requires that for two years, you will not, and I quote, "participate in any particular matter involving specific parties that is directly and substantially related to my former employer or former clients, including regulations and contracts." It also includes issues that you lobbied on.

a. Do you intend to sign the ethics pledge and recuse yourself for two years on relevant issues?

Response: Yes.

b. If so, will you share this document with the committee? And if not, why not?

Response: I have assumed the document would be public since my ethic agreement is public.

c. How will we know that you are sticking with the two-year recusal? Will you, on a quarterly basis, for two years, provide the committee a list of the matters from which you are recused?

Response: Because I have agreed to do it and I will work with the Department's Designated Agency Ethics Official on a regular basis to ensure I am implementing best practices. I will not provide a list, but I will commit to visiting with you as often as you would like.

d. Executive Order 13770 allows the president to grant waivers exempting lobbyists from this ban. This is not uncommon, but what stands out is the order's elimination of the requirement that such waivers be publically disclosed once they occur. Will you commit to publically disclose the issuance of any waivers you may receive from this administration so that the American people have greater transparency into potential conflicts of interest? If not, why not?

Response: I do not know under what circumstances I might seek a waiver because I do not anticipate doing so. However, should I seek a waiver from the Designated Agency Ethics Official, I will discuss whether such a request should be made public.

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Questions from Senator Steve Daines

Question 1: I understand you have done a lot of work dealing with the Endangered Species Act. And, I know you are familiar with the Ninth Circuit Court's misguided ruling in *U.S. Forest Service vs. Cottonwood Environmental Law Center*. The Obama administration argued that the ruling has the "potential to cripple" federal land management across Ninth Circuit states, and I have no doubt that Secretary Zinke shares this concern.

a. Do you agree that the burdensome extra layer of consultation required in the *Cottonwood* decision could substantially slow forest management projects and is unnecessary to protecting at-risk species?

Response: Yes.

b. **Now that the Supreme Court has declined to hear the *Cottonwood* case, Senator Jon Tester and I have introduced legislation to statutorily reverse the decision. Can I get your commitment to speedily work in a bipartisan manner to enact a legislative solution?**

Response: Yes, I will commit to working with you in a bipartisan manner.

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Questions from Senator Joe Manchin III

Question 1: The Land and Water Conservation Fund (LWCF) expired September 30, 2015. The fund was temporarily extended for 3 years in the Consolidated Appropriations Act, 2016, and will expire again September 30, 2018, if Congress fails to pass reauthorization. The 2017 omnibus funding bill funds LWCF at $400 million - $50 million less than the fiscal 2016 enacted level. West Virginia has received approximately $233 million in LWCF funding over the past five decades, protecting places like the New River Gorge National River, and the Harpers Ferry National Historical Park, both of the National Park Service. West Virginia has 61,000 outdoor recreation jobs, and generates approximately $272 million in annual state tax revenue. In 2016, several local governments in West Virginia received grants totaling $418,473 from LWCF funds from the "state side." Previously, funds from the "federal side" have been used to acquire lands at Canaan Valley National Wildlife Refuge. These are vital to the outdoor economy and heritage of West Virginia.

If you are confirmed, will you commit to working with Congress to find a permanent reauthorization of LWCF?

Response: I share Secretary Zinke's support for the LWCF and look forward to working with you and your colleagues to reauthorize the program.

Are you willing to accept reforms to LWCF?

Response: As noted in the response to the previous question, I share Secretary Zinke's support for the LWCF and look forward to working with you and your colleagues to reauthorize the program.

If so, what reforms are you willing to accept and not accept?

Response: Should I be confirmed, I would look forward to working with Secretary Zinke, you, and your colleagues to reauthorize the program, including identifying stable, diverse and long-term funding mechanisms to keep the fund viable for generations to come.

Question 2: If confirmed, you have pledged to recuse yourself for two years from matters involving your former clients per the ethics pledge that President Trump put forth for his nominees to sign.

If confirmed, do you plan to serve longer than two years as Deputy Secretary?

Response: If confirmed, I plan to serve at the pleasure of the President, and anticipate that could be through his term.

How will you ensure you are avoiding all conflicts of interest if you indeed work on matters involving your former clients after the two-year pledge expires?

Response: If confirmed, I will follow my ethics agreement, and for the entire duration of my tenure I will consult, seek, and follow the guidance of the Department of the Interior's Designated Agency Ethics Official.

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Questions from Senator Martin Heinrich

Question 1: I continue to hear about problems arising from the large number of long-standing job vacancies in BLM's field offices in New Mexico. Of particular concern are significant vacancies in Farmington, the Federal Indian Minerals Office and Carlsbad. I understand there are as many as 21 vacant positions in Carlsbad alone, as well as the position of the Field Office Manager. Clearly the administration's hiring freeze contributed to the delay in filling these important federal jobs. If you are confirmed, what actions will you take to address promptly the need to fill the large number of job vacancies in New Mexico's various BLM offices?

Response: Although I am not aware of the status of current job vacancies within the Department's bureaus or efforts to fill those positions, Secretary Zinke has stressed one of his priorities is to get the right tools and resources out to the field, and I will look into this if confirmed.

Question 2: President Trump in his signing statement enacting the FY2017 Omnibus Appropriations Bill implied that some programs and services for American Indians and tribes may not comply with the Due Process Clause of the Constitution. The signing statement reads:

> **My Administration shall treat provisions that allocate benefits on the basis of race, ethnicity, and gender (e.g., Division B, under the heading "Minority Business Development"; Division C, sections 8016, 8021, 8038, and 8042; Division H, under the headings "Departmental Management Salaries and Expenses," "School Improvement Programs," and "Historically Black College and University Capital Financing Program Account"; Division K, under the heading "Native American Housing Block Grants"; and Division K, section 213) in a manner consistent with the requirement to afford equal protection of the laws under the Due Process Clause of the Constitution's Fifth Amendment.**

Do you believe that programs and services for Indian tribes and their members, as currently implemented, are constitutional?

Response: As I indicated at the hearing, I am not familiar with this signing statement and I have assumed that many of these programs are constitutional.

Question 3: **During the hearing, in response to a question about conducting full tribal consultation before making any changes to the land-into-trust process, you first said that you would "participate in some form of engagement", and in response to a follow up question, said that any distinction between "engagement" and "consultation" is a "distinction without a difference". However, as you know, "tribal consultation" has a particular meaning in U.S. law, involving specific commitments, processes, and procedures, while "engagement" could mean as little as a form letter or a phone call.**

If the Department of the Interior considers changes to the land-into-trust process, will you commit to engaging in a tribal consultation process before finalizing any such decision?

Response: As I stated to you at the hearing, I will support a full tribal consultation for any meaningful changes. However, because I am not at the Department, I cannot tell you what changes the Department of the Interior intends, if any, and I do not know what consultation process the Department currently intends to take.

Question 4: Good information is vital for good decision-making, and the government must act as an honest broker. Do you believe that the office of the Secretary of the Interior has the prerogative to interpret for Congress and the public the data and assessments of scientists at the FWS and other Interior science agencies?

Response: As I stated at my hearing, my view is that policy decisions should be predicated on the evaluation of science as it is and application of the law. I believe when scientific data is evaluated on its merits and used as a basis to make policy decisions that are honest to the science, conflicts will be reduced and those decisions will be reliable and legally sound. I believe when the Department picks and chooses between data, it is obligated to articulate a reason why it has done so, and it must be able to connect its conclusions to the facts it finds in a rational manner.

Question 5: **The Bureau of Indian Education (BIE) is implementing a reorganization plan developed with minimal tribal input. Will you commit, moving forward, to engaging tribes in meaningful consultation on any reorganization, and any BIE policy changes that affect tribes?**

Response: I am not familiar with the reorganization plan you reference and would need to learn more about it and the process to provide a meaningful response to your question.

Question 6: **The Department of Interior's regulatory and scientific agencies invest taxpayer dollars to produce a wealth of data about the nation's energy and natural resources. Will you commit to maintaining the integrity and public accessibility of datasets produced by Interior staff?**

Response: The integrity of scientific data and its application in decision making on behalf of the public are of paramount importance to me. Should I be confirmed, I commit to continuing this commitment and applying it to policy recommendations.

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Questions from Senator Mazie K. Hirono

Question 1: Mr. Bernhardt, beginning in April 2001 you directed the Department of Interior's Office of Congressional and Legislative Affairs. In this position, were you responsible for drafting, editing, or reviewing testimony for then-Secretary Norton?

Response: The generation of testimony for Congress generally involves a whole host of entities throughout the Department of the Interior, including individual bureaus, Solicitors office, senior advisors, Administration appointees, and the White House Office of Management and Budget. My office would have had engagement at each stage and ultimately transmitted the testimony to the Committee.

Question 2: (Follow-up to Question 1) If so, please describe your contribution to the drafting, editing, and review of Ms. Norton's testimony responding to questions submitted by then-Chair Frank Murkowski on U.S. Fish and Wildlife Service findings relating to the impact of drilling on caribou in the Arctic National Wildlife Refuge?

Response: As I stated in my previous response, the generation of testimony for Congress generally involves a whole host of entities throughout the Department of the Interior, including individual bureaus, Solicitors office, senior advisors, Administration appointees, and the White House Office of Management and Budget. My office had engagement at each stage and ultimately transmitted the testimony to the Committee.

Question 3: (Follow-up to Question 1) At the time the testimony was drafted and reviewed at the Department of Interior, were you aware of the use of information contained in a report funded by BP Oil in Ms. Norton's testimony?

Response: No, at the time I was just learning about ANWR and I was not then serving as the Secretary's primary policy counselor on the issue.

Question 4: Do you believe the Fish and Wildlife Service provides valuable scientific expertise in shaping policy for the Department of Interior?

Response: Yes.

Question 5: To what extent will you consider scientific data in shaping policy if it fails to align with the President's political agenda?

Response: As I stated at my hearing, my view is that policy decision should be predicated on the evaluation of science and application of the law. I believe when scientific data is evaluated on its merits and used as an information base to make policy decisions that are honest to the science and transparent regarding the policy choice, conflicts will be reduced

and those decisions will be reliable and legally sound.

Question 6: During the hearing in your response to Senator Franken regarding the use of climate change science in shaping policy you said that you would "take the science as it comes." Please explain what that means.

Response: Generally, we have to use the data we have available to make decisions in the context of the law and the discretion of the executive branch.

Question 7: (Follow-up to Question 6) As you may be aware, there is a substantial body of research conducted over multiple decades in multiple countries as to the causes, impacts, and effects of climate change. Given the data-driven scientific consensus regarding the current and future impacts of climate change on our communities, national security, and economy what additional scientific evidence would you be looking for to develop policy as Deputy Secretary?

Response: As I indicated in response to a similar question at my hearing, as a policymaker we must take the science as we find it, whatever it may be, and use it to make informed decisions, with the discretion we are given under the law.

Question 8: During the hearing you highlighted the concerns raised by the President on the impact activities to mitigate climate change would have on jobs, assuming that you were referencing jobs within the fossil fuel extraction industry. However, as you may be aware, there is a substantial body of evidence that climate change will negatively impact our broader economy in the long-term. In addition, as Sen. Franken pointed out, renewable energy jobs are a substantial and growing sector of American jobs which are less likely to be outsourced. As Deputy Secretary you will be second in line to assume the responsibility of protecting and managing natural resources for the U.S. public interest. In deciding policy matters how much weight will you give to protecting fossil fuels jobs versus protecting our nation's long-term economic and environmental health?

Response: As I stated at my hearing, my view is that policy decisions should be predicated on the evaluation of science and application of the law. If confirmed, I will make decisions with an open mind, actively seeking input and listening to varied views and perspectives.

Question 9: Do your business clients at Brownstein Hyatt Farber Schreck LLP have business interests in matters currently pending or that will likely come before the Department of Interior within the next few years?

Response: Yes, but to the extent they do, I will follow my ethics agreement.

Question 10: During the hearing in your response to Senator Stabenow you stated that you are certain that scientists at Interior are not under attack. Under this administration there have been reports of instances where National Park Service employees have been prohibited from publicly communicating climate facts and reprimanded for posting pictures of attendance at the inauguration. If not an "attack" how would you classify these directives?

Response: As I stated at my hearing, I do not believe that scientists at the Department are under attack. Although I am not at the Department, I understand that the directives you have identified, related to the National Park Service's official twitter account, were already existing policies.

Question 11: If confirmed as Deputy Secretary, will you encourage a culture of transparency at the Department of Interior?

Response: Yes.

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Question from Senator Angus S. King, Jr.

Question: Do you believe that prior record of service and performance should be a factor when considering how the National Park Service awards concession contracts?

Response: Yes.

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Questions from Senator Catherine Cortez Masto

Question 1: You appear to have several conflicts of interests from representing oil, gas, and water clients as a lobbyist working at the firm Brownstein, Hyatt Farber Schreck, LLP. You have stated that you will recuse yourself from matters involving your former clients for a year. Which particular matters involving your clients are currently pending before the Department?

Response: I believe that public trust is a public responsibility and that maintaining an ethical culture is important. I will fully comply with the ethics agreement that I signed. In addition, for the duration of my service, I intend to actively seek and consult with the Department's Designated Agency Ethics Official regarding particular matters involving specific parties of former clients or entities represented by my former firm. Finally, I will install a robust screening process, should one not exist within the office.

That said, on May 4, 2017, the Committee on Energy and Natural Resources received correspondence from the General Counsel of the United States Office of Government Ethics, David J. Apol.

Mr. Apol's correspondence included an enclosure of the "ethics agreement outlining the actions that the nominee [David Bernhardt] will undertake to avoid conflicts of interest." Further, General Counsel Apol explained, "we [the Office of Government Ethics] believe that this nominee [David Bernhardt] is in compliance with the applicable laws and regulations governing conflicts of interest."

In addition, I have reviewed some of the prior ethics agreements provided to the Committee in the past. There is a striking degree of consistency between the ethics agreement provided by Mr. Apol and the prior agreements provided by other nominees to positions within the Department of the Interior who worked in large private law firms representing similar clients, and in some cases the same clients. Copies of two such ethics agreements are attached to this correspondence to give you a sense of the similarities.

Given General Counsel Apol's determination that the ethics agreement I signed complies with the Office of Government Ethics' regulations and the applicable laws governing conflicts of interest, as well as the obvious similarity between that ethics agreement and those the Committee previously found sufficiently clear to proceed with the nomination, I reaffirm that I will comply with the ethics agreement I signed.

Question 2: After the year, what will your approach be as issues involving these clients arise?

Response: I will follow my ethics agreements in consultation with the Department's Designated Agency Ethics Official.

Question 3: **Under what circumstances would you seek a recusal? Or a waiver from a recusal? How transparent will that process be?**

Response: I do not anticipate seeking a waiver. However, should I do so, I will consult with the Department's Designated Agency Ethics Official on best practices.

Question 4: **As Deputy Secretary, you will oversee the Bureau of Land Management and the National Park Service. What are your thoughts on the Antiquities Act?**

Response: It was a significant grant of power to the President by the Congress.

Question 5: **What would your approach be with respect to the review of our monuments?**

Response: If confirmed, I do not know if I will have a role in the review process.

Question 6: **As a part of the review, would you consider widespread support from the state?**

Response: If I were part of such a review, yes.

Question 7: **Do you believe that monuments are important for outdoor recreation and rural economies to thrive?**

Response: In some instances, yes very important.

Question 8: **Resource Advisory Councils (RACs) are a crucial way for DOI to get diverse community input on public land management issues. RACs have helped inform decisions on issues related to recreation, land use planning, wildfire management, etc. I am concerned that these meetings are being postponed until September 2017 due to a full scale review. Do you believe community input is essential?**

Response: Yes.

Question 9: **Will you continue to postpone these meetings?**

Response: I did not postpone the meetings.

Question 10: **In Nevada, the Gold Butte National Monument Public Information forum has also been postponed. The shutting down of public input is disconcerting. What would your approach be with respect to the ongoing review of monuments and the measures taken to exclude our resource advisory councils and communities?**

Response: As I am not at the Department, I am uncertain if I will play a role in either review process.

Question 11: **Are you a strong supporter of states' rights?**

Response: Yes.

Question 12: **Do you believe a state should have a say in protecting its monuments?**

Response: Yes.

Question 13: **What are your thoughts on the protection of public lands?**

Response: I think protecting certain lands is one of the Department's highest duties.

Question 14: **There has been a push to privatize public lands, but the counties in my state cannot afford to properly manage these areas. Do believe in the agency's continued role in managing and protecting public lands?**

Response: Yes.

Question 15: **Do you support the BLM Methane rule? It has been reported that Secretary Zinke will be reviewing the rule internally. What would your approach be in reviewing the rule?**

Response: I have no informed view of the final rule, but I would learn about it by reading the rule and its administrative record, evaluating prior comments, listening to the career staff that developed it, and reviewing the complaints about it.

Question 16: Nevada is the driest state in the Nation. Please describe your approach in helping Western states address water scarcity and resiliency?

Response: I will do everything I can to ensure that the Department is a good neighbor, facilitating a collaborative approach to addressing scarcity and resiliency.

Question 17: **How would you help to facilitate another water sharing agreement once Minute 319 under the U.S. Mexico water treaty expires this year?**

Response: I would need to get up to speed on where the Department is at and where the Basin states are before I could answer this question.

Question 18: **Because the lower basin states are all dependent upon the Colorado River, do you believe we also need to increase our water supply regionally by investing in recycling, groundwater storage, and stormwater capture?**

Response: I think that these are good things to do.

Question 19: **What about ensuring that refuges get the federal water supplies they need and are receive under the law?**

Response: I think this is important.

Question 20: How would you approach wild horse management concerns that we have in my state?

Response: By working with you and your colleagues on the issue.

Question 21: **Do you believe there should be a task force to facilitate consensus?**

Response: I know that several administrations have made efforts here and failed, so before I suggest that a task force is a magic bullet, I would need to understand the scope of any previous review and how those reviewers were empowered. There have been many studies of the situation, and we need to find a pathway to fix it.

Question 22: How will you protect agency scientific findings that may be politically challenging, but should be the basis for decisions and analysis from each Bureau and Department?

Response: I will not shrink from taking the evidence as I see it and developing a reasoned articulation of the conclusions I draw based upon the facts found and the legal framework I am working under.

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:56 AM

Conversation Contents

Fwd: Description of the interim final rule for venting and flaring; delays in certain deadlines

Attachments:

/9. Fwd: Description of the interim final rule for venting and flaring; delays in certain deadlines/1.1 Update_BLM_PR_1004-AE54_53017.docx

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Tue May 30 2017 15:45:26 GMT-0600 (MDT)
To:	"Spisak, Timothy" <tspisak@blm.gov>
CC:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Fwd: Description of the interim final rule for venting and flaring; delays in certain deadlines
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<V&F Description for Mark Lawyer.Unified Agenda 5.23.17.docx>

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jtichenor@blm.gov
202-573-0536

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Tue May 30 2017 15:51:29 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
CC:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Description of the interim final rule for venting and flaring; delays in certain deadlines

Not a big surprise.

Sent from my iPhone

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U.S. Department of the Interior
Phone: (202) 513-0705
E-mail: kerry_rodgers@ios.doi.gov

On Tue, May 30, 2017 at 2:03 PM, Bremner, Faith <fbremner@blm.gov> wrote:

> Kerry:
>
> Today we learned that we're no longer doing an interim final rule to suspend and delay the various deadlines in the 2016 Waste Prevention Final Rule. Instead, we'll be preparing proposed and final rules for this purpose. So we'll need to somehow change the Reg Alert Action Form (for RIN 1004-AE54) that you approved for us on May 24 and let OMB know that we've changed direction a bit.
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> The description of the rule is the same that's in the Reg Alert Action Form and the anticipated month and year of publication is July.
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> Thanks
>
> Faith Bremner
> Division of Regulatory Affairs
> Bureau of Land Management
> 20 M St., S.E., Rm. 6291
> Washington DC 20003
> 202-912-7441
>
> ---------- Forwarded message ----------
> From: **Rodgers, Kerry** <kerry_rodgers@ios.doi.gov>
> Date: Wed, May 24, 2017 at 1:11 PM
> Subject: Re: Description of the interim final rule for venting and flaring; delays in certain deadlines
> To: "Bremner, Faith" <fbremner@blm.gov>
> Cc: Juliette Lillie <juliette_lillie@ios.doi.gov>, "Lawyer, Mark" <mark_lawyer@ios.doi.gov>, "Senio, Ian" <isenio@blm.gov>, Megan Apgar <Megan_Apgar@ios.doi.gov>, Richard Cardinale <richard_cardinale@ios.doi.gov>, "Tichenor, James C" <jtichenor@blm.gov>, Timothy Spisak <tspisak@blm.gov>
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> Hi all,
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> I obtained RIN 1004-AE54 for this Interim Final Rule and have attached: (1) the updated Regulatory Action Alert form, which I will distribute within DOI; (2) the ROCIS entry for this rule; and (3) ASLM approval to obtain the RIN. We plan to include this RIN on the Spring 2017 Agenda. Please let me know if you have any questions.
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> Thank you.

Kerry

Kerry E. Rodgers
Management Analyst, Policy and Regulatory Affairs
Executive Secretariat and Regulatory Affairs
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> > To expedite Kate can send me an email saying she is good with this.
> >
> > Juliette Lillie
> > Director Executive Secretariat and Regulatory Affairs
> > U.S. Department of the Interior
> > 1849 C St NW
> > Washington DC 20240
> >
> > PH: 202-219-7724
> >
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> >
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To: Mark Lawyer <mark_lawyer@ios.doi.gov>
Cc: "Senio, Ian J" <isenio@blm.gov>

Attached.

Thanks, Mark. Reg Alert Form to follow "soon."

Faith Bremner
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--

Mark Lawyer

Deputy Director - Policy and Regulatory Affairs
Executive Secretariat and Regulatory Affairs
Office of the Secretary
Department of the Interior

Email: mark_lawyer@ios.doi.gov
Voice: (202) 208-5257

Fax: (202) 219-2100

<V&F Description for Mark Lawyer.Unified Agenda 5.23.17.docx>

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300

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jtichenor@blm.gov
202-573-0536

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Thu Jun 01 2017 11:42:40 GMT-0600 (MDT)
To:	James Tichenor <jtichenor@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>
Subject:	RE: Description of the interim final rule for venting and flaring; delays in certain deadlines

Good idea. I will mention at our meeting with Mike today.

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

From: Tichenor, James [mailto:jtichenor@blm.gov]
Sent: Thursday, June 01, 2017 1:37 PM
To: Spisak, Timothy
Cc: Lonny Bagley
Subject: Re: Description of the interim final rule for venting and flaring; delays in certain deadlines

Hi Tim,

(b) (5) [redacted]

On Tue, May 30, 2017 at 2:45 PM, Tichenor, James <jtichenor@blm.gov> wrote:
FYI

OIRA is saying the Waste Prevention Delay Proposed Rule is "major" and "economically significant." [redacted]
(b) (5) [redacted]

---------- Forwarded message ----------
From: **Senio, Ian** <isenio@blm.gov>

Date: Tue, May 30, 2017 at 2:38 PM
Subject: Fwd: Description of the interim final rule for venting and flaring; delays in certain deadlines
To: James Tichenor <jtichenor@blm.gov>
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We just got this from the Dept.

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To: "Bremner, Faith" <fbremner@blm.gov>
Cc: Mark Lawyer <mark_lawyer@ios.doi.gov>, Ian Senio <ian_senio@blm.gov>, Megan Apgar <megan_apgar@ios.doi.gov>

Faith,

OIRA provided the following feedback on the proposed rule. Please share it with the rule writers.

—

To confirm, the rule should be designated as major under the CRA, and economically significant under EO 12866.

The regulatory impact analysis can be narrow and focus on the impact from shifting the compliance date. Underlying assumptions need not be changed, and can be revised on the basis of new information when DOI submits the proposed rule to revise the current regulations.

—

Attached is the updated Agenda entry which I will send to RISC.

Kerry

Kerry E. Rodgers
Management Analyst, Policy and Regulatory Affairs
Executive Secretariat and Regulatory Affairs
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Phone: (202) 513-0705
E-mail: kerry_rodgers@ios.doi.gov

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Kerry

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Office of the Secretary
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Phone: (202) 513-0705
E-mail: kerry_rodgers@ios.doi.gov

On Tue, May 30, 2017 at 3:04 PM, Bremner, Faith <fbremner@blm.gov> wrote:
The publication date for the final rule is projected to be November 2017.

Thanks for your help.

Faith

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Division of Regulatory Affairs
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202-912-7441

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Faith,

I will update the Regulatory Action Alert form to describe an NPRM anticipated for July 2017 publication. I will circulate it within DOI and will let OIRA and RISC know. I will ask RISC to make the corresponding changes in ROCIS, as we are unable to change the Agenda entries at this time.

One question--what is the date for the Final Rule that will follow the NPRM to suspend and delay various deadlines? We will need to provide this for the ROCIS timetable.

Thanks.

Kerry

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302. • WASTE PREVENTION, PRODUCTION SUBJECT TO ROYALTIES, AND RESOURCE CONSERVATION; DELAY AND SUSPENSION OF IMPLEMENTATION DATES FOR CERTAIN REQUIREMENTS

Priority: (b) (5) Economically Significant

Legal Authority: 25 U.S.C. 396d; 25 U.S.C. 2107; 30 U.S.C. 189; 30 U.S.C. 306; 30 U.S.C. 359; 30 U.S.C. 1751; 43 U.S.C. 1732(b); 43 U.S.C. 1733; 43 U.S.C. 1740

CFR Citation: 43 CFR 3164.1; 43 CFR subpart 3170; 43 CFR subpart 3179

Legal Deadline: None

Abstract: This ~~interim final~~proposed rule would temporarily suspend and delay certain requirements contained in a final rule that published in the Federal Register on November 18, 2016 (81 FR 83008). The final rule went into effect on January 17, 2017. Some of its provisions have delayed implementation dates that have not yet gone into effect. The delays and suspensions are consistent with the President's March 28, 2017, Executive Order on Promoting Energy Independence and Economic Growth and its requirement that the BLM review the previous, related final rule to determine whether revisions, rescissions, or suspensions are appropriate. The ~~interim final~~proposed rule would suspend until (b) (5) 2019, provisions pertaining to: waste minimization plans; flaring and venting of gas during drilling and production operations, and during well completions and related operations; determining the emissions levels of storage vessels; and minimizing gas vented during downhole well maintenance and liquids unloading. The ~~interim final~~proposed rule would delay until (b) (5), 2019 ((b) (5)) provisions pertaining to: gas capture; measuring and reporting gas volumes vented and flared; existing approvals to flare royalty free; replacing pneumatic controllers; and leak detection and repair.

Timetable:

Action	Date	FR Cite

~~Interim Final~~Proposed Rule	~~08~~07/00/17	
Final Action	11/00/17	

Regulatory Flexibility Analysis Required: No

Government Levels Affected: None

Agency Contact: Steven Wells, Division Chief, Fluid Minerals Division, Department of the Interior, Bureau of Land Management, Room 2134 LM, 20 M Street SE., Washington, DC 20003

Phone: 202 912–7143

Fax: 202 912–7194

Email: s1wells@blm.gov

Related RIN: Related to 1004–AE53

RIN: 1004–AE54

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:56 AM

Conversation Contents

NRS remote help on waste reduction rule

"Wells, Steven" <s1wells@blm.gov>

From:	"Wells, Steven" <s1wells@blm.gov>
Sent:	Fri May 19 2017 06:29:19 GMT-0600 (MDT)
To:	Ryan Joyner <rjoyner@blm.gov>
CC:	Lonny R Bagley <lbagley@blm.gov>
Subject:	NRS remote help on waste reduction rule

Ryan
Good morning, your name came up in conversation as a potential SME.
We need someone to work on the NEPA EA document to support our waste reduction rule efforts (Venting and Flaring) as part of our team. This rule is of high vis bility, and likely a good experience for your career. Would you be interested? If so, we would work with and approach your supervisor for approval and see if we can balance your workload.
I imagine it would be in spurts of effort, mostly done from your home office. If it is more time consuming we could propose a temp promotion detail.

Here is one of the current stories,

METHANE

Oil industry asks Zinke to delay rule 2 years

Brittany Patterson, E&E News reporter
Published: Friday, May 19, 2017

The American Petroleum Institute is urging Interior Secretary Ryan Zinke to postpone upcoming compliance deadlines that will affect oil and gas operators, a move prompted by the Senate's failure to kill an Obama-era methane rule earlier this month.

In a **letter** sent Tuesday, API told Zinke "swift action" is needed so hat oil and gas operators on public and tribal lands are not forced to invest in equipment to meet methane reductions set out in the rule overseen by the Bureau of Land Management. The regulation, finalized in November, limits flaring, venting and equipment leaks at more than 100,000 oil and gas wells across he West.

API urged Zinke to direct BLM to postpone the compliance dates by two years, "in light of the fact that any final determinations from the review and rulemaking processes will likely take several months."

In a surprise move last week, the Senate came up one vote short in its attempt to use the Congressional Review Act to nullify BLM's Methane and Waste Prevention Rule. The Interior Department has committed to taking a second look at the regulation as specified by President Trump's "energy independence" executive order issued in March.

However, because the methane rule remains in place, oil and gas operators face having to purchase expensive leak detection and repair equipment. Stricter requirements for producers are scheduled to begin on Jan. 1, 2018.

In the letter, API argues that changes to the methane rule are likely due to Trump's recent executive order and Interior's subsequent secretarial order, which detailed how the agency would comply. Both target the rule for review.

"With requirements of the Final Rule already applicable and deadlines approaching to initiate a multitude of acts to meet future compliance dates in the Final Rule, swift ac ion from your Department is needed to provide certainty for operators of federal oil and gas leases subject to its terms," wrote API President and CEO Jack Gerard.

Mark Brownstein, vice president of U.S. climate and energy for the Environmental Defense Fund, criticized API for trying to skirt an opportunity for the public to comment.

"Having lost in federal district court in Wyoming, and again last week in Congress, industry is wasting no time trying to find an alternative path to avoid implementing basic, long-overdue measures to reduce waste and protect public health," he said in a statement. "Any changes to BLM's safeguards to reduce waste must be made available to the public for comment before they are finalized, and must be based on sound evidence."

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Steve Wells, BLM
Division Chief,

Fluid Minerals
p 202.912.7143
c 202.329.4551
https://www.tumblr.com/search/mypubliclandsroadtrip
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I look forward to answering your question and, if confirmed, representing the interest of our great nation and giving a voice to all Americans, to include our great Indian Nations, on how we manage and sustain our public lands and treasures they contain.

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From:	"Wells, Steven" <s1wells@blm.gov>
Sent:	Tue May 23 2017 09:03:50 GMT-0600 (MDT)
To:	Ryan Joyner <rjoyner@blm.gov>
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Mr. Wells-

I apologize for not getting back to you earlier, I was on AL on Friday. I am extremely interested and would welcome the opportunity to work on this project. Would it be proper protocol for me to approach my supervisor directly about this opportunity or should I let the WO work that communication?

Again, I look forward to the opportunity.

Sincerely,

Ryan Joyner
NRS
BLM-CO-TRFO
O.970.385.1242
C.970.799.6619

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c 202.329.4551
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From:	"Wells, Steven" <s1wells@blm.gov>
Sent:	Tue May 23 2017 09:33:34 GMT-0600 (MDT)
To:	"Joyner, Ryan" <rjoyner@blm.gov>
CC:	Lonny R Bagley <lbagley@blm.gov>
Subject:	Re: NRS remote help on waste reduction rule

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BLM-CO-TRFO

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C.970.799.6619

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Subject: Re: NRS remote help on waste reduction rule

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From:	"Wells, Steven" <s1wells@blm.gov>
Sent:	Thu May 25 2017 10:11:29 GMT-0600 (MDT)
To:	"Joyner, Ryan" <rjoyner@blm.gov>, John Pecor <jpecor@blm.gov>
CC:	Lonny R Bagley <lbagley@blm.gov>, James Tichenor <jtichenor@blm.gov>
Subject:	Re: NRS remote help on waste reduction rule

John, I left you a vmail,
Hopefully the national office may use Ryan remotely to help our waste reduction rule, the EA support document.
I am looping in James the team lead for the project, he can fill in the details.
Thank you for the consideration (and your recent help for our OK ICR on drainage and diligence).
Have a good weekend, steve

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Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:56 AM

Conversation Contents

RE: Hey quick q

Attachments:

/11. RE: Hey quick q/6.1 WO Sundry Notices_followup_03.22.17 (2).docx
/11. RE: Hey quick q/7.1 MT-DAKS Briefing Paper - NDFO Flaring EA_clean 2_7_17.docx
/11. RE: Hey quick q/8.1 NDFO Flaring EA.pdf
/11. RE: Hey quick q/8.2 NDFO Flaring FONSI.pdf
/11. RE: Hey quick q/8.3 NDFO Flaring DR.pdf

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Fri May 19 2017 14:23:56 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>
CC:	Peter Mali <pmali@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	RE: Hey quick q

Did either of you have a status on this issue? If no, I would appreciate a quick note/call to BLM-MT for an update…

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: MacGregor, Katharine [mailto:katharine_macgregor@ios.doi.gov]
Sent: Friday, May 19, 2017 12:50 PM
To: Michael Nedd
Subject: Hey quick q

What is the status of the ND sundry notice issue?

--
Kate MacGregor
1849 C ST NW
Room 6625
Washington DC 20240

202-208-3671 (Direct)

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Fri May 19 2017 14:28:06 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Steven Wells <s1wells@blm.gov>, Peter Mali <pmali@blm.gov>, Jeff Brune <jbrune@blm.gov>
Subject:	Re: Hey quick q

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> **From:** MacGregor, Katharine [mailto:katharine_macgregor@ios.doi.gov]
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From:	"Wells, Steven" <s1wells@blm.gov>
Sent:	Fri May 19 2017 14:33:56 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, "Judice, Donato" <djudice@blm.gov>, Loren Wickstrom <lwickstr@blm.gov>
CC:	Michael Nedd <mnedd@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Peter Mali <pmali@blm.gov>, Jeff Brune <jbrune@blm.gov>

Subject: Re: Hey quick q

I think this is the programmatic EA for the SN approvals of flaring, looping in Loren from ND and Don, does this make sense?
thx

On Fri, May 19, 2017 at 4:28 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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From:	"Judice, Donato" <djudice@blm.gov>
Sent:	Fri May 19 2017 15:15:44 GMT-0600 (MDT)
To:	"Wells, Steven" <s1wells@blm.gov>
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Subject:	Re: Hey quick q

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(406) 896-5293 Fax
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E-Mail Address: djudice@blm.gov

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to BLM-MT for an update…

Take care and have a wonderful day! :)

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mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: MacGregor, Katharine [mailto:katharine_macgregor@ios.doi.gov]
Sent: Friday, May 19, 2017 12:50 PM
To: Michael Nedd
Subject: Hey quick q

What is the status of the ND sundry notice issue?

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Kate MacGregor
1849 C ST NW
Room 6625
Washington DC 20240

202-208-3671 (Direct)

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Steve Wells, BLM
Division Chief, Fluid Minerals
p 202.912.7143
c 202.329.4551
https://www.tumblr.com/search/mypubliclandsroadtrip
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I look forward to answering your question and, if confirmed, representing the interest of our great nation and giving a voice to all Americans, to include our great Indian Nations, on how we manage and sustain our public lands and treasures they contain.

-Secretary Zinke

"Wells, Steven" <s1wells@blm.gov>

From:	"Wells, Steven" <s1wells@blm.gov>
Sent:	Fri May 19 2017 15:35:40 GMT-0600 (MDT)
To:	"Judice, Donato" <djudice@blm.gov>, Lonny R Bagley <lbagley@blm.gov>
Subject:	Re: Hey quick q

Sounds like no movement at MIB, perhaps the question raised will lead to a green light,
Thanks for the intell, always go to the SOAK - source of all knowledge
Enjoy the weekend

On Fri, May 19, 2017 at 5:15 PM, Judice, Donato <djudice@blm.gov> wrote:
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Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Wed May 24 2017 15:57:12 GMT-0600 (MDT)
To:	Donato J Judice <djudice@blm.gov>, Jeff Brune <jbrune@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Peter Mali <pmali@blm.gov>, Jon Raby <jraby@blm.gov>
Subject:	RE: Hey quick q
Attachments:	WO Sundry Notices_followup_03.22.17 (2).docx

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"Brune, Jeff" <jbrune@blm.gov>

From: "Brune, Jeff" <jbrune@blm.gov>
Sent: Thu May 25 2017 06:17:47 GMT-0600 (MDT)

To:	Michael Nedd <mnedd@blm.gov>
CC:	Donato J Judice <djudice@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Peter Mali <pmali@blm.gov>, Jon Raby <jraby@blm.gov>
Subject:	Re: Hey quick q
Attachments:	MT-DAKS Briefing Paper - NDFO Flaring EA_clean 2_7_17.docx

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(202) 208-3774
Email: jbrune@blm.gov

"Judice, Donato" <djudice@blm.gov>

From:	"Judice, Donato" <djudice@blm.gov>
Sent:	Thu May 25 2017 07:13:12 GMT-0600 (MDT)
To:	"Brune, Jeff" <jbrune@blm.gov>
CC:	Michael Nedd <mnedd@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Peter Mali <pmali@blm.gov>, Jon Raby <jraby@blm.gov>, Diane Friez <dfriez@blm.gov>
Subject:	Re: Hey quick q
Attachments:	NDFO Flaring EA.pdf NDFO Flaring FONSI.pdf NDFO Flaring DR.pdf

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Sent:	Thu May 25 2017 08:14:52 GMT-0600 (MDT)
To:	Jon Raby <jraby@blm.gov>
CC:	"Brune, Jeff" <jbrune@blm.gov>, Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Peter Mali <pmali@blm.gov>, Diane Friez <dfriez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Judice, Donato" <djudice@blm.gov>

Subject: Re: Hey quick q

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Lonny

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> Donato J. Judice
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To: Michael Nedd
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Kate MacGregor
1849 C ST NW
Room 6625
Washington DC 20240

202-208-3671 (Direct)

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Steve Wells, BLM
Division Chief, Fluid Minerals
p 202.912.7143
c 202.329.4551
https ://www.tumblr.com/search/mypubliclandsroadtrip
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Washington, DC 20204
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lbagely@blm.gov

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"Friez, Diane" <dfriez@blm.gov>

From:	"Friez, Diane" <dfriez@blm.gov>
Sent:	Thu May 25 2017 08:58:30 GMT-0600 (MDT)
To:	"Bagley, Lonny" <lbagley@blm.gov>
Subject:	Re: Hey quick q

Awesome news. Thanks, Lonny, for your assistance!

****
Diane M. Friez
District Manager
Eastern Montana/Dakotas District
111 Garryowen Road
Miles City, Montana 59301
406-233-2827 (O)
406-671-9082 (C)

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"Raby, Jon" <jraby@blm.gov>

From:	"Raby, Jon" <jraby@blm.gov>
Sent:	Thu May 25 2017 09:19:58 GMT-0600 (MDT)
To:	"Bagley, Lonny" <lbagley@blm.gov>
CC:	"Brune, Jeff" <jbrune@blm.gov>, Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Peter Mali <pmali@blm.gov>, Diane Friez <dfriez@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, "Judice, Donato" <djudice@blm.gov>
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Acting State Director
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Billings, Montana
Office: 406.896.5012

Mobile: 406.606.2352

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From:	Lonny Bagley <lbagley@blm.gov>
Sent:	Thu May 25 2017 12:54:00 GMT-0600 (MDT)
To:	"Raby, Jon" <jraby@blm.gov>
Subject:	Re: Hey quick q

Thanks Jon, have a great weekend, I'm headed home for the holiday

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INFORMATION/BRIEFING MEMORANDUM
FOR THE ACTING DEPUTY DIRECTOR – BUREAU OF LAND MANAGEMENT

DATE: March 22, 2017

FROM: Jon Raby, Acting State Director for Montana/Dakotas– Bureau of Land Management (BLM)

SUBJECT: Follow-up questions on Sundry Notices

The purpose of this memo is to supplement the information provide in the February 7, 2016, briefing memo called North Dakota Sundry Notice Flaring Requests Environmental Assessment

DISCUSSION

Is there an effective mechanism to capture the gas? If there is not, how can we penalize operators?

The most effective way to capture gas is by installing a pipeline. Operators not connected to a pipeline submit a sundry notice requesting approval to flare gas produced by the well. Each sundry notice is evaluated to determine whether it is economically feasible to build a connection to the nearest pipeline. The BLM's economic determination takes into account several factors, such as the cost of the pipe to gather the gas, the volume of gas and oil produced, the heating value (BTU) of the gas and oil, and the market price for the gas and oil.

There are alternatives to building a connector pipeline. Alternative gas capture methods involve installing specialized equipment to remove high-grade natural gas such as butane and propane. Smaller amounts of lower grade gas are still flared into the air. Most operators have told the BLM that these alternative gas capture methods are not economically feasible.

Are there lines available? (Similar to above)

Most of the wells in North Dakota are connected to a pipeline. However, there is more gas being produced by North Dakota wells than the existing pipelines can transport. Operators don't have control over pipeline transport capacity.

When a pipeline can't accept any more gas, the gas is flared at the well. Gas is flared (burned) rather than vented (released into the air) without combustion for both safety and environmental reasons. Operators don't think they should be charged royalties on gas flared due to a lack of pipeline capacity.

There are other instances where operators are waiting for new pipelines to be built. While there are no rights-of-way pending with the BLM for gas pipelines, there are instances where approvals are pending with other surface management agencies such as the U.S. Forest Service,

Army Corps of Engineers, the Bureau of Reclamation and the Bureau of Indian Affairs. Common reasons for delay are the lack of landowner approval and completion of analysis under the National Environmental Policy Act.

Operators do not think they should be charged royalties on gas flared due to any delay in pipeline construction.

How do you measure volume (and quality, if that is important) of gas being vented or flared? What is the royalty based on?

There are two approved methods of determining the volume of gas flared. One is by estimation and the other is by connecting an approved gas measurement meter. In most cases, the amount of gas is estimated using a formula derived from the well's production, where the BLM can estimate how much gas is flared for every barrel of oil produced. The heating value (or BTU value) is determined by a gas analysis, which is required by BLM regulation. The gas market price is reported to the Office of Natural Resources Revenue and available for the BLM's use in the economic analysis.

Royalties are determined by the volume of gas flared, times the gas heating value, times the gas market price, times the lease royalty rate. The royalty rate for Federal oil and gas leases is 12 1/2 percent. Royalty rates on Indian trust leases start at 16 2/3 percent and can be much higher, depending upon the negotiated lease rate.

What was the rule before NTL-4A? Was royalty paid prior to NTL-4A? After NTL-4A?

The U.S. Geological Survey Conservation Division managed onshore oil and gas programs on Federal and Indian lands prior to these functions being transferred to the BLM in 1983.

The U.S.G.S. Conservation Division Manual (CDM) was published 1977. NTL-4A went into effect in 1979. The CDM provided guidelines, and NTL-4A provided regulations governing waste prevention and beneficial use of oil and gas operations on onshore Federal and Indian lands. The BLM uses both documents when processing sundry notices requesting to flare oil well gas.

A BLM petroleum engineer reviews and analyzes the available data to determine whether it is economically feasible to capture the gas. If the analysis shows gas capture is economically unfeasible, the Field Manager approves the sundry notice and no royalties are due.

Between the time the BLM began processing sundry notice requests to flare gas in 1983 until the North Dakota Field Office began holding such requests in 2012, there have been no determinations that royalties were due on flared gas.

Of the 5,000 pending sundry notices, how many came under the new Methane Waste rule?
The BLM halted processing of sundry notices for gas flaring in 2012. Approximately 4,900 sundry notices were received between that time and prior to January 17, 2017. These sundry notices will be evaluated under NTL-4A. All sundry notices submitted on or after January 17, 2017, would be reviewed using the new Methane Waste Prevention Rule.

What would happen if the Methane Rule is rescinded under the Congressional Review Act?
All sundry notices would be evaluated using NTL-4A.

INFORMATION/ BRIEFING MEMORANDUM
FOR THE ACTING ASSISTANT SECRETARY, LANDS & MINERALS

DATE: February 7, 2017
FROM: Kristin Bail, Acting Director, Bureau of Land Management
SUBJECT: North Dakota Sundry Notice Flaring Requests Environmental Assessment

BACKGROUND

Operators are required to submit a Sundry Notice application to request changes to their Surface Use Plans of Operations, including the approval to flare oil-well gas. The BLM reviews these Sundry Notice requests from operators developing Federal or Indian minerals. Most flaring of oil-well gas occurs because the well is not connected to natural gas gathering lines, or because the well is connected to infrastructure with inadequate capacity to handle the volumes of gas being generated.

The processing of Sundry Notice applications has been on hold in the North Dakota Field Office (NDFO) since July 2013 pending the completion of an Environmental Assessment (EA) that covers the flaring of oil-well gas (which was initiated in August 2013). This has resulted in the accumulation of approximately 5,000 Federal and Indian flaring Sundry Notice applications pending review by the North Dakota Field Office, although operators continue to flare pending review of their Sundry Notices. The NDFO, Montana/Dakotas State Office, and the Office of the Solicitor in Washington, D.C. have worked closely to address the backlog of Sundry Notice applications in accordance with Federal regulations.

On June 1, 2014, the North Dakota Industrial Commission (NDIC) adopted a new policy, with a published revision on September 24, 2015, Order 24665, for the reduction of gas flaring from oil wells. This requirement is for all wells which will be drilled in the Bakken, Three Forks, and Three Forks/Bakken or Sanish Pools. The policy requires that a Gas Capture Plan (GCP) accompany all Applications for Permits to Drill (APDs) submitted to NDIC to ensure that all options for capturing gas are fully evaluated prior to drilling. Another component of the new policy is the implementation of flaring reduction targets in accordance with a prescribed timeline. Failure to meet the targets results in the restriction of oil production until the target is met.

In 2014 and 2015, the NDFO coordinated with the BLM's Washington Office and various entities to gather information and developed review protocols to process the pending Sundry Notice requests in accordance with Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases. Royalty or Compensation for Oil and Gas Lost (NTL-4A). This effort included the North Dakota Petroleum Council, the Three Affiliated Tribes (Mandan, Hidatsa, and Arikara Nation), operators, midstream companies and other State oil and gas entities which discussed development, infrastructure and other issues in the Williston Basin/Bakken area.

On August 27, 2015, the BLM prepared an EA, Finding of No Significant Impact (FONSI), and Decision Record (DR) to respond to pending Sundry Notice requests in accordance with NTL-

4A and identify potential mitigation measures. A revised DR was issued on October 18, 2015, applying the appropriate appeal language. On February 11, 2016, the State Director remanded the DR after receiving three State Director Review requests. The State Director's decision required NDFO to revise the EA and DR to clearly demonstrate that each Sundry Notice request would be individually evaluated as a separate decision on a case-by-case basis and not as part of the EA.

On June 1, 2016, the NDFO revised the EA in accordance with the State Director's decision. The EA, along with an unsigned FONSI, was available for a 30-day public comment period. The modified EA has been prepared to disclose and analyze the environmental consequences of Sundry Notice requests to flare oil-well gas from BLM administered Federal and Indian oil wells in western North Dakota. The EA describes the proposed action and decision to be made by the BLM, and clarifies that royalty determination will be made on a case-by-case basis as a separate decision on each Sundry Notice request. The backlogged Sundry Notices will utilize this EA for their National Environmental Policy Act (NEPA) documentation. The EA addresses current flaring requests, any necessary conditions of approval, and under what conditions reasonably foreseeable future flaring may or may not be allowed to occur within the same geographic area.

Sundry Notices for wells which flared gas prior to January 17, 2017, will be processed under NTL-4A. Sundry Notices for wells which first flared gas on or after January 17, 2017, will be processed under the new Methane and Waste Prevention Rule.

POSITION OF INTERESTED PARTIES

Interested parties include the Three Affiliated Tribes, individual Indian allottees, oil and gas operators, and the general public. Each party has different opinions on flaring and how the Sundry Notice requests to flare should be processed. The Three Affiliated Tribes and individual allottee members view all gas as royalty bearing. Operators view most flaring as an unavoidable loss due to multiple reasons that they state are out of their control and they may be reluctant to pay royalties. The public views flaring as an impact to air resources and climate change, and as a loss of resources. Any of the interested parties may take BLM decisions to the level of State Director Review and possibly the Interior Board of Land Appeals (IBLA).

NEXT STEPS

On February 2, 2017, the Eastern Montana Dakotas District and the NDFO completed the subject EA in accordance with NEPA. The BLM Authorized Officer may sign a FONSI and DR to complete the EA process.

Once the FONSI and DR are signed, the NDFO will utilize this EA for their NEPA documentation and make determinations in accordance with NTL-4A on each Sundry Notice as a separate decision on a case-by-case basis.

United States Department of the Interior
Bureau of Land Management

Environmental Assessment
DOI-BLM-MT-C030-2016-0212-EA

February 2, 2017

Project Title: Sundry Notice Flaring Requests

Location: North Dakota Field Office
99 23rd Avenue West, Suite A
Dickinson, ND 58601-2619

BLM

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1.0 PURPOSE AND NEED

1.1 Introduction

This Environmental Assessment (EA) has been modified based on the decision of a State Director Review. The EA now better describes the proposed action and decision to be made by the BLM, and clarifies that royalty determination will be made on a case-by-case basis as a separate decision on each Sundry Notice (SN) request to flare oil-well gas. Modifications are made throughout the document as a result of the changes to the purpose and need/proposed action.

This modified EA has been prepared to disclose and analyze the environmental consequences of SN requests pending review to flare oil-well gas from BLM administered oil wells in western North Dakota. Reasonably foreseeable requests to flare oil-well gas for BLM administered oil wells in the same geographic areas will also be analyzed in the EA. Royalty determination will not be part of this EA, and will be completed for each SN request in accordance with NTL-4A as a separate review.

The BLM anticipates additional flaring requests in the future as a result of development. This broader suite of anticipated flaring requests would be temporally and spatially related to the past and ongoing flaring activities, and would require a series of associated subsequent decisions. Additional coordination would be conducted with the proper surface management agency (SMA) for SNs requiring mitigation at the time of submission of an Application for Permit to Drill (APD).

This EA does not apply to private and state wells approved and administered by the State of North Dakota that have been committed to Federal units or communitization agreements in accordance with Instruction memorandum No MT-95-025. The BLM has authority to make avoidable or unavoidable loss determinations for private and state wells committed to Federal units or CAs. As stated above, royalty determination will not be part of this EA, and will be completed for each SN request in accordance with NTL-4A as a separate review.

Oil production on Federal and Indian mineral estates has dramatically expanded in western North Dakota in the past several years with horizontal drilling and hydraulic fracturing of the Bakken and Three Forks Formations. The “Bakken” play primarily produces oil and associated natural gas. During oil and gas production, it may be necessary to combust or release natural gas for a number of operational reasons. The combustion of natural gas is known as flaring, while releasing natural gas directly into the atmosphere is venting. Each has different environmental impacts.

In addition to the operational reasons for flaring and venting, in areas where the primary purpose of drilling is to produce oil, producers flare or vent associated natural gas because no local market exists for the gas and transporting it to a market may not be economically feasible. Natural gas prices are a major determinant of whether associated gas is flared, vented or sold.

Associated natural gas would be sold if prices were high enough over a long enough period to justify building the infrastructure to transport the gas to a market.

Under the general requirements for onshore oil and gas operations (43 CFR 3162.1), an operator shall comply with applicable laws and regulations. These include, but are not limited to, conducting all operations in a manner that results in maximum ultimate economic recovery of oil and gas with minimum waste.

Notice to Lessees & Operators of Onshore Federal & Indian Oil and Gas Leases (NTL-4A) Royalty or Compensation for Oil and Gas Lost, Instruction Memorandum No. WO 87-652, and Instruction Memorandum WO No. 92-91 provide the BLM authority and guidance to allow venting or flaring of oil-well gas under certain conditions. Specifically in NTL-4A, an operator must request approval to vent or flare produced oil well gas by submitting:

1) *an evaluation report supported by engineering, geologic, and economic data which demonstrates to the satisfaction of the Supervisor that the expenditures necessary to market or beneficially use such gas are not economically justified and that conservation of the gas, if required, would lead to the premature abandonment of recoverable oil reserves and ultimately to a greater loss of equivalent energy than would be recovered if the venting or flaring were permitted to continue, or*
2) *an action plan that will eliminate flaring of gas within 1 year from the date of application.*

The Operator submits a Form 3160-5, Sundry Notices and Reports on Wells that details the notice of intent to flare gas. The BLM is currently developing a national rule that will update and replace NTL-4A. The new rule will focus on waste prevention and royalty collection, authorities inherent to the BLM.

Most flaring in western North Dakota occurs either because the well is connected to infrastructure with inadequate capacity or the well is not connected to the gathering system. Various factors such as surface ownership and permitting review time make pipeline permitting challenging.

The BLM North Dakota Field Office (NDFO) is highly engaged in facilitating pipeline infrastructure, some of which would help to address flaring of oil-well gas. From 2012 – 2015, the NDFO has seen an increase in the number of SN applications requesting to flare from both Federal and Indian wells throughout western North Dakota. The requests to flare vary and require review to ensure compliance with NTL-4A. The need for an environmental assessment of flaring impacts, limited staff, and an increased number of Applications for Permit to Drill (APDs) have resulted in the accumulation of approximately 1,770 [1] Federal and Indian flaring SN applications requesting flaring approval for Federal and Indian oil wells throughout western North Dakota.

[1] See Appendix E, Comment # 14, for explanation of changes to the number of Sundry Notices being analyzed in this EA.

On June 1, 2014, the North Dakota Industrial Commission (NDIC) adopted a new policy, with a published revision on September 24, 2015, Order 24665, for the reduction of gas flaring. This requirement is for all wells which will be drilled in the Bakken, Three Forks, and Three Forks/Bakken or Sanish Pools. The policy requires that a Gas Capture Plan (GCP) accompany all APDs submitted to NDIC. Gas Capture Plans aim to ensure that all options for capturing gas are fully evaluated prior to drilling. Another component of the new policy is the implementation of flaring reduction targets in accordance with a prescribed timeline. Failure to meet the targets results in the restriction of oil production until the target is met.

In addition to the new NDIC policy, a "Flaring Task Force" was formed under the North Dakota Petroleum Council (NDPC) composed of industry representatives, State of North Dakota representatives and others, intending to pool knowledge and experience to better optimize the resource at the wellhead and improve existing infrastructure to capture and transport gas for processing. The group focused on educating the public while working with stakeholder groups, governments, the Three Affiliated Tribes (Fort Berthold Reservation), researchers, and landowners.

1.2 Purpose and Need for the Proposed Action

The need for the action is established by the BLM's responsibility under the National Environmental Policy Act (NEPA) and NTL-4A to evaluate Federal and Indian SN requests to flare oil-well gas. The BLM has approximately 1,770[1] SNs pending review representing past and present flaring. This review allows BLM to determine the social and environmental impacts from flaring and identify any needed for mitigation measures, allow private individuals or companies to continue developing oil and gas resources in accordance with Federal regulations, and at the same time meet the requirements identified in the Energy Policy Act, Sec. 362(2), Federal Oil and Gas Leasing Reform Act of 1987, and the Mineral Leasing Act of 1920, Sec. 17. Companies with pending flaring sundry notices have received approved APDs from the BLM.

1.3 The Decision to be Made

The BLM will determine the environmental and social impacts from flaring (past, present and reasonably foreseeable) and identify any design features/mitigation measures that may need to be applied to future flaring from new facilities only, as well as Conditions of Approval. The BLM has the authority to protect the viewsheds of cultural and historic properties for federally administered wells on both federal and non-federal surface under the National Historic Preservation Act (NHPA), and 36 CFR 800 – Protection of Historic Properties. In addition, mitigation requirements for venting and flaring within the viewsheds of historic or cultural properties are authorized under the NEPA, section 6.8.4.

The BLM is evaluating and analyzing current and future flaring as well as disclosing the cumulative impact of flaring oil-well gas. These activities are an integral part of BLM's oil and gas program under authority of Federal Land Policy and Management Act (FLPMA) of 1976.

1.4 Conformance with Land Use Plan(s)

This EA is tiered to the information and analysis and conforms to the decisions contained in the North Dakota RMP Desktop Document, April 1988, Chapter 4 page 11, and its' associated Environmental Impact Statement (EIS), the governing land use plan for the NDFO.

Analysis of the impacts from flaring is documented in this EA, and was conducted by BLM staff in the Eastern Montana/Dakotas District, North Dakota Field Office, and Montana State Office who relied on professional knowledge of the areas involved, review of current databases, file information, and operator input to ensure that appropriate considerations were made.

Analyzing the impacts from flaring and determining potential mitigation measures for flaring from new facilities would not be in conflict with any local, county, or state laws or plans.

1.5 Public Scoping and Identification of Issues

Public scoping for this project was conducted by posting the proposed action on the NDFO website - NEPA notification log. Therefore, scoping was initiated August 30, 2013, the date the EA was assigned a number and posted to the NEPA notification log. Refer to Chapter 5 of this EA for a more complete summary of comments received and consultation/coordination.

Site-specific resource concerns were identified by the BLM through the preliminary review process conducted during the internal scoping period. The BLM focuses its analysis on "issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)). Issues have a relationship with the proposed action; are within the scope of analysis; and are amenable to scientific analysis.

The interdisciplinary team reviewed the proposed action and determined two issues that would have an effect on particular resources. The resources carried forward through analysis in this EA are air resources, greenhouse gas emission and climate change, visual setting of cultural or historical properties, Native American Religious Concerns, and socioeconomic

- Issue – Flaring emissions

  The BLM recognizes air as a valuable natural and public resource that needs to be protected through prudent management and appropriate mitigation. Where a BLM-authorized activity has the potential to affect the air resource, this activity must be managed appropriately, consistent with BLM planning objectives and in compliance with the Clean Air Act.

  According to EPA Emission Inventory Improvement documents (EPA 1999), oil field emissions encompass three primary areas: combustion, fugitive, and vented. Flaring falls under the combustion area and those emissions include SO_2, ozone precursors called volatile organic compounds (VOCs), greenhouse gases (GHGs), and hazardous air pollutants (HAPs).

- Issue – Effects on the visual setting of historical properties

  Flaring has the potential to alter the characteristics of a significant cultural or historic property by introducing visual, atmospheric or audible elements that diminish the integrity of the property's setting or feel. The BLM has the authority and responsibility to protect the viewsheds of cultural and historic properties for federally administered wells on both federal and non-federal surface under the NHPA and 36 CFR 800 – Protection of Historic Properties. In addition, mitigation requirements for venting and flaring within the viewsheds of historic or cultural properties are authorized under the NEPA, section 6.8.4

  Though the effect on all historic properties were considered, for this analysis an Interdisciplinary Team developed a viewshed of the Killdeer Mountain Battlefield State Historic Site, Elkhorn Ranch within Theodore Roosevelt National Park, the Lynch Knife River Flint Quarry, the Chateau de Mores State Historical Site, the Fort Buford State Historic Site, the Fort Union Trading Post National Historic Site, the Fort Dilts State Historic Site, and the Lewis & Clark National Historic Trail to understand the potential effects from flaring.

1.6 Issues Not Analyzed

The BLM considered the following issues but did not analyze those in further detail because they were determined to not be present or not potentially impacted by this project:

- Areas of Critical Environmental Concern (ACEC),
- Farmlands (Prime & Unique),
- Floodplains, Invasive,
- Non-native weed species,
- Threatened, Endangered, or Candidate Plant Species, Threatened, Endangered, or Candidate Animal Species,
- Wastes (Hazardous or Solid),
- Water Quality (Drinking/Ground),
- Wild and Scenic Rivers,
- Livestock Grazing,
- Woodland/Forestry,
- Vegetation including Special Status Plant Species,
- Fish and Wildlife including Special Status Species,
- Soils,
- Recreation,
- Geology,
- Paleontology,
- Lands/Access,
- Fuels/Fire Management,
- Wilderness Characteristics.

This EA does not contain discussion of flaring approvals or avoidable/unavoidable loss determinations.

2.0 DESCRIPTION OF ALTERNATIVES

2.1 Alternative A (No Action):

The No Action Alternative would be to analyze 1,770[1] pending SN requests to flare oil-well gas from Federal and Indian oil wells on an individual basis in accordance with NEPA. The No Action Alternative means the analysis would be conducted on a case-by-case basis with limited consideration of the larger environmental context and requires significant review time. Impacts and mitigation measures would be limited to the small geographic area of the individual request. Surface management would remain the same and ongoing oil and gas production would continue on surrounding Federal, Indian, private, and State leases. Future flaring SN requests would also be analyzed on a case-by-case basis.

2.2 Alternative B (Proposed Action-BLM Preferred):

The Proposed Action would be for BLM to analyze 1,770[1] pending SN requests (Appendix A) to flare oil-well gas from Federal and Indian oil wells along with disclosing the reasonably foreseeable impacts from flaring in the western portion of North Dakota, and identify mitigation measures for flaring from future production facilities (Map 1).

Below is a list of potential mitigation measures that the BLM could apply, as appropriate, to future flaring requests on new facilities. For past flaring refer to Chapter 4 for the disclosure of the impacts to cultural resources.

- Construct a gathering pipeline which will ultimately be connected to a trunk pipeline;
- Liquefy the gas on location and store on location until it can be transported via truck to a pipeline injection location;
- Reinject the natural gas into a formation for possible future use;
- Reinject the natural gas into the reservoir for secondary enhanced oil recovery;
- Beneficial use on lease;
- Camouflaging of flare using vegetation or architectural structures;
- Reducing flare stack height;
- Restriction of active flaring at night
- Coordination with the appropriate SMA would be required for future flaring requests within the viewshed of a cultural or historic property.

2.3 Alternatives Considered But Dismissed from Further Analysis

Approving all SN requests to flare oil-well gas from Federal and Indian wells as submitted by the operator without individual analysis would not be in accordance with BLM policy and regulations. This alternative would not allow BLM to properly evaluate each request to flare in accordance to NEPA, and apply necessary mitigation measures to flaring from newly constructed facilities when necessary.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter describes the existing environment (i.e., the physical, biological, social, and economic values and resources) within the Williston Basin in western North Dakota (Map 1). For this environmental analysis, the Williston Basin in western North Dakota is considered the area of analysis that could be affected by implementation of the alternatives described in Chapter 2. Each resource description will be analyzed further in Chapter 4.

Only those aspects of the existing environment that are potentially impacted by this project are described in detail. The aspects of the existing environment that were determined to not be present or not potentially impacted by this project are listed in Section 1.6 above.

3.2 General Description of the Affected Environment

The western portion of North Dakota is comprised of gently rolling hills, buttes, badlands, wetlands, riparian areas, and river breaks. These lands are primarily privately owned and are mainly used for agriculture. These lands have limitations from crop production and are generally rangelands or pasture lands.

The BLM manages approximately 57,400 surface acres of public land in North Dakota and has oil and gas management responsibilities for 1,082,000 acres of Federal subsurface and approximately 546,000 acres of Indian Trust and Allotted subsurface, mostly on the Fort Berthold reservation. Federal and Indian minerals represent approximately 7 percent of total Bakken/Three Forks mineral estate. The BLM and BIA split management responsibility on Indian lands. The BIA manages leasing and surface use, and the BLM manages oversight of oil and gas drilling and production activities. Similarly, the BLM and USDA Forest Service split management responsibilities on Forest Service lands, approximately 1,025,000 acres. The Forest Service manages leasing and surface use, and the BLM managing oversight of oil and gas drilling and production activities.

3.3 Air Resources

Air resources include air quality, air quality related values (AQRVs), and greenhouse gas (GHG) emissions affecting climate change.

The U.S. Environmental Protection Agency (USEPA) has the primary responsibility for setting minimum air quality standards, including seven criteria air pollutants subject to National Ambient Air Quality Standards (NAAQS). Pollutants regulated under NAAQS include carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ozone, particulate matter with a diameter less than or equal to 10 microns (PM_{10}), particulate matter with a diameter less than or equal to 2.5 microns ($PM_{2.5}$), and sulfur dioxide (SO_2). Two additional pollutants, nitrogen oxides (NO_x) and volatile organic compounds (VOCs), are regulated because they form ozone in the atmosphere. Air quality is determined by pollutant emissions and emission characteristics, atmospheric chemistry, dispersion meteorology, and terrain. AQRVs include effects on soil and water, such as sulfur and nitrogen deposition, lake acidification, and aesthetic effects, such as visibility.

In addition to USEPA federal regulations, air quality is also regulated by the North Dakota Department of Health, Division of Air Quality. This agency develops state-specific regulations and issues air quality permits to emission sources.

Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. Climate change includes both historic and predicted climate shifts that are beyond normal weather variations.

3.3.1 Air Quality

Air quality is monitored at State and Local Air Monitoring Systems (SLAMS) monitors within the following counties with oil and gas activity: Billings, Burke, Dunn, and McKenzie. The USEPA air quality index (AQI) is an index used for reporting daily air quality to the public. The index tells how clean or polluted an area's air is and whether associated health effects might be a concern. The USEPA calculates the AQI for five criteria air pollutants regulated by the Clean Air Act (CAA): ground-level ozone, PM, CO, SO_2, and NO_2. For each of these pollutants, USEPA has established NAAQS to protect public health. An AQI value of 100 generally corresponds to the primary ambient standard for the pollutant. The following terms help interpret the AQI information:

- **Good** – The AQI value is between 0 and 50. Air quality is considered satisfactory and air pollution poses little or no risk.
- **Moderate** – The AQI is between 51 and 100. Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.
- **Unhealthy for Sensitive Groups** – When AQI values are between 101 and 150, members of "sensitive groups" may experience health effects. These groups are likely to be affected at lower levels than the general public. For example, people with lung disease are at greater risk from exposure to ozone, while people with either lung disease or heart disease are at greater risk from exposure to particle pollution. The general public is not likely to be affected when the AQI is in this range.
- **Unhealthy** – The AQI is between 151 and 200. Everyone may begin to experience some adverse health effects, and members of the sensitive groups may experience more serious effects.
- **Very Unhealthy** – The AQI is between 201 and 300. This index level would trigger a health alert signifying that everyone may experience more serious health effects.

AQI data show that there is little risk to the general public from air quality in the analysis area (Table 3.3.1). Based on available aggregate data for state-operated monitors in Billings, Burke, Dunn, and McKenzie counties for years 2011–2013, at least 92 percent of the days were rated "good." The three-year median daily AQIs were 33, 34, 31, and 35 for the Billings, Burke, Dunn, and McKenzie county monitors. Table 3.3.1 does not include data from monitors located at industrial sites.

Table 3.3.1 USEPA Air Quality Index Reports

County[1]	# Days in Period	# Days Rated Good or No Data		# Days Rated Moderate	# Days Rated Unhealthy for Sensitive Groups	# Days Rated Unhealthy	# Days Rated Very Unhealthy
Billings	1,096	1,091		5	0	0	0
Burke	1,094	1,006		88	0	0	0
Dunn	1,023	968		55	0	0	0
McKenzie	1,096	1,005		90	0	0	1

Source: USEPA 2014. AirData website (http://www.epa.gov/airdata/ad_rep_aqi html, accessed August 19, 2014).
[1] Monitor names and station identifiers are as follows:
The Billings County monitor is the Painted Canyon monitor at the Theodore Roosevelt National Park North Unit (38-007-002).
The Burke County monitor is located in the Lostwood Wilderness (38-013-004).
The Dunn County monitor is located in Dunn Center (38-025-003).
The McKenzie County monitor is located at the Theodore Roosevelt National Park North Unit (38-053-002).

The area managed by the NDFO is designated as an attainment area for all NAAQS. Maximum concentrations as a percentage of the NAAQS are summarized in Table 3.3.2 based on 2013 monitoring data. Gaseous pollutant concentrations are provided in terms of parts per million (ppm) or parts per billion (ppb), while particulate concentrations are provided in terms of micrograms per cubic meter ($\mu g/m^3$). Data are not provided for CO and lead, which are not monitored at these sites. Data from multiple SLAMS monitoring locations are provided, including monitors in the Lostwood Wilderness (Burke County) and Theodore Roosevelt National Park North Unit (McKenzie County). A non-SLAMS monitoring site is maintained by the National Park Service at the Theodore Roosevelt National Park South Unit in Billings County.

Figure 3.3.1 provides air quality trend data based on monitoring data provided by the North Dakota Department of Health for years 2006-2013. Although oil and gas activity has increased substantially during the last several years, ambient concentrations have remained relatively stable or have decreased slightly, with the exception of PM_{10}, which increased substantially in Dunn County from 2010 to 2011 and has remained at the higher level. Additional air quality regulations that reduce emissions from many types of sources and operator efforts to control emissions have maintained good air quality in the area.

In addition, a new policy adopted in June 2014, and revised on September 24, 2015 by the North Dakota Industrial Commission (NDIC) will further limit VOC, GHG, and NO_x emissions from flaring of gas associated with oil wells. NDIC Order 24665 requires operators to capture greater percentages of gas at North Dakota Bakken Formation wells in order to meet gas capture targets of 77% by January 1, 2015, 80% by April 1, 2016, 85% by November 1, 2016, 88% by November 1, 2018, and 91% by November 1, 2020. Gas capture targets may be met by routing gas to pipeline for sale, usage of gas at the well site, or through the beneficial use of gas (e.g. electrical power generation).

Table 3.3.2 2013 Monitored Concentrations Representative of the Study Area

Pollutant	Averaging Time	Applicable Standard (Format)	Ambient Concentrations[a] (Billings, Burke, Dunn, McKenzie, Williston[b] Counties)	Percentages of NAAQS (Billings, Burke, Dunn, McKenzie, Williston[b] Counties)
CO	1 hour	35 ppm (2nd highest)	NA, NA, NA, NA, NA	NA, NA, NA, NA, NA
	8 hour	9 ppm (2nd highest)	NA, NA, NA, NA, NA	NA, NA, NA, NA, NA
Lead	24 hour	150 (3-month avg.)	NA, NA, NA, NA, NA	NA, NA, NA, NA, NA
NO_2	1 hour	100 ppb (98th percentile)	NA, 17, 10, 10	NA, 17%, 10%, 10%
O_3	8 hour	0.070 ppm, (4th highest daily maximum)	0.059, 0.058, 0.056, 0.058. 0.059	79%, 77%, 75%, 77%, 79%
PM_{10}	24 hour	150 $\mu g/m^3$ (2nd highest)	NA, 37.0, 74.0, 19.0, 76.0	NA, 25%, 49%, 13%, 51%
$PM_{2.5}$	24 hour	35 $\mu g/m^3$ (98th percentile)	11, 15, 15, 11, 22	31%, 43%, 43%, 31%, 63%
	Annual	12 $\mu g/m^3$ (weighted mean)	4.4, 6.8, 5.5, 6.5, 9.6	37%, 57%, 46%, 54%, 80%
SO_2	1 hour	75 ppb (99th percentile)	NA, 28, 9, 9, NA	NA, 37%, 12%, 12%, NA

Source: NDDOH 2014.

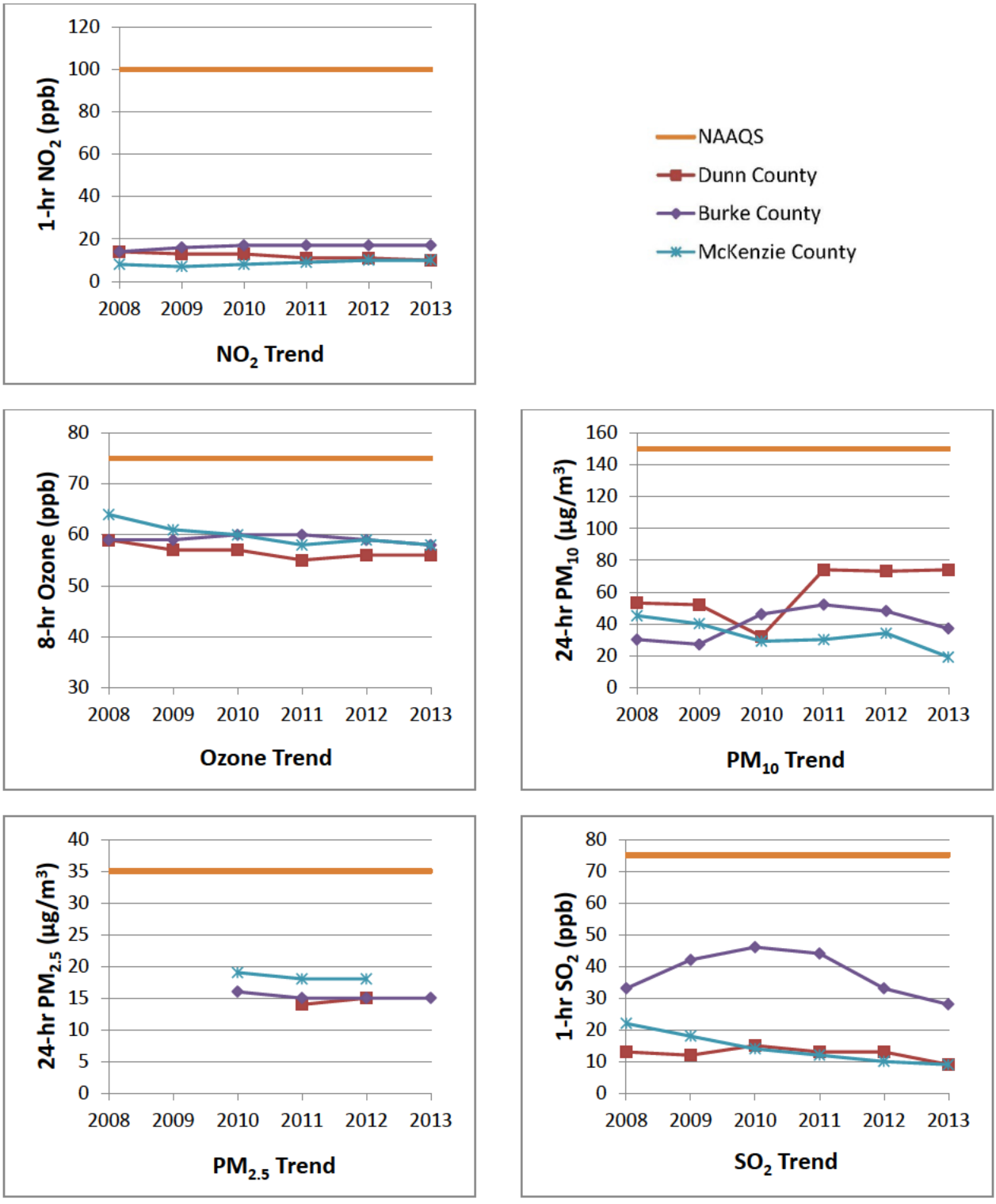
NA = not available.

[a] These values represent a 3-year average or a single year depending on the format of the NAAQS. Three-year averages of annual values are needed to determine NAAQS compliance for the NO_2, O_3, PM_{10}, 24-hour $PM_{2\ 5}$, and SO_2 standards.

[b] The monitor in Williston County began operating in 2013.

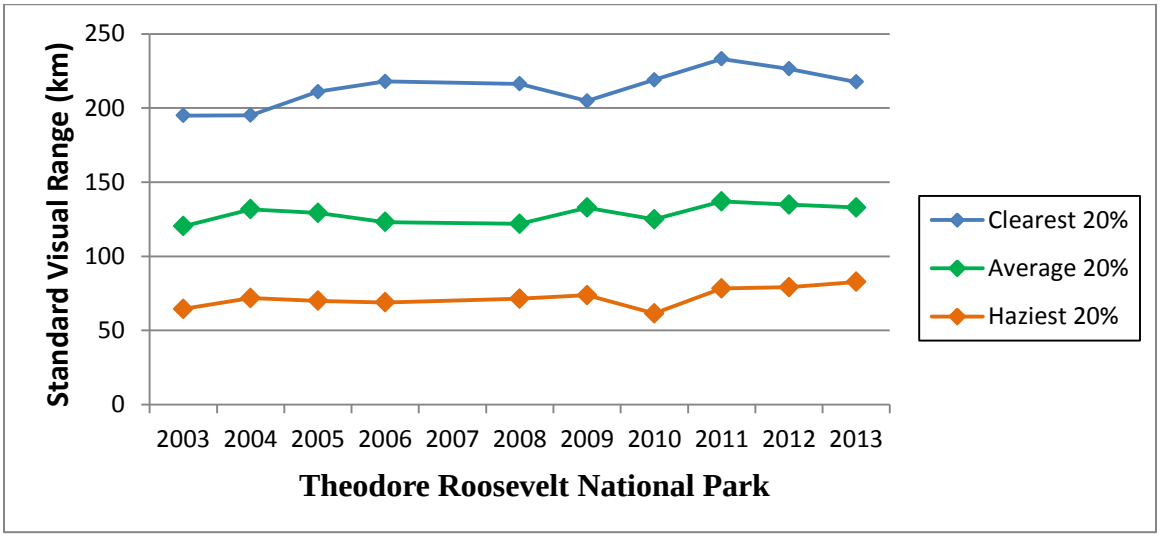
The order requires that after September 30, 2014, all existing and completed wells in the Bakken, Bakken/Three Forks, and/or Three Forks Pool be evaluated for compliance. A well is in compliance with the order if the gas capture percentage is consistent with the gas capture targets. If gas capture targets are not met, well production is limited to 100 or 200 barrels of oil per day depending on site-specific activities. Exemptions are allowed for: (1) wells that have received an exemption to North Dakota Century Code Section 38-08-06.4; (2) the first horizontal well completed in a Bakken, Bakken/Three Forks, and/or Three Forks Pool non-overlapping spacing unit; or (3) the first 90 days commencing on the first day oil is produced through well-head equipment into tanks from the ultimate producing interval after casing has been run.

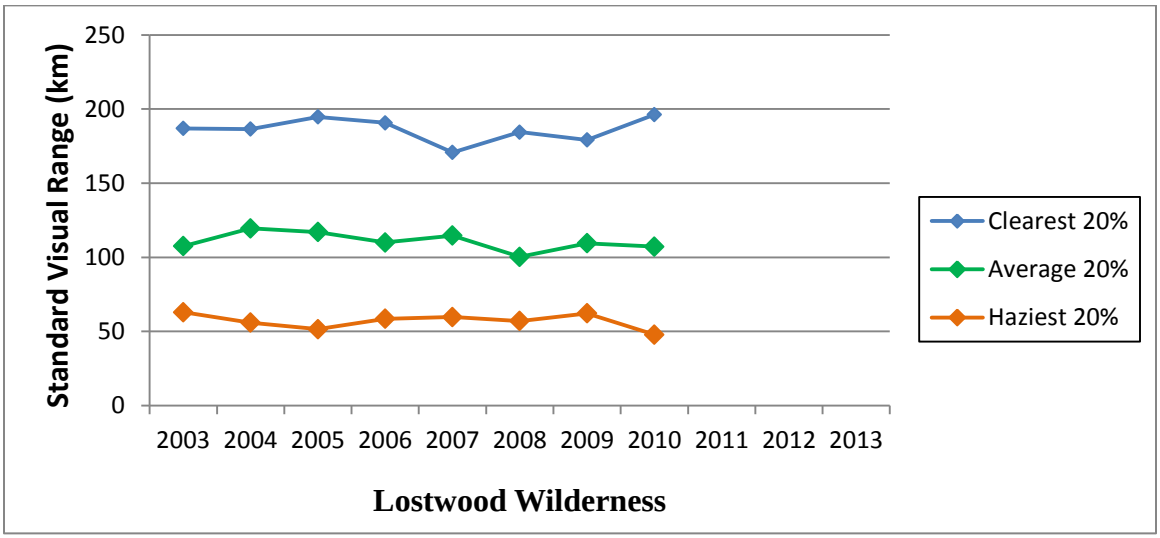
Figure 3.3.2 Air Quality Trends



Sources: Data derived from NDDOH 2006, 2007, 2008, 2009, 2010, 2012a, 2012b, 2013, 2014.

Figure 3.3.3 Visibility Trends in Nearby Class I Areas





Source: Data derived from IMPROVE 2014.

Air resources also include visibility, which can be assessed in terms of the standard visual range (in kilometers or miles) that a person can distinguish a large dark object. Visibility degradation is primarily due to anthropogenic sulfate, nitrate, and particulate emissions and wildfires. Air pollutants affecting visibility can be transported hundreds of miles. Figure 3.3.3 illustrates visibility trends based on IMPROVE monitoring data from 2003-2013 at the two Class I areas in North Dakota: Lostwood Wilderness and Theodore Roosevelt National Park. Because visibility is highly variable throughout the year, it is characterized by three groupings: the clearest 20% days, average 20% days, and haziest 20% days. Monitoring data for the Lostwood Wilderness are not available for 2010-2013. A slight improving trend in visibility is apparent at Theodore Roosevelt National Park. At the Lostwood Wilderness, there was no apparent trend from 2003 to 2010.

Sulfur, nitrogen, and acid deposition rates in the study area are among the lowest in the nation, as measured at the Theodore Roosevelt National Park South Unit during 2012 (NADP 2013). Dry deposition was 2 kilograms per hectare (kg/ha) for sulfate and 3 kg/ha for nitrate. Nitrogen and sulfur wet deposition were 173 equivalents per hectare. Precipitation pH was 5.8, which EPA does not consider acidic. Hydrogen ion wet deposition was extremely low at less than 0.01 kg/ha. Lake acidification is unlikely with these deposition values and to date has not been reported at lakes in the area.

3.3.2 Climate Change

Climate change is defined by the Intergovernmental Panel on Climate Change (IPCC) as "a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and persist for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use (IPCC 2013)." Climate change and climate science are discussed in detail in the *Climate Change Supplementary Information Report for Montana, North Dakota, and South Dakota* (BLM 2010). This document is incorporated by reference into this EA.

The IPCC states, "Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased (IPCC 2013)." The global average surface temperature has increased approximately 1.5°F from 1880 to 2012 (IPCC 2013). Warming has occurred on land surfaces, oceans and other water bodies, and in the troposphere (lowest layer of earth's atmosphere, up to 4-12 miles above the earth). Other indications of global climate change described by the IPCC (BLM 2010) include:

- Rates of surface warming increased in the mid-1970s and the global land surface has been warming at about double the rate of ocean surface warming since then;
- Eleven of the last 12 years rank among the 12 warmest years on record since 1850;
- Lower-tropospheric temperatures have slightly greater warming rates than the earth's surface from 1958-2005.

Earth has a natural greenhouse effect wherein naturally occurring gases such as water vapor, carbon dioxide ($CO_{2)}$, methane (CH_4), and nitrous oxide (N_2O) absorb and retain heat. Without the natural greenhouse effect, earth would be approximately 60°F cooler (BLM 2010). Current ongoing global climate change is caused, in part, by the atmospheric buildup of GHGs, which may persist for decades or even centuries. Each GHG has a global warming potential that accounts for the intensity of each GHG's heat trapping effect and its longevity in the atmosphere (BLM 2010). Emissions of GHGs such as CO_2, methane, N_2O, and halocarbons since the start of the industrial revolution have substantially increased atmospheric concentrations of these compounds compared to background levels. At such elevated concentrations, these compounds absorb more energy from the earth's surface and re-emit a larger portion of the earth's heat back to the earth rather than allowing the heat to escape into space than would be the case under more natural conditions of background GHG concentrations.

A number of activities contribute to the phenomenon of climate change, including emissions of GHGs (especially CO_2 and methane) from fossil fuel development, large wildfires, activities using combustion engines, changes to the natural carbon cycle, and changes to radiative forces and reflectivity (albedo). It is important to note that GHGs will have sustained climatic impact over different temporal scales due to their differences in global warming potential (described above) and lifespans in the atmosphere. For example, CO_2 may last 50 to 200 years in the atmosphere while methane has an average atmospheric life time of 12 years (BLM 2010). Based on the global warming potentials put forth in EPA regulations (40 *Code of Regulations* Part 98), companies must report GHG emissions using global warming potentials of 1 for CO_2, 25 for methane, and 298 for N_2O. The BLM uses these global warming potentials to provide consistent comparisons with federal GHG emission inventories.

Climate change impacts will occur at global, national, regional, and local scales. The USEPA identifies western North Dakota as part of the Great Plains region. The following summary characterizes potential changes identified by the U.S. Climate Change Science Program (CCSP 2008) that are expected to occur at the regional scale (BLM 2010).

- The region is expected to experience warmer temperatures with less snowfall.
- Temperatures are expected to increase more in winter than in summer, more at night than in the day, and more in the mountains than at lower elevations.
- Earlier snowmelt means that peak stream flow will be earlier, weeks before the peak needs of ranchers, farmers, recreationalist, and others. In late summer, rivers, lakes, and reservoirs will be drier.
- More frequent, more severe, and possibly longer-lasting droughts are expected to occur.
- Crop and livestock production patterns will shift northward; less soil moisture due to increased evaporation may increase irrigation needs.
- Large-scale shifts have already occurred in the ranges of many species and the timing of the seasons and animal migrations. These shifts will continue. Climate changes include the arrival of spring an average of 10 days to 2 weeks earlier through much of the U.S. compared to 20 years ago. Multiple bird species now migrate north earlier in the year.
- Air quality will be degraded due to increased particulate matter in the air as drier, less vegetated soils experience wind erosion.
- Fires, insect epidemics, disease pathogens, and invasive weed species have increased and these trends are likely to continue. Changes in timing of precipitation and earlier runoff will increase fire risks.
- Grasslands and rangelands will expand into previously forested areas

Additional projected changes associated with climate change in North Dakota include (BLM 2010):

- Temperature increases in North Dakota are predicted to be between 3 to 5°F at mid-21st century. As the mean temperature rises, more heat waves are predicted to occur.
- Precipitation is expected to increase during winter and spring, decrease slightly in summer, and remain relatively unchanged in the fall.
- For the western portion of the state, annual median runoff is expected to decrease between 2 and 5 percent by mid-21st century.
- Crop yields may increase in North Dakota due to predicted temperature increases.

- North Dakota's Prairie Pothole wetlands are expected to decline in quality, due to their shallow depths and rapid evaporation rates. Shrinking wetlands may lead to decreased waterfowl populations.
- Wildland fire risk is predicted to continue to increase due to climate change effects on temperature, precipitation, and wind. One study predicted an increase of 393 percent in the median annual area burned by wildland fires in the western portion of North Dakota, based on a 1°C global average temperature increase (1°C = 33.8°F).

While long-range regional changes will occur within the NDFO, it is impossible to predict precisely when these changes will occur.

3.4 Visual Resources

The Federal Land Policy and Management Act requires that the BLM consider the scenic values of public land as a resource that merits management and preservation, as determined through the land use planning process. Visual Resource Management (VRM) classifications are only applied to BLM-administered surface.

The NDFO did not assign VRM classifications in the current Resource Management Plan. However, the following general objective and management actions were approved in the RMP:

RMP Objective: "To maintain visual qualities wherever possible."

RMP Management Actions:

- Consider impacts to the visible landscape during all phases of land use planning.
- Ensure that the high visual qualities of National Park Service Units are considered in cooperation with the NPS when a specific mineral lease or developmental action is proposed that potentially affects existing visual qualities.

3.5 Cultural Resources

The BLM is responsible for identifying, protecting, managing, and enhancing cultural resources located on public lands, or that may be affected by a BLM undertaking on BLM-administered or non-federal lands, in accordance with the National Historic Preservation Act (NHPA) of 1966, as amended. Cultural resources are defined as prehistoric or historic district, site, building, structure, or object significant in American history, architecture, archeology, engineering, and culture (36 CFR 60.1). Cultural resources also refer to artifacts, records, remains, and properties of traditional religious and cultural importance to an Indian tribe (36 CFR 800.16(l)(1)).

Cultural resources are evaluated with reference to their eligibility for listing on the National Register of Historic Places (NRHP). Each resource is considered on a case-by-case basis. Common prehistoric resource types in North Dakota include stone circles, stone cairns, rock art, lithic artifacts, pottery remains, earthlodge villages, rock alignments, bone concentrations, eagle-trapping pits, and lithic procurement areas. Common historic site types in North Dakota are

material remains of human life or activities over 50 years in age including homesteads, farmsteads, dumps, schools, roads, railroad grades, trails, trading posts, and military forts.

There are a number of areas designated as National Historic Landmarks or State Historic Sites within the Williston Basin of western North Dakota. They include the:

- Killdeer Mountain Battlefield State Historic Site,
- Elkhorn Ranch site within Theodore Roosevelt National Park,
- Lynch Knife River Flint Quarry site,
- Chateau de Mores State Historical Site,
- Fort Buford State Historic Site,
- Fort Union Trading Post National Historic Site,
- Fort Dilts State Historic Site, and
- Lewis & Clark National Historic Trail.

3.6 Native American Religious Concerns

The BLM's management of Native American Religious concerns is guided through Manual 8120: *Tribal Consultation under Cultural Resources Authorities* and Handbook 8120-1: *Guidelines for Conducting Tribal Consultation*. Generally, areas of concern to Native Americans are referred to as "Traditional Cultural Properties" (TCPs) which are defined as cultural properties eligible for the National Register of Historic Places because of its association with cultural practices or beliefs that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community.

There are several locations within the Williston Basin in western North Dakota that are a concern to Native Americans. Cultural resources associated with Native American ceremonies, religious practices, and important events in history have the highest probability of being of religious or of cultural concern to Native Americans. Common sites of concern are burials, rock art, monumental rock features, eagle catching pits, sweat lodges, offering and prayer loci, battle sites, and stone rings (Deaver 1995:3.11 – 3.25).

The Mandan, Hidatsa, and Arikara Nation attach religious and cultural significance to the Missouri River (Murray et al 2011; Sundstom 1997:7), Black Butte (Deaver 1995), and the Blue Buttes (Deaver 1995:4.66). In addition, Grassy Butte, Bullion Butte, the Sentinel Buttes, and the Little Missouri River were the setting for Hidatsa, Mandan, and Arikara myths (Sundstom 1997:6-8). It is likely that the Killdeer Mountain Battlefield and Cannonball River are of concern to many of the Sioux tribes (Sundstom 1997:8).

Bowers (1965:12) identifies specific buttes associated with the Hidatasa Earthnaming Bundle. The ceremonies tied to the Earthnaming Bundle were linked to specific spirts (e.g., Buffalo), and were residents of named buttes and the adjacent prairies in North Dakota. For example, spirts were associated with the Killdeer Mountains, Rosebud Butte and at least a dozen more buttes (i.e.., White Butte, Singing Butte, Ghost Singing Butte, Crow Butte, Fox Singing Butte, Little Heart Butte, Heart Singing Butte, Square Butte, Buffalo Home Butte, Lone Butte, Opposite Butte and Dog Den Butte).

3.7 Fluid Minerals

Oil and gas exploration and development in North Dakota has been concentrated in the Williston Basin western portion of North Dakota. The Williston Basin covers approximately 200,000 square miles of western North Dakota, northwestern South Dakota, eastern Montana, southern Saskatchewan, and extreme southwestern Manitoba. As of June 2015, there are approximately 12,383 active oil/gas wells in western North Dakota (Table 3.7.1).

Table 3.7.1. Total number of wells in the area of analysis.

Well Status	Federal Wells	Private and State Wells	Indian Wells	Total
Active Oil/Gas Wells	1,795	10,126	462	**12,383**
Permitted/Drilling/Constructed	184	954	131	**1,269**
Temporarily Abandoned/ Abandoned/Plugged/Inactive	2,209	11,417	200	**13,826**
TOTAL	**4,188**	**22,497**	**793**	**27,478**

Source: NDIC GIS database, accessed June 10, 2015.

Current technology allows wells to be drilled horizontally from the same well pad, resulting in multi-well pads composed of wells from multiple mineral owners (e.g. Federal, Indian, Private, State). Multi-well pads are commonly used for producing Bakken or Three Forks Formation wells in the Williston Basin. They are typically larger in size to accommodate both drilling and production operations of multiple wells, but reduce the overall surface disturbance on a per well basis. Production facilities can be used by all the wells in the same communitization agreement (CA) or lease. In order for multiple CAs or leases to produce to common storage tanks or through a single gas sales meter, an operator must apply for and receive BLM approval for commingling of production.

Communitization agreements are federal agreements used for development of Bakken or Three Forks Formation wells in the Williston Basin. A CA allows for the development of a separate lease or a portion of a lease that cannot be independently developed and operated in conformity with the state established well spacing or well development program. The leases within a CA are typically composed of multiple mineral owners (e.g. Federal, Indian, Private, State) sharing in the benefits of the well drilled in the spacing unit. Like multi-well pads, CAs reduce the amount of surface disturbance and eliminate unnecessary wells, roads, pipelines, and lease equipment while improving mineral drainage and protecting correlative rights. As of June 2015 there were 1,026 Federal CAs and 443 Indian CAs in the NDFO.

Wells in the Williston Basin in North Dakota will produce at the highest gas rate in the first few years of production, and then they will steadily decline and produce lower volumes of gas for the remaining life of the well. There are multiple reasons for an operator to request flaring of associated oil-well gas. Some of those include:

- the operator has submitted a one-year gas capture plan in accordance to NTL-4A;
- the operator is unable to obtain a Right-of-Way from the surface owner(s) (private, government agency, or Indian) to install a natural gas gathering line;

- the well is connected to a gas sales line with inadequate capacity to handle the volumes of gas being produced;
- the gas produced does not meet standards for gas processing, the well produces a low gas volume for which a gas processing contract cannot be obtained; or
- the well is in a remote location with no current or future gas transmission plans.

An application for flaring of oil well gas would include an evaluation report supported by engineering, geologic, and economic data which demonstrates to the satisfaction of the Authorized Officer that flaring is justified in accordance to NTL-4A.

Most flaring in North Dakota occurs because the well is connected to gas sales pipelines with inadequate capacity to handle the volumes of gas being produced. This results in oil wells flaring associated gas sporadically throughout the year. The length of time an operator flares due to inadequate capacity varies and can be of short duration.

As of June 1, 2014, the NDIC adopted a new policy, Order 24665, to reduce gas flaring. This Order was revised on September 24, 2015. The Order requires all wells which produce from the Bakken, Three Forks, and Three Forks/Bakken or Sanish Pools to reduce the volume of gas flared by specified percentages and deadlines. The policy requires that all APDs submitted to NDIC must be accompanied by a Gas Capture Plan (GCP). The GCP has various requirements that must be met prior to approval of an APD. These plans aim to ensure that all options for capturing gas are fully evaluated before a well is drilled. The State policy also requires that operators meet flaring reduction targets according to a prescribed timeline. For operators that do not meet the targets, the state policy provides for the restriction of oil production until the targets are met. The revised Order requires that by January 1, 2015, gas capture rates should be at 77 percent allowing 23 percent to be flared; and by November 1, 2020, gas capture rate should be at least 91 percent allowing 9 percent to be flared. In the March 2016 NDIC Director's Cut report, gas capture rates were at 87 percent capture, meeting the percent required in the policy.

3.8 Socio-Economic Conditions

Oil and gas development, which includes the extraction of oil and gas, drilling of wells, and support activities, has significantly increased in North Dakota over the last decade as exploration in the Bakken Formation has intensified. Leasing, exploration, development and production of federal minerals stimulates economic activity within the state, influencing employment, income, and public revenues.

The analysis area for socio-economic conditions includes the following counties: Billings, Bowman, Burke, Divide, Dunn, Golden Valley, McKenzie, McLean, Mountrail, Stark, and Williams counties. The 2014 population for the analysis area was 107,907 residents with Billings County having the fewest residents (901) and Williams County the most (32,130) (Table 3.8.1) Unemployment rates are relatively low, ranging from 1.2 percent to 4.2 percent (Table 3.8.1). Both Billings and McLean counties have unemployment rates (3.0 and 4.2 percent respectively) higher than the average for North Dakota (2.8 percent). In 2014 there was an average of 97,379 jobs in the analysis area with a majority of them in Stark and Williams counties (Labor Market Information Center 2015). A majority of jobs in Dunn, McKenzie, Mountrail, and Williams counties were in the mining, oil and gas extraction; construction; and transportation and

warehousing industries (Table 3.8.1). Oil and gas development is often associated with increased jobs in construction and transportation due to building energy infrastructure and truck hauling of materials such as water and waste.

Annual wages associated with jobs in these three industries tend to be relatively high-for example annual wages for mining, oil and gas extraction industry ranged from $106,932 in Williams County to $97,244 in Mountrail County (Labor Market Information Center 2015). This highlights energy development as a major contributor to many of the local economies in the analysis area in terms of jobs and income.

Forty-nine percent of the federal revenues collected in association to oil and gas development (e.g. bonus bids, rent, and royalties) is redistributed back to the state of production. The state then redistributes these monies with half going towards North Dakota public education/school and the other half being returned to the county of production. This revenue helps fund county functions such as enforcing laws, administering justice, collecting and disbursing tax funds, providing for orderly elections, maintaining roads and highways, providing fire protection, and keeping records. Other county functions that may be funded include operating clinics/hospitals, county libraries, county airports, local landfills, and county health systems.

Based on sales year data, the amount of revenues associated with federal oil and gas activities in the analysis area counties redistributed back to North Dakota in 2014 was approximately $104,419,578 (ONRR 2015). Revenues associated with gas avoidably lost to flaring or venting occurred in Burke and Dunn counties with a total of $405 being received by the federal government in 2014 (ONRR 2015). As discussed in Section 1.2, the BLM has the authority to allow venting or flaring of an oil-well gas under certain conditions pursuant to NTL-4A. Through the review process of the SN applications, the BLM will determine whether each request is an avoidable loss of gas or unavoidable loss of gas as a separate decision.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, states “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations…” (Executive Order 12989).

Minority populations as defined by Council on Environmental Quality (CEQ) guidance under the National Environmental Policy Act (CEQ 1997) include individuals in the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. A minority population is identified where “(a) the minority population of the

Table 3.8.1 Analysis Area Social and Economic Conditions.

	North Dakota	Billings County	Bowman County	Burke County	Divide County	Dunn County	Golden Valley County	McKenzie County	McLean County	Mountrail County	Stark County	Williams County
Total Population (2014)[1]	739,482	901	3,247	2,245	2,432	4,399	1,825	10,996	9,578	9,782	30,372	32,130
Unemployment Rate, Annual Average (2014)[2]	2.8%	3.0%	1.8%	2.8%	1.5%	1.3%	2.2%	1.5%	4.2%	1.3%	1.6%	1.2%
Percent of Total Jobs by Industry (2014 average annual)[3]												
Agriculture, Forestry, Fishing and Hunting	1.0%	****	3.1%	0.0%	0.0%	0.3%	3.9%	0.4%	1.4%	0.1%	0.2%	****
Mining, Quarrying, and Oil and Gas Extraction	6.7%	9.2%	7.6%	8.2%	13.3%	32.8%	****	18.2%	****	20.4%	20.9%	35.5%
Utilities	0.8%	****	****	****	****	0.2%	****	0.6%	****	****	0.4%	0.6%
Construction	7.8%	1.7%	11.0%	9.0%	3.7%	16.2%	2.3%	22.0%	6.8%	15.8%	9.4%	11.6%
Manufacturing	5.8%	0.0%	1.7%	0.0%	****	****	****	0.1%	****	****	5.5%	1.2%
Wholesale Trade	6.1%	****	13.1%	7.2%	****	2.3%	14.4%	4.7%	8.5%	4.8%	7.0%	7.8%
Retail Trade	11.4%	4.0%	11.1%	6.0%	8.4%	4.7%	9.0%	5.9%	7.7%	8.2%	9.9%	6.4%
Transportation and Warehousing	5.0%	9.5%	3.4%	21.0%	16.0%	13.2%	8.1%	17.9%	2.6%	20.6%	8.8%	9.1%
Information	1.5%	0.0%	1.2%	****	****	****	****	****	****	****	1.1%	0.5%

Finance and Insurance	4.0%	na	4.5%	3.5%	2.9%	0.7%	4.8%	1.1%	3.7%	1.2%	1.8%	1.0%
Real Estate and Rental and Leasing	1.3%	****	****	0.5%	1.3%	1.4%	na	1.6%	0.7%	0.3%	2.0%	3.7%
Professional and Technical Services	3.8%	0.7%	2.1%	1.3%	1.9%	3.7%	3.9%	2.9%	0.7%	3.1%	2.9%	3.0%
Management of Companies and Enterprises	1.2%	na	****	****	na	na	na	****	****	****	0.2%	****
Administrative and Waste Services	3.2%	1.3%	****	****	2.8%	1.1%	0.0%	1.0%	0.8%	1.0%	2.3%	2.6%
Educational Services	0.5%	0.0%	0.0%	0.0%	****	na	****	0.1%	****	0.0%	0.3%	0.2%
	North Dakota	Billings County	Bowman County	Burke County	Divide County	Dunn County	Golden Valley County	McKenzie County	McLean County	Mountrail County	Stark County	Williams County
Health Care and Social Assistance	12.5%	0.0%	15.7%	2.1%	****	****	17.0%	2.8%	11.5%	3.1%	7.4%	3.5%
Arts, Entertainment, and Recreation	1.0%	****	0.8%	0.8%	****	0.4%	****	0.6%	1.1%	****	0.8%	0.2%
Accommodation and Food Services	8.1%	11.3%	7.2%	4.6%	8.6%	5.2%	3.5%	5.8%	6.1%	4.1%	7.4%	6.0%
Other Services (except Public Administration)	2.8%	1.2%	2.1%	1.8%	1.2%	2.5%	4.4%	2.2%	1.7%	1.2%	2.8%	1.5%

Government (federal, state, local)	15.4%	29.2%	14.5%	29.0%	17.0%	9.2%	25.6%	12.0%	23.4%	11.8%	8.9%	5.1%
Percent Population (All Ages) Below Poverty Level[4] (2013)												
	11.6%	8.2%	8.0%	9.5%	9.0%	9.6%	11.7%	9.9%	10.6%	11.5%	8.7%	7.8%
Race Alone[1] (2014)												
White	89.1%	95.0%	95.8%	96.5%	96.6%	85.9%	96.7%	81.7%	90.6%	68.7%	93.9%	90.0%
Black or African American	2.1%	0.6%	0.3%	0.6%	0.7%	0.6%	0.8%	1.2%	0.3%	0.9%	1.7%	2.4%
American Indian and Alaska Native	5.4%	0.4%	2.5%	1.0%	0.7%	9.7%	1.2%	14.1%	7.2%	27.2%	1.3%	3.9%
Asian	1.3%	3.7%	0.2%	0.6%	0.7%	1.5%	0.2%	0.7%	0.1%	0.3%	1.4%	0.8%
Native Hawaiian and Other Pacific Islander	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%
Two or More Races[1] (2014)	2.0%	0.3%	1.1%	1.3%	1.2%	2.3%	0.9%	2.3%	1.8%	2.9%	1.6%	2.9%
Hispanic[1] (2014)	3.2%	1.8%	4.7%	2.1%	3.9%	3.8%	2.7%	6.8%	2.1%	6.2%	4.9%	5.2%
Total Minority[5] (2014)	13.4%	6.3%	7.3%	5.5%	7.0%	17.0%	5.8%	23.5%	10.5%	35.2%	10.5%	14.5%

Source: [1]U.S. Census Bureau 2015. [2]Bureau of Labor Statistics 2015. [3]Labor Market Information Center 2015. [4]U.S. Census Bureau 2014. [5] Total minority is calculated as: (Total Population - Non-Hispanic White Alone population)/Total Population. The term "total minority population" refers to the part of the total population which is not classified by the race/ethnicity category Non-Hispanic White Alone by the U.S. Census Bureau. This definition is most inclusive of populations that may be considered as a minority population under EO 12898.

affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater…" (CEQ 1997). Additionally, "[a] minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds" (CEQ 1997). Low-income populations are determined by the U.S. Census Bureau based upon poverty thresholds developed every year.

U.S. Census data are used to determine whether the populations residing in the analysis area constitute an "environmental justice population" through meeting either of the following criteria:

- At least one-half of the population is of minority or low-income status; or
- The percentage of population that is of minority or low-income status is at least 10 percentage points higher than for the entire State of North Dakota.

Table 3.8.1 indicates the State of North Dakota has 11.6 percent of the population living below the poverty level in 2013 and a total minority population of 13.4 percent in 2014. None of the counties met the criteria above for low-income environmental justice populations. McKenzie and Mountrail counties have total minority populations that meet the criteria for constituting environmental justice populations. In 2014, Mountrail County met the criteria with a total minority percent of 35.2 and an American Indian/Alaska Native percent of 27.2 whereas the State of North Dakota has 13.4 percent of total minority and 5.4 percent of the population as American Indian/Alaska Native (Table 3.8.1). McKenzie County had a total minority percent of 23.5 percent which was largely driven by the American Indian/Alaska Native race and Hispanic or Latino ethnicity (14.1 and 6.8 percent respectively).

4.0 ENVIRONMENTAL IMPACTS

4.1 Assumptions and Methodology

The analytical assumptions and methodology listed below were developed by BLM resource specialists and petroleum engineers who relied on professional judgment of the resource and knowledge of flaring activity within the Williston Basin in western North Dakota. The BLM used production and GIS data from the BLM and NDIC databases to identify well locations, status, and production information.

BLM took into consideration NDIC Order 24665 to develop assumptions for this EA. The revised Order requires that by January 1, 2015, gas capture rate should be at 77 percent allowing 23 percent to be flared; and by November 1, 2020, gas capture rate should be at least 91 percent allowing 9 percent to be flared. See Appendix B for further details on the methodology and application of assumptions to determine gas production rates and quantities for this EA.

The BLM assumes that all operators will comply with applicable laws, regulations and BLM requirements. Under the general requirements for onshore oil and gas operations (43 CFR 3162.1), an operator shall comply with applicable laws and regulations. These include, but are not limited to, conducting all operations in a manner that results in maximum ultimate economic recovery of oil and gas with minimum waste.

The BLM assumes that no additional surface disturbance would occur as a result of evaluating the flaring requests and potential mitigation measures.

The BLM assumes that all wells that have sold natural gas associated with oil production are connected to a natural gas gathering pipeline to transport gas to a processing plant.

Based on the type of flaring SN request, one well may have multiple SN requests submitted for BLM review. The impacts to each resource may be associated to the number of SN requests submitted or the number of wells within the analysis area. Therefore, each resource will identify when the number of SN requests is being used as part of the impact analysis and when the number of wells is being used as part of the impact analysis.

For this EA, 173 wells are not connected to a sales pipeline. These 173 wells have 208 associated flaring sundry notices submitted. The BLM assumes 5 percent of the pending SN requests representing 9 wells (5% of 173 wells) would be required to capture and market the oil-well gas and gas would be flared from these wells intermittently based on pipeline capacity. The BLM assumes 80 percent of the pending sundry notices representing 138 wells (80% of 173 wells) would flare for a designated period of time (i.e. 1-year gas capture plan, ROW approval, etc.) which would result in gas capture upon installation of infrastructure and intermittent flaring based on pipeline capacity limitations. The BLM assumes 15 percent of the pending sundry notices representing 26 wells (15% of 173 wells) would flare long-term (i.e. remote location, poor gas quality, low gas volume, etc.).Wells flaring long term would be subjected to NDIC operator flaring limits.

For this EA, the BLM assumes the average thousand cubic feet (MCF) of gas flared by an oil well per day in North Dakota is approximately 121 MCF per day. This chapter describes the environmental effects (direct, indirect, and cumulative) that would result from the alternatives. Environmental consequences are discussed below by alternative to the extent possible at this time for the resources described in Chapter 3. As per NEPA regulations at 40 CFR 1502.14(f), 40 CFR 1502.16(h), and 40 CFR 1508.20, mitigation measures to reduce, avoid, or minimize potential impacts of the proposed action are identified by resource below.

4.2 Reasonably Foreseeable Development

The Reasonably Foreseeable Development (RFD) scenario for this EA is based on information and assumptions contained in the RFD developed in 2009, revised in 2011 for the NDFO Resource Management Plan (RMP), and revised again in 2014 for the NDFO RMP to consider the increased rate of development in the Williston Basin portion of North Dakota (Map 1). The 2014 RFD revision contains projections of oil and gas wells for the western portion of the NDFO area. This information was used in the analysis of this EA.

The 2014 RFD revision took into consideration the assumptions and methodology from the previous reports completed. It also incorporated current changes in development that resulted in an increase projection of oil and gas development for the next 20 years. For this EA, only the first 5 years of projected development was used to complete this environmental analysis. In the next 5 years, the 2014 RFD revision projects a baseline total of 6,648 wells to be producing wells in the western portion of North Dakota. Of those 6,648 total wells, 1,263 are Federal, 399 are Indian, and 4,986 are Fee/State administered wells.

Based on 2014 RFD, for the next five years, the BLM assumes a total of 6,648 wells are projected to produce gas and flare an average 121 MCFPD per well. The gas capture percentages requirements from NDIC Order 24665 were applied to the projected number of wells for the next five years to identify projected capture and projected short-term and long-term flaring by year. See Appendix B for specific percentages and projections per year.

4.3 Alternative A (No Action Alternative)

4.3.1 Direct Effects Common to All Resources

Under Alternative A, the 1,770[1] pending SN requests and future SN requests would be reviewed and responded to on a case-by-case basis in accordance with NEPA. Each SN request would have an individual NEPA document analyzing impacts from an individual request.

The direct and indirect impacts would be similar to those described in Section 4.4 Alternative B; however, completing individual NEPA reviews would limit the scale and scope of analysis, not adequately disclose cumulative effects, and increase review time for all requests. Increased review time frames would be inefficient and result in a backlog of pending SN requests. Not processing requests to flare in a timely manner would also limit BLM's opportunity to mitigate environmental impacts at the time they are occurring. Surface management would remain the same and ongoing oil and gas development would continue on surrounding Federal, private, and State leases. Future flaring SN requests submitted by operators and identification of environmental mitigation measures would be completed on a case-by-case basis.

4.3.2.2 Cumulative Effects Common to All Resources:

The cumulative effects would be the similar to those described in Section 4.4.6. Cumulative Impacts Alternative B; however, reviews for current and future flaring requests, and the identification of environmental mitigation measures would be completed on a case-by-case basis. This would result in inefficiencies and a continual backlog of pending SN requests.

4.4 Alternative B (Proposed Action BLM Preferred Alternative)

4.4.1 Air Resources

4.4.1.1 Air Quality

Associated gas flaring is a combustion process, creating primarily CO_2, water vapor, and combustion by-products that can include hazardous air pollutants (HAPs). Flaring does not combust all organic compounds because it is an incomplete process. Flares must meet North Dakota Department of Health and EPA requirements. EPA's New Source Performance Standards (NSPS) in 40 CFR §60.18 and National Emission Standards for Hazardous Air Pollutants (NESHAPS) in 40 CFR 63.11, include equipment design and operational standards for flares and requires they be operated and maintained consistent with "good air pollution control practices". This has been interpreted to mean a destruction efficiency of 98 percent. The NSPS also require no visible emissions, except for up to 5 minutes every 2 hours.

Appendix C contains criteria air pollutant and HAP emission calculations for flared gas on a pound per million standard cubic foot (lb/MMSCF) basis and annual basis in terms of short tons per year. The calculations use associated gas composition and assume that 2 percent of the gas passes through the flare without combustion and 98 percent is completely combusted. Annual emissions for the year with the greatest quantity of flared gas are shown in Table 4.4.1. The emissions are compared to statewide North Dakota criteria pollutant emissions, provided as a percentage of EPA's year 2011 National Emissions Inventory (NEI).

Table 4.4.1. Criteria and Hazardous Air Pollutant Annual Emissions

Pollutant	Cumulative Annual Emissions (short tons/year)		Flaring Emissions as a Percent of total ND Emissions (Year 2019)
	Maximum Annual Flaring Emissions (2019)	North Dakota (2011 NEI)	
PM_{10}	589	365,857	<1%
$PM_{2.5}$	589	90,086	<1%
NOx	8,282	163,788	54%
SO_2	8,947	1,074,343	≤1%
CO	6,512	488,511	1%

VOC	32,285	281,219	11%
HAPs	1,431	N/A	N/A

NEI = National Emissions Inventory
Short tons = 2,000 lb
Source: EPA 2015.

As shown in Table 4.4.1, criteria air pollutant emissions due to cumulative flaring in northwestern North Dakota would constitute a small percentage of statewide emissions. These emissions represent an increase in emissions in the specific locations where flaring would be allowed under this alternative. However, the emissions may or may not represent an increase in the region, given the flaring reductions required by the NDIC.

Flaring emissions would occur over a wide geographic area covering many counties with relatively flat terrain and with good pollutant dispersion characteristics. Given the good air quality in the planning area, flaring emissions are not expected to affect air quality.

Flaring is not expected to cause visible plumes, except for short periods of time. Some impacts to visibility due to emissions of fine particulate, NO_x, and SO_2 could potentially occur because these pollutants can contribute to regional haze. Because the net increase in these pollutants cannot be estimated due to regional reductions in flaring, impacts to regional haze are difficult to predict.

4.4.1.2 Greenhouse Gas Emissions at the NDFO and Project Scales

The primary GHGs of concern emitted by flaring are CO_2, CH_4, and N_2O. Associated gas that bypasses the flare consists of approximately 70 percent by volume CH_4 (WRAP 2014). The total climate change effect of aggregated GHGs is estimated in terms of carbon dioxide equivalent (CO_2e), which is calculated by multiplying the quantity of each GHG by its global warming potential (GWP) and summing the results. In order to make meaningful comparisons to EPA emission inventories, regulatory GWPs from 40 CFR Part 98, Table A-1 are used in the calculations. These GWPs reflect the 100-year impact of GHG emissions and are equal to 1 for CO_2, 25 for CH_4, and 298 for N_2O. For every molecule of CH_4 that is flared, one molecule of CO_2 is produced and for every metric ton of CH_4 flared, approximately 2.9 metric tons of CO_2 are formed. Put in terms of CO_2e, each metric ton of CH_4 flared is equivalent to 25 metric tons of CO_2e entering the flare and results in 2.9 metric tons of CO_2e exiting the flare. Flaring converts a high GWP gas to a lower GWP gas.

Other GWPs based on different time frames can be used by the reader by selecting desired GWP values and multiplying them by the emissions of each individual GHG.

Appendix C provides an estimate of GHG emissions on a pound per million standard cubic foot (lb/MMSCF) basis and an annual basis in terms of short tons per year and metric tons per year. Table 4.4.2 summarizes GHG emissions in terms of individual GHG emissions and as CO_2e.

Table 4.4.2 Greenhouse Gas Annual Emissions

GHG	Maximum Cumulative Annual Flaring Emissions (short tons/year)	(metric tons/year)
CO_2	9,303,940	8,440,348
CH_4	28,979	26,289
N_2O	171	155
CO_2e		**9,143,690**

Short tons = 2,000 lb
Metric tons = 2,205 lb

Flaring GHG emissions can be put into context by comparing them to state and national GHG emission inventories. An EPA inventory of GHG emissions emitted by large sources in North Dakota estimates emissions at 37,003,286 metric tons per year (EPA 2015a). This number does not include emissions from residential heating, vehicular travel, and other sources with small emissions on a per household or per vehicle basis. Alternative B flaring emissions would be approximately 25 percent of this large-source North Dakota emission inventory. A more comprehensive national inventory including nearly all types of GHG emissions estimates national CO_2e emissions of 6.673 billion metric tons per year for 2013 (EPA 2015b). Alternative B flaring emissions would be 0.14 percent of this national inventory.

4.4.1.3 Climate Change

Flaring releases increased GHG emissions into the atmosphere because no energy benefit, such as electricity production or resident heating, is obtained from the flaring process. Additional natural gas must be produced and combusted in order to provide these energy benefits. Under Alternative B, atmospheric GHG concentrations would be slightly greater than they would be otherwise. However, given the small percentage of GHG emissions compared to state and national emission inventories, the global change would be extremely small.

The extent of climate effects due to the increase in GHG emissions is also difficult to predict because the change in emissions is so small. Climate change models cannot differentiate global, regional, state, and local climate impacts for changes at this scale. Furthermore, impacts to human health and ecosystems cannot be accurately predicted due to these small emission changes.

4.4.1.4 Mitigation

When compared with venting associated gas, flaring is a form of mitigation because it destroys most VOCs and HAPs in the gas by converting them to CO_2 and other compounds. As described earlier, flaring also mitigates GHG emissions by converting a high GWP gas (CH_4) to a low GWP gas (CO_2).

Air pollutant and climate change impacts could be minimized or mitigated by capturing the associated gas.

4.4.2 Visual Resources

4.4.2.1 Direct and Indirect Effects

There are no SN requests to flare on BLM administered lands; therefore, the 1,770[1] SN requests to flare on existing facilities would have no impacts to visual resources on BLM administered lands.

Potential impacts from flaring requests from future facilities from BLM administered wells and State administered wells throughout western North Dakota would include the introduction of visual contrast and degradation of scenic quality by the artificial lighting of the landscape that may otherwise be unlit. It is expected that the majority of flaring requests would be short term (less than 5 years) and result in negligible impacts due to existing infrastructure on the existing well pad (e.g. tanks, pump jacks, heater-treaters, etc.), application of NDIC Order 24665, increased beneficial use gas, and the decrease in gas production over the life of the well.

4.4.2.2 Mitigation

Application and implementation of the facility design features/mitigation measures addressed in the proposed action would provide the necessary measures to protect visual resources when a SN request to flare is proposed on BLM administered lands. Additional site specific mitigation measures for future requests from new wells and facilities to flare oil-well gas on BLM administered lands, would be determined on a case-by-case basis to maintain the visual qualities or scenic value of the area.

For future Federal APDs on BLM administered surface, the BLM would apply appropriate BLM best management practices for visual resources, which would serve to mitigate flaring activities on the well pad. Mitigation measures applied to the APD would include, but not be limited to, proper site selection, reduction of visibility, and appropriate color(s)/color schemes that blend with the background. Repetition of form, line, color and texture when designing projects would reduce contrasts between landscape and development. This would be managed as part of the Surface Use Plan of the APD.

4.4.3 Cultural Resources

4.4.3.1 Direct and Indirect Effects

The 1,770[1] requests to flare located on existing facilities, would not introduce new elements to the landscape.

Of the 1,770[1] SN requests located on existing facilities, there are no requests to flare gas within the viewsheds of the Chateau de Mores State Historical Site, the Fort Dilts State Historic Site, and the Lynch Knife River Flint Quarry site.

Of the 1,770[1] SN requests, there are no requests with ongoing flaring on existing facilities within the viewsheds of the Killdeer Mountain Battlefield State Historic Site, the Fort Buford State Historic Site, the Fort Union Trading Post National Historic Site, or the Lewis & Clark National Historic Trail.

Of the 1,770[1] SN requests, there is one request to flare on the Morgan Draw Federal 1 well facility which is not connected to a pipeline and has ongoing flaring within the viewshed of Theodore Roosevelt Greater Elkhorn Ranchlands. The well is located on U.S. Forest Service Land and is not connected to a pipeline. Flaring from this well is infrequent and low volume, averaging 8 Mcf per month from 2011 – 2015. Since flaring from the Morgan Draw Federal 1 well is historically low volume and continues to be low volume, this well does not have the potential to introduce new elements to the landscape. Therefore, flaring from this well would not have the potential to affect cultural, scientific, or historic resources.

Future flaring requests, or future APDs, has the potential to introduce visual, atmospheric or audible elements that would diminish the integrity of a property's setting and feel. However, applying mitigation measures to these future requests on new facilities and applications would reduce, avoid, or minimize potential impacts to the visual, atmospheric or audible elements of a historic or cultural property's setting or feel in accordance to Section 106.

4.4.3.2 Mitigation

The BLM has the authority to protect the viewsheds of cultural and historic properties for federally administered wells on both federal and non-federal surface under the NHPA and 36 CFR 800 – Protection of Historic Properties. In addition, mitigation requirements for venting and flaring within the viewsheds of historic or cultural properties are authorized under the NEPA, section 6.8.4.

The pending 1,770[1] SN requests on existing locations would not require the application or implementation of design features/mitigation measures. Application and implementation of the project design features/mitigation measures would be applied to future requests on new facilities, or future APDs, with the potential to introduce visual, atmospheric or audible elements diminishing the integrity of a property's setting or feel in accordance with Section 106. Project design features/mitigation measures would provide the necessary measures to reduce, avoid, or minimize potential impacts to cultural or historic properties. Site specific mitigation measures, including design features proposed by the operator would be developed during review of the application to reduce, avoid, or minimize potential impacts to historic or cultural property's setting or feel in accordance with Section 106.

For future APDs, application of standard lease terms, stipulations, and cultural lease notices on the APD would provide additional mechanisms to protect cultural or historic properties that may be affected by flaring. The NDFO would conduct necessary viewshed analysis, as outlined in Appendix D, to identify potential impacts to a historic property's setting or feel and where viewshed is integral to the sites integrity and therefore its eligibility to the NRHP. Site specific mitigation measures could include but are not limited to the project design features/mitigation measures addressed in the proposed action to reduce, avoid, or minimize potential impacts to a historic property's setting or feel in accordance with Section 106.

4.4.4 Native American Religious Concerns

4.4.4.1 Direct and Indirect Effects

The 1,770[1] requests to flare located on existing facilities would not impact Native American religious concerns. Flaring on an existing location would not interfere with the performance of

traditional ceremonies and rituals pursuant to the American Indian Religious Freedom Act (AIRFA) or EO 13007 and would not prevent tribes from visiting sacred sites or prevent possession of sacred objects.

Potential impacts from flaring requests on new facilities or future APDs submitted for BLM review have the potential to introduce visual, atmospheric or audible elements with possible impacts for Native American Religious Concerns and/or interference with performance of traditional ceremonies and rituals.

4.4.4.2 Mitigation

Mitigation would be the same as section 4.4.3.2 above. The NDFO would continue to invite interested parties to consult about historic properties of religious and cultural significance to Native Americans.

4.4.5 Socio-Economic Conditions

4.4.5.1 Direct and Indirect Effects

Application of mitigation measures to future APDs could result in a cost increase to the operator. Mitigation would be determined during the APD review and associated NEPA document, and would depend on factors such as proposed facilities, topography, proximity to historic properties, etc.

In regards to the American Indian/Alaska Natives environmental justice populations, the 1,770[1] requests to flare located on existing facilities would not impact Native American religious concerns. Flaring on an existing location would not interfere with the performance of traditional ceremonies and rituals pursuant to the American Indian Religious Freedom Act (AIRFA) or EO 13007 and would not prevent tribes from visiting sacred sites or prevent possession of sacred objects.

4.4.5.2 Mitigation

Mitigation for the American Indian/Alaska Natives environmental justice populations would be the same as section 4.4.4.2 and 4.4.3.2. The NDFO would continue to invite interested parties to consult about historic properties' that are of religious and cultural significance to Native Americans.

4.4.6 Cumulative Impacts- Alternative B

Cumulative impacts are those impacts resulting from the incremental impact of an action when added to other past, present, and reasonably foreseeable actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7). This section describes cumulative impacts associated with this project on resources.

4.4.6.1 Past, Present and Reasonably Foreseeable Future Actions

Past, present, or reasonably foreseeable future actions that affect the same components of the environment as the Proposed Action, are: drilling and producing of new and existing wells on state, private, Indian, and Federal minerals, installation of new infrastructure and roads, and utility rights-of-way. Additional flaring of gas from state, private, Federal and Indian oil-wells is expected but in lower volumes for short duration due to the requirements in NDIC Order 24665. The revised Order requires that by January 1, 2015, gas capture rate should be at 77 percent

allowing 23 percent to be flared; and by November 1, 2020, gas capture rate should be at least 91 percent allowing 9 percent to be flared.

4.4.6.2 Cumulative Impacts by Resource

Cumulative effects for all resources in the NDFO are described in the final RMP/EIS (pgs. 22 to 28). Anticipated flaring activity associated with the SNs being analyzed in this EA is described in this document's cumulative effects analysis for air resources, socio-economic conditions, cultural resources, and visual resources.

Anticipated development activities associated with the SN requests considered in this EA are within the range of assumptions used and effects described in this cumulative effects analysis for resources other than air resources, economic, cultural resources, and visual resources.

4.4.6.3 Greenhouse Gas Emissions and Cumulative Impacts on Climate Change

GHG emission cumulative impacts are extremely difficult to predict due to the many sources of GHG emissions at the local, state, national, and global scales. Within the planning area, cumulative GHG emissions from oil and gas operations are expected to decline as greater percentages of associated gas are captured due to recent NDIC regulations. Oil and gas companies are also reducing GHG emissions due to GHG emission reporting programs and public pressure.

Regional, state, and national GHG emissions are expected to decline due to recently promulgated EPA regulations that reduce vehicle emissions and proposed regulations, such as the Clean Power Plan, that will significantly reduce GHG emissions from power plants.

Substantial global GHG emissions reductions are becoming more likely as more nations are recognizing climate change impacts to their resources and economics and as they are imposing regulations to reduce these emissions.

Given these changes on such large scales, it is difficult to determine if global cumulative GHG emissions will increase or decrease.

4.4.6.4 Cumulative Impacts of Climate Change

Cumulative climate change impacts on human health, ecosystems, and economies will depend on GHG emissions, atmospheric GHG concentrations, and the ability to mitigate climate change impacts by developing more resilient systems. Due to the longevity of GHGs in the atmosphere, climate change impacts will continue to increase for many years, regardless of whether global GHG emissions increase, decrease, or remain stable over the next 5-6 years.

4.4.6.5 Cumulative Impacts to Visual Resources

While impacts to visual resources are assumed to be short term in nature, the location of the impacts would extend across the landscape over time with additional development and contributing to cumulative visual effects in the project area.

4.4.6.6 Cumulative Impacts to Cultural Resources

Cultural resources have been affected by past and current land uses including agricultural, transportation, and mineral development, which continue to impact resource values today throughout western North Dakota. Of the 1,770[1] SN requests, there are 102 SN requests for wells that are connected to pipelines and have flared oil well gas within the viewshed of the following five areas. The numbers of SN requests are as follows:

- 75 requests in the Lewis & Clark National Historic Trail;
- 6 requests in the Fort Union Trading Post National Historic Site;
- 2 requests in the Killdeer Mountain Battlefield State Historic Site;
- 2 requests in the Theodore Roosevelt Greater Elkhorn Ranchlands; and
- 17 requests in the Fort Buford State Historic Site.

The implementation of NDIC Order 24665 in North Dakota is a form of mitigation. The state mandated reduction in flaring, in conjunction with site specific requirements on an APD or SN request to flare, would provide the protection needed to eliminate, minimize or mitigate impacts to a property's setting and feel in accordance to Section 106.

4.4.6.7 Cumulative Impacts to Native American Religious Concerns

Cultural resources associated with Native American ceremonies, religious practices, and important events in history have the highest probability of being of religious or of cultural concern to Native Americans. These cultural resources have been affected by past and current land uses such as agricultural development, transportation development, and mineral development throughout western North Dakota. Site specific mitigation measures for future APDs or requests to flare on new facilities would be identified during tribal consultation for each project, in conjunction with the implementation of NDIC Order 24665, would serve to eliminate, minimize, or mitigate impacts to cultural resources associated with Native American Religious Concerns.

4.4.6.8 Cumulative Impacts to Socio-Economic Conditions

The implementation of NDIC Order 24665 in North Dakota would curtail production if capture rates are not met by operators. Over time, this would result in a change of pace in oil and gas development and minimize or eliminate the need to flare on existing oil well locations. These changes can impact the royalties received from the development of federal minerals or from vented or flared oil well gas.

The analysis area for cumulative impacts includes numerous additional counties with current wells. Three of these additional counties-Benson, Rolette and Sioux counties, meet the criteria for low-income environmental justice populations and for American Indian/Alaska Native environmental justice populations. Flaring on an existing location would not interfere with the performance of traditional ceremonies and rituals pursuant to the American Indian Religious Freedom Act (AIRFA) or EO 13007 and would not prevent tribes from visiting sacred sites or prevent possession of sacred objects. The NDFO would continue to invite interested parties to consult about historic properties' that are of religious and cultural significance to Native Americans.

5.0 CONSULTATION AND COORDINATION

5.1 Persons, Agencies, and Organizations Consulted

Public scoping for this project was conducted by posting the proposed action on the NDFO website - NEPA notification log. Therefore, scoping was initiated August 30, 2013, the date the EA was assigned a number and posted to the NEPA notification log.

To better understand the challenges facing natural gas development in the Williston Basin, the BLM attended an NDPC sponsored workshop with oil and gas industry representatives, natural gas midstream representatives, Chairman Fox of the Mandan, Hidatsa, and Arikara Three Affiliated Tribes and NDIC representatives. During the workshop, operators were individually consulted to clarify the details of their SN requests to flare from Federal and Indian wells.

The BLM consults with the State Historic Preservation Office (SHPO) and Native American Tribes under Section 106 of the National Historic Preservation Act (NHPA). On June 24, 2015, the NDFO sent formal consultation and determination letters to the State Historic Preservation Officer (SHPO) of North Dakota. On July 8, 2015, the SHPO concurred with the NDFO's finding of "No Historic Properties Affected" (ND SHPO Ref: 15-0835).

On June 29, 2015, the NDFO invited seventeen federally recognized Indian tribes to consult about the NDFO's oil and gas program and the flaring of natural gas. The NDFO sent letters with maps inviting 17 Tribal Historical Preservation Officers (THPOs) or the respective cultural contacts to submit issues and concerns BLM should consider in the environmental analysis. The following were invited: Flandreau Santee Sioux Tribe, Fort Belknap Indian Community, Crow Tribe, Oglala Sioux Tribe, Mandan, Hidatsa, and Arikara Nation, Sisseton-Wahpeton Oyate Tribes, Rosebud Sioux Tribe, Lower Sioux Indian Community, Lower Brule Sioux Tribe, Yankton Sioux Tribe, Spirt Lake Tribe, Turtle Mountain Band of Chippewa, Cheyenne River Sioux Tribe, Northern Cheyenne Tribe, Standing Rock Sioux Tribe, Fort Peck Assiniboine and Sioux Tribes, and the Crow Creek Sioux Tribe. To date, the Fort Belknap Indian Community has requested to be consulted on future NDFO APDs.

5.2 Summary of Public Participation

5.2.1 Scoping

Public scoping for this project was conducted by posting the proposed action on the NDFO website - NEPA notification log. Therefore, scoping was initiated August 30, 2013, the date the EA was assigned a number, DOI-BLM-MT-C030-2013-229-EA, and posted to the NEPA notification log. No comments were received from the public.

5.2.2 30-Day Public Comment Period

Three SDRs were submitted on the Decision Record signed on August 25, 2015 (DOI-BLM-MT-C030-2013-229-EA). Based on the decision letter from the SDRs, modifications were made throughout this EA (DOI-BLM-MT-C030-2016-0212-EA) to clarify the proposed action and decision to be made by the BLM. In addition to the modifications, the NDFO posted this EA, DOI-BLM-MT-C030-2016-0212-EA, for a 30-day public comment period and notified

interested parties of its posting on the BLM e-Planning website. A two week extension was granted to the public until July 14, 2016.

A total of three written comment submissions were received during the comment period, which resulted in 28 substantive comments addressing various resources and concerns in the EA. After review and consideration of the comments, some modifications were made to the EA. A summary of the 30-day comments and changes made to the EA as a result of the comment period can be found in Appendix E of this EA.

Table 5.1. List of Preparers

Name	Title	Responsible for the Following Section(s)
Susan Bassett	Air Resource Specialist	Air Resources, Climate Change
Melissa Hovey	Air Resource Specialist	Air Resources, Climate Change
Jessica Montag	Economist	Socio-Economic Conditions
Irma Nansel	Planning and Envir. Coor.	Project Lead
Margaret Ward	NEPA Coordinator	NEPA
Ruth Miller	Land Use Specialist	NEPA
Dale Manchester	Petroleum Engineer	Fluid Minerals, RFD
Barney Whiteman	Petroleum Engineer	Fluid Minerals, RFD
Beth Poindexter	Petroleum Engineer	Fluid Minerals
Paul Kelley	Natural Resource Specialist	Visual Resources
Sean Berry	Archaeologist	Cultural Resources, Native American Religious Concerns

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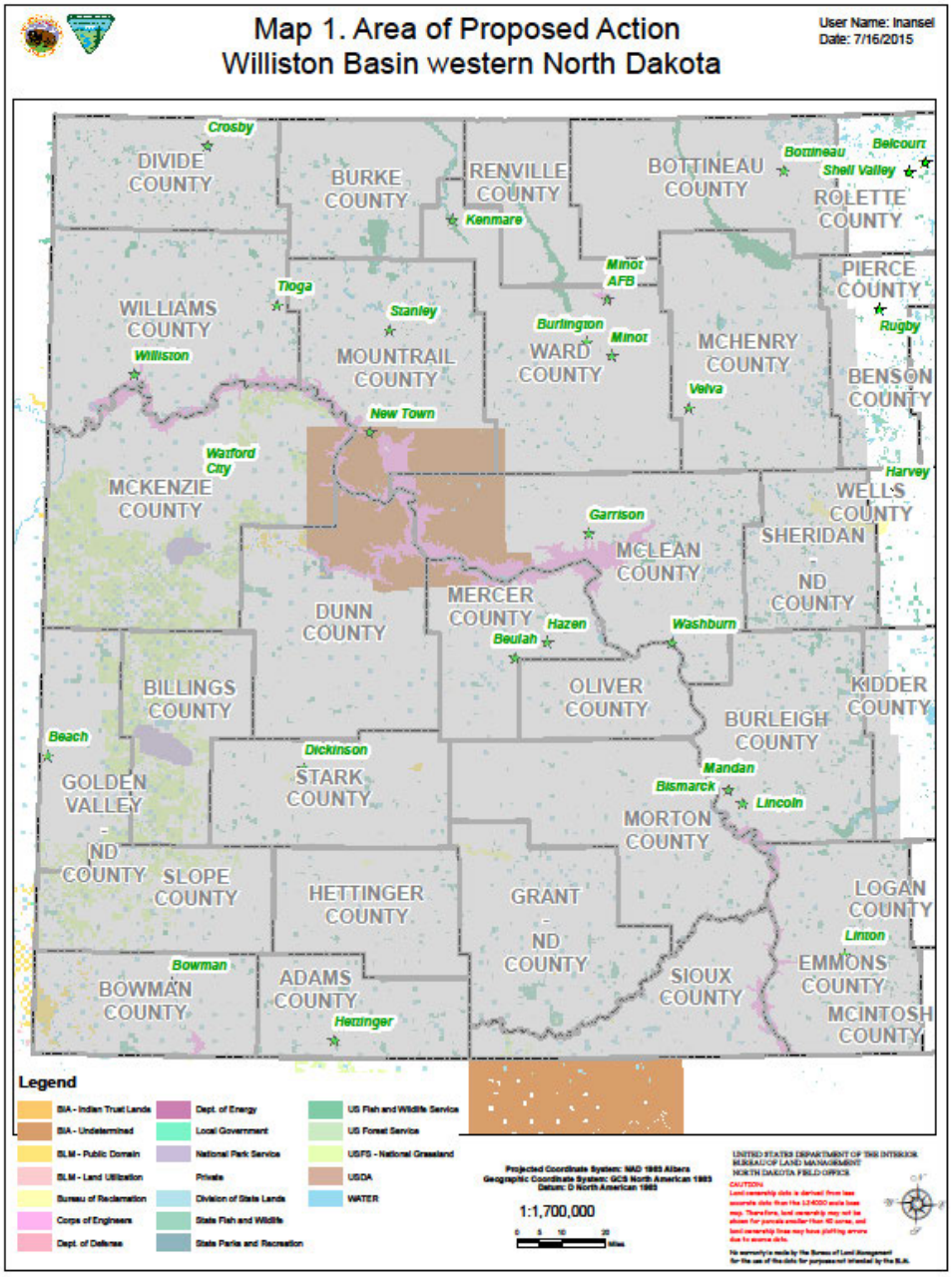
Map 1. Area of Proposed Action Williston Basin Western North Dakota



Appendix A. Sundry Notices in the NDFO from January 1, 2012 to April 16, 2015[1]. (BLM AFMSS database, accessed April 16, 2015)

	WELL ID	COUNTY			WELL ID	COUNTY
1	0904ERH NERU	BILLINGS		47	21-36TFH TEDDY	BILLINGS
2	1 MORGAN DRAW F	BILLINGS		48	24-24TFH DRS FE	BILLINGS
3	10-1 FEDERAL	BILLINGS		49	24X-12H TRMU	BILLINGS
4	1-10 T.R.FEDERA	BILLINGS		50	24X-12H TRMU	BILLINGS
5	11-10 CITIES SE	BILLINGS		51	2901H NERU	BILLINGS
6	11-14PH PRONGHO	BILLINGS		52	3 MORGAN DRAW B	BILLINGS
7	11-15PH PRONGHO	BILLINGS		53	3006 BSMU	BILLINGS
8	11-17TFH ANDERS	BILLINGS		54	3108 BSMU	BILLINGS
9	11-17TFH ANDERS	BILLINGS		55	31-10TFH DEMORE	BILLINGS
10	11-19-1PH KJELS	BILLINGS		56	31-16H BUCKHORN	BILLINGS
11	11-19-1PH KJELS	BILLINGS		57	3-11F US	BILLINGS
12	11-20TFH TEDDY	BILLINGS		58	31-28PH REDMOND	BILLINGS
13	11-25PH DRS FED	BILLINGS		59	31-3PH MCDONALD	BILLINGS
14	11-27PH TALKING	BILLINGS		60	31-3PH MCDONALD	BILLINGS
15	11-28PH REDMOND	BILLINGS		61	3204 BSMU	BILLINGS
16	11-5PH BABECK F	BILLINGS		62	34-10PH PRONGHO	BILLINGS
17	11-7TFH ELLISON	BILLINGS		63	34-11PH DULETSK	BILLINGS
18	11-8TFH KORDON	BILLINGS		64	34-11TFH PRONGH	BILLINGS
19	11-8TFH KORDON	BILLINGS		65	34-12TFH SMITH	BILLINGS
20	12-12H TRMU	BILLINGS		66	34-31H FEDERAL	BILLINGS
21	12-12TFH SCHNEI	BILLINGS		67	34-35-1H BASARA	BILLINGS
22	1-22 VOODOO	BILLINGS		68	34-9PH PRONGHOR	BILLINGS
23	14-10PH PRONGHO	BILLINGS		69	34-9TFH CLEMENS	BILLINGS
24	14-11PH DULETSK	BILLINGS		70	41-14H BUCKHORN	BILLINGS
25	14-11PH PRONGHO	BILLINGS		71	41-15PH PRONGHO	BILLINGS
26	14-12PH DULETSK	BILLINGS		72	41-16PH PRONGHO	BILLINGS
27	14-14H TRMU	BILLINGS		73	41-18D FEDERAL	BILLINGS
28	14-22H MOSSER	BILLINGS		74	41-18D FEDERAL	BILLINGS
29	1707 BSMU	BILLINGS		75	41-22H TRMU	BILLINGS
30	1806 BSMU	BILLINGS		76	41-22H TRMU	BILLINGS
31	1807 BSMU	BILLINGS		77	41-27PH TALKING	BILLINGS
32	1910 BSMU	BILLINGS		78	41-30H FEDERAL	BILLINGS
33	2 BUCKHORN FED	BILLINGS		79	42-18H FEDERAL	BILLINGS
34	2 MORGAN DR FED	BILLINGS		80	44-10PH PRONGHO	BILLINGS
35	21-13TFH PRONGH	BILLINGS		81	44-11PH DULETSK	BILLINGS
36	21-14 CL PH PRO	BILLINGS		82	44-11PH DULETSK	BILLINGS
37	21-14H TR MADIS	BILLINGS		83	44-11PH PRONGHO	BILLINGS
38	21-14TFH PRONGH	BILLINGS		84	44-18TFH ASH CO	BILLINGS
39	21-15PH PRONGHO	BILLINGS		85	44-18TFH ASH CO	BILLINGS
40	21-16TFH PRONGH	BILLINGS		86	44-20TFH DRY CR	BILLINGS
41	21-1TFH WANNER	BILLINGS		87	44-28H KUKOWSKI	BILLINGS
42	2-12 US	BILLINGS		88	44-32TFH TEDDY	BILLINGS
43	21-24TFH TEDDY	BILLINGS		89	44-9PH PRONGHOR	BILLINGS
44	21-26TFH TALKIN	BILLINGS		90	7 ELKHORN FED A	BILLINGS
45	21-27PH TALKING	BILLINGS		91	44-32SH DAVIS	BOWMAN
46	21-28TFH REDMON	BILLINGS		92	21-3427H KANDIY	BURKE

	WELL ID	COUNTY			WELL ID	COUNTY
93	03-16H HORSE CA	DUNN		139	11-2MBH CCU OLY	DUNN
94	04B-03HTF SERGE	DUNN		140	11-2TFH CCU OLY	DUNN
95	05AH NEEDLE (MW	DUNN		141	11-4H BEARS GHO	DUNN
96	05CH TF GRAY WO	DUNN		142	11-4TFH BEARS G	DUNN
97	06B-05-4H TF HU	DUNN		143	1-19-18H 1 HALL	DUNN
98	102-16H HORSE C	DUNN		144	1-19-18H 1 HALL	DUNN
99	1-03-02H-149-92	DUNN		145	11X-10 FBIR SMI	DUNN
100	1-03-34H-150-92	DUNN		146	11X-10A FBIR SM	DUNN
101	1-03-35H-150-92	DUNN		147	11X-10E FBIR SM	DUNN
102	1-04-03H-149-91	DUNN		148	11X-10F FBIR SM	DUNN
103	1-04-33H-150-92	DUNN		149	11X-11 TUCKERMA	DUNN
104	1-04-33H-150-92	DUNN		150	11X-11A TUCKERM	DUNN
105	1-05-08H-147-92	DUNN		151	11X-11B TUCKERM	DUNN
106	1-05H SOWARD	DUNN		152	11X-11F TUCKERM	DUNN
107	1-06-01H-149-92	DUNN		153	11X-20 FENTON F	DUNN
108	1-06-05H-149-92	DUNN		154	11X-20 JANE FE	DUNN
109	1-06-07H-147-92	DUNN		155	11X-20 ROBERT F	DUNN
110	1-06-31H-150-92	DUNN		156	11X-20 THELMA F	DUNN
111	1-06-32H-150-92	DUNN		157	11X-28B THORP F	DUNN
112	1-10-11H-149-91	DUNN		158	11X-28B THORP F	DUNN
113	1-10-15H-149-91	DUNN		159	11X-28F THORP F	DUNN
114	11-15H BOY CHIE	DUNN		160	11X-28F THORP F	DUNN
115	11-15TFH BOY CH	DUNN		161	12-10-11-9H SKU	DUNN
116	11-18H GEORGE T	DUNN		162	12-10-11-9H SKU	DUNN
117	11-18H GEORGE T	DUNN		163	12-10-11-9H3 SK	DUNN
118	1-12H BLACK HAW	DUNN		164	12-10-11-9H3 SK	DUNN
119	1-12H BLACK HAW	DUNN		165	1-22-10H CHARGI	DUNN
120	1-12H BLACK HAW	DUNN		166	1-22-10H CHARGI	DUNN
121	11-2H PORCUPINE	DUNN		167	1-22-23H CHARGI	DUNN
122	1-12H SKUNK CRE	DUNN		168	1-22-23H CHARGI	DUNN
123	1-12H SKUNK CRE	DUNN		169	1-22H WILD TURK	DUNN
124	1-12HA BLACK HA	DUNN		170	12-7-8-8H SKUNK	DUNN
125	1-12HA BLACK HA	DUNN		171	12-7-8-8H SKUNK	DUNN
126	1-12HA BLACK HA	DUNN		172	12-7-8-9H SKUNK	DUNN
127	1-12HB BLACK HA	DUNN		173	12-7-8-9H SKUNK	DUNN
128	1-12HB BLACK HA	DUNN		174	12-7-8-9H3 SKUN	DUNN
129	1-12HB BLACK HA	DUNN		175	12-7-8-9H3 SKUN	DUNN
130	1-12HD BLACK HA	DUNN		176	12X-19 ALWIN FE	DUNN
131	1-12HD BLACK HA	DUNN		177	12X-19 ELAINE F	DUNN
132	1-12HW BLACK HA	DUNN		178	12X-5 TEDDY FED	DUNN
133	1-12HW BLACK HA	DUNN		179	1-30H HARRIS FE	DUNN
134	1-12HW BLACK HA	DUNN		180	1-31-30H-150-91	DUNN
135	1-12HY BLACK HA	DUNN		181	1-31-36H-150-92	DUNN
136	1-12HY BLACK HA	DUNN		182	13-18-17-16H3 S	DUNN
137	1-12HZ BLACK HA	DUNN		183	13-18-17-16H3 S	DUNN
138	1-12HZ BLACK HA	DUNN		184	13-18-17-9H SKU	DUNN

	WELL ID	COUNTY			WELL ID	COUNTY
185	13-18-17-9H SKU	DUNN		231	14-21-4H TWO SH	DUNN
186	1-32-29H-150-91	DUNN		232	14-21-4H TWO SH	DUNN
187	1-32-33H-148-92	DUNN		233	14-23HA MABEL L	DUNN
188	13-34-28-1H MOC	DUNN		234	14-23HB MABEL L	DUNN
189	13-34-28-1H MOC	DUNN		235	14-23HX MABEL L	DUNN
190	13-34-28-2H MOC	DUNN		236	142-94 (DWOA) F	DUNN
191	13-34-28-2H MOC	DUNN		237	142-94 (DWOA) F	DUNN
192	13-34-3H MOCCAS	DUNN		238	142-94 (DWOA) F	DUNN
193	13-34-3H MOCCAS	DUNN		239	14-2H TAT	DUNN
194	1-36HC BUFFALO	DUNN		240	14-2H TAT	DUNN
195	1-36HC BUFFALO	DUNN		241	14-31TFH GORHMA	DUNN
196	1-36HD CORRAL	DUNN		242	14-33-28H TWO S	DUNN
197	1-36HD CORRAL	DUNN		243	14-33-28H TWO S	DUNN
198	13X-13B FBIR NE	DUNN		244	14-33-6H TWO SH	DUNN
199	13X-13B FBIR NE	DUNN		245	14-33-6H TWO SH	DUNN
200	13X-5A NYGAARD	DUNN		246	146-97-3328H-1	DUNN
201	14-10H LUCILLE	DUNN		247	147-93-18B-19H	DUNN
202	14-10H SHERALEE	DUNN		248	147-93-18B-19H	DUNN
203	14-10H SHERALEE	DUNN		249	14-8H FOX	DUNN
204	14-11-2-3H MOCC	DUNN		250	14-8H FOX	DUNN
205	14-11-2-3H MOCC	DUNN		251	149-93-33C-28H	DUNN
206	14-11-2-3H3 MOC	DUNN		252	14C-13H TF PUMP	DUNN
207	14-11-2-3H3 MOC	DUNN		253	14C-13H TOBACCO	DUNN
208	14-11H T.KUPPER	DUNN		254	14HC ETHAN HALL	DUNN
209	14-11H T.KUPPER	DUNN		255	14HC ETHAN HALL	DUNN
210	14-12TFH DEEP C	DUNN		256	14X-10 STROMME	DUNN
211	14-14-10-2H CHA	DUNN		257	14X-10A STROMME	DUNN
212	14-14-10-2H CHA	DUNN		258	14X-36F TAT STA	DUNN
213	14-14-10-2H3 CH	DUNN		259	15-14-11-4H CHA	DUNN
214	14-14-10-2H3 CH	DUNN		260	15-14-11-4H CHA	DUNN
215	14-14-10-3H3 CH	DUNN		261	15-14-24-16H CH	DUNN
216	14-14-10-3H3 CH	DUNN		262	15-14-24-16H CH	DUNN
217	14-14-24-16H3 C	DUNN		263	15-1H TAT	DUNN
218	14-14-24-16H3 C	DUNN		264	15-1H TAT	DUNN
219	14-16H BIRDSBIL	DUNN		265	15-21-16-2H CHA	DUNN
220	14-16H BIRDSBIL	DUNN		266	15-21-16-2H CHA	DUNN
221	14-17H CLARA	DUNN		267	15-21-16-2H3 CH	DUNN
222	14-17H CLARA	DUNN		268	15-21-16-2H3 CH	DUNN
223	14-20H ROHDE US	DUNN		269	15-21-16-3H3 CH	DUNN
224	14-20H ROHDE US	DUNN		270	15-21-16-3H3 CH	DUNN
225	14-21-16-2HS TW	DUNN		271	15-22-15-3H3 CH	DUNN
226	14-21-16-2HS TW	DUNN		272	15-22-15-3H3 CH	DUNN
227	14-21-33-15H TW	DUNN		273	15-22-15-3H3 CH	DUNN
228	14-21-33-15H TW	DUNN		274	15-22-15-4H CHA	DUNN
229	14-21-33-16H3 T	DUNN		275	15-22-15-4H CHA	DUNN
230	14-21-33-16H3 T	DUNN		276	15-22-15-4H CHA	DUNN

	WELL ID	COUNTY			WELL ID	COUNTY
277	15-2H HOPKINS U	DUNN		323	18B-19H TF PYGM	DUNN
278	15-32H PACKINEA	DUNN		324	18B-19H TF PYGM	DUNN
279	15-32H PACKINEA	DUNN		325	18C-07-1H DUET	DUNN
280	15-34H BLACK HA	DUNN		326	18C-07-1H DUET	DUNN
281	15-34H BLACK HA	DUNN		327	18C-07-2H TF HA	DUNN
282	15D-16H CATFISH	DUNN		328	18C-07-2H TF HA	DUNN
283	15D-16H TF BULL	DUNN		329	18D-07-3H CHORD	DUNN
284	15HC WOUNDED FA	DUNN		330	18D-07-3H CHORD	DUNN
285	15HC WOUNDED FA	DUNN		331	18D-07-4H TF MU	DUNN
286	16-10-3-3H MOCC	DUNN		332	18D-07-4H TF MU	DUNN
287	16-10-3-3H MOCC	DUNN		333	18D-07-4H TF MU	DUNN
288	16-10-3-3H3 MOC	DUNN		334	19-18HB ALFRED	DUNN
289	16-10-3-3H3 MOC	DUNN		335	19-18HC ALFRED	DUNN
290	16-15-16H TALL	DUNN		336	19-18HD ALFRED	DUNN
291	16-1H LINCOLN U	DUNN		337	19-18HW MAGGIE	DUNN
292	16-21-16-1H CHA	DUNN		338	19-18HW MAGGIE	DUNN
293	16-21-16-1H CHA	DUNN		339	19-18HW MAGGIE	DUNN
294	16-21-16-1H3 CH	DUNN		340	19-18HY ALFRED	DUNN
295	16-21-16-1H3 CH	DUNN		341	19-18HZ ALFRED	DUNN
296	16-21-16-1HA CH	DUNN		342	19C-18H KNUCKLE	DUNN
297	16-21-16-1HA CH	DUNN		343	19C-18H KNUCKLE	DUNN
298	16-2-3-13H SKUN	DUNN		344	1A-12-1H FORT B	DUNN
299	16-2-3-13H SKUN	DUNN		345	1A-12-2H FORT B	DUNN
300	16-2-3-13H3 SKU	DUNN		346	20-17HA MARTIN	DUNN
301	16-2-3-13H3 SKU	DUNN		347	20-17HB MARTIN	DUNN
302	16-26-27-12H MO	DUNN		348	20-17HC MARTIN	DUNN
303	16-26-27-12H MO	DUNN		349	20-17HD MARTIN	DUNN
304	16-26-27-13H3 M	DUNN		350	20-17HF MARTIN	DUNN
305	16-26-27-13H3 M	DUNN		351	20-17HW MARTIN	DUNN
306	16-3-11H MOCCAS	DUNN		352	20-17HX MARTIN	DUNN
307	16-3-11H MOCCAS	DUNN		353	20-17HZ MARTIN	DUNN
308	16-34-2H MOCCAS	DUNN		354	20-24H BIRON	DUNN
309	16-34-2H MOCCAS	DUNN		355	20-24H BIRON	DUNN
310	16-34H MOCCASIN	DUNN		356	2-03-02H-149-92	DUNN
311	16-34H MOCCASIN	DUNN		357	2-03-35H-150-92	DUNN
312	16-3H MOCCASIN	DUNN		358	20-34H BAKER	DUNN
313	16-3H MOCCASIN	DUNN		359	20-34H BAKER	DUNN
314	16-44H BURR	DUNN		360	2-04-03H-149-91	DUNN
315	16-8-16H TWO SH	DUNN		361	2-04-33H-150-92	DUNN
316	16-8-16H TWO SH	DUNN		362	2-04-33H-150-92	DUNN
317	16-8-7H TWO SHI	DUNN		363	2-05-04H-148-91	DUNN
318	16-8-7H TWO SHI	DUNN		364	2-06-01H-149-92	DUNN
319	16-9H ALISIA FO	DUNN		365	2-06-05H-149-92	DUNN
320	16-9H ALISIA FO	DUNN		366	2-06-07H-147-92	DUNN
321	17D-08-1H FORT	DUNN		367	2-06-31H-150-92	DUNN
322	17D-08-2H FORT	DUNN		368	2-06-32H-150-92	DUNN

	WELL ID	COUNTY			WELL ID	COUNTY
369	20C-21-4H FORT	DUNN		415	22D-15-1H FORT	DUNN
370	20C-21-5H FORT	DUNN		416	2-31-25H-150-92	DUNN
371	20C-21-6H FORT	DUNN		417	23-14HC SKUNK C	DUNN
372	2-10-11H-149-91	DUNN		418	23-14HC SKUNK C	DUNN
373	21-14H GOOD BEA	DUNN		419	2-31H LIKES EAG	DUNN
374	21-15H CHASE US	DUNN		420	2-32-29H-143-96	DUNN
375	21-15TFH TWO CR	DUNN		421	2-32-29H-150-91	DUNN
376	21-2TFH CCU OLY	DUNN		422	2-32-33H-148-92	DUNN
377	21-30MBH CCU PR	DUNN		423	23-36H GARY BEL	DUNN
378	21-4H GERALD TU	DUNN		424	23-36H GARY BEL	DUNN
379	21-4H GERALD TU	DUNN		425	2-35HC INDEPEND	DUNN
380	21-4H RICHANDA	DUNN		426	2-35HC INDEPEND	DUNN
381	21-4TFH BEARS G	DUNN		427	2-35HD INDEPEND	DUNN
382	21-6H CASEY KUK	DUNN		428	2-35HI INDEPEND	DUNN
383	21-6H CASEY KUK	DUNN		429	2-35HY INDEPEND	DUNN
384	2-19H JOSEPH EA	DUNN		430	2-35HZ INDEPEND	DUNN
385	2-19H JOSEPH EA	DUNN		431	23A-1H HAWAII 1	DUNN
386	21A-20-1H FORT	DUNN		432	23A-4H TF MAUI	DUNN
387	21A-20-2H FORT	DUNN		433	23B-2H TF HILO	DUNN
388	21A-20-3H FORT	DUNN		434	23B-3H KONA 148	DUNN
389	21A-22H CHOKECH	DUNN		435	24-31MBH GORHMA	DUNN
390	21C-22H TF BLUE	DUNN		436	24-7H DAVID BEC	DUNN
391	21C-22H WORMWOO	DUNN		437	24-7H DAVID BEC	DUNN
392	2-1H TAT	DUNN		438	24X-13F BRANDVI	DUNN
393	2-1H TAT	DUNN		439	24X-21B FBIR BL	DUNN
394	21X-10 FBIR IRO	DUNN		440	24X-21B FBIR BL	DUNN
395	21X-10 FBIR YEL	DUNN		441	24X-26B FBIR LA	DUNN
396	21X-19B GEORGE	DUNN		442	24X-27A FBIR GU	DUNN
397	21X-19F BANG FE	DUNN		443	24X-27A FBIR GU	DUNN
398	21X-33A MARTIN	DUNN		444	24X-27B FBIR GU	DUNN
399	21X-33B MARTIN	DUNN		445	24X-27B FBIR GU	DUNN
400	21X-33E MARTIN	DUNN		446	24X-27ER FBIR G	DUNN
401	21X-33F MARTIN	DUNN		447	24X-27F FBIR GU	DUNN
402	21X-6B FBIR GEO	DUNN		448	24X-36 CARUS FE	DUNN
403	2215H-1 MC-HEIN	DUNN		449	24X-6 CAROL FED	DUNN
404	22-27HC SARAH Y	DUNN		450	24X-6 LOIS FED	DUNN
405	22-27HC SARAH Y	DUNN		451	24X-8A FBIR BEA	DUNN
406	2-24-12-1H3 TWO	DUNN		452	24X-8B FBIR BEA	DUNN
407	2-24-12-1H3 TWO	DUNN		453	24X-8B FBIR HUN	DUNN
408	2-24-12-2H TWO	DUNN		454	24X-8E FBIR BEA	DUNN
409	2-24-12-2H TWO	DUNN		455	24X-8E FBIR HUN	DUNN
410	2-24-25-15H SKU	DUNN		456	25A-36-1H FORT	DUNN
411	2-24-25-15H SKU	DUNN		457	27A-34-1H FORT	DUNN
412	2-24-25-16H SKU	DUNN		458	27A-34-2H FORT	DUNN
413	2-24-25-16H SKU	DUNN		459	27A-34-3H FORT	DUNN
414	22A-27-2H FORT	DUNN		460	2-8-17-14H3 SKU	DUNN

	WELL ID	COUNTY			WELL ID	COUNTY
461	2-8-17-14H3 SKU	DUNN		507	31-30HA CHARLES	DUNN
462	2-8-17-15H SKUN	DUNN		508	31-30HA CHARLES	DUNN
463	2-8-17-15H SKUN	DUNN		509	31-30HB CHARLES	DUNN
464	28-33HC HOWLING	DUNN		510	31-30HB CHARLES	DUNN
465	28-33HC HOWLING	DUNN		511	31-30HX CHARLES	DUNN
466	28A-33-1H FORT	DUNN		512	31-30HX CHARLES	DUNN
467	28A-33-2H FORT	DUNN		513	31-4H BEARS GHO	DUNN
468	28HC NORTH JOHN	DUNN		514	31-4H BEARS GHO	DUNN
469	28HC NORTH JOHN	DUNN		515	31-4H JUDY TUHY	DUNN
470	28HC NORTH JOHN	DUNN		516	31-4TFH BEARS G	DUNN
471	29-31H BAKER	DUNN		517	31-4TFH BEARS G	DUNN
472	29-31H BAKER	DUNN		518	3-18H NATHAN HA	DUNN
473	29-31H BAKER	DUNN		519	3-18H NATHAN HA	DUNN
474	29A-32-3H FORT	DUNN		520	3-1H OLSON (DWO	DUNN
475	29A-32-4H FORT	DUNN		521	31X-11C FBIR GO	DUNN
476	29A-32-5H FORT	DUNN		522	31X-12C FBIR WA	DUNN
477	29B-32-1H FORT	DUNN		523	31X-12D FBIR WA	DUNN
478	29B-32-2H FORT	DUNN		524	31X-12G FBIR WA	DUNN
479	29B-32H ARABIAN	DUNN		525	31X-12H FBIR WA	DUNN
480	3-03-02H-149-92	DUNN		526	31X-19 ERNEST F	DUNN
481	30-31H MANDAREE	DUNN		527	31X-19 FBIR BIR	DUNN
482	30-31HA MANDARE	DUNN		528	31X-19 FBIR STE	DUNN
483	30-31HC ALFRED	DUNN		529	31X-19D FBIR BI	DUNN
484	30-31HD ALFRED	DUNN		530	31X-19D FBIR ST	DUNN
485	30-31HW MANDARE	DUNN		531	31X-19G FBIR BI	DUNN
486	30-31HY ALFRED	DUNN		532	31X-19G FBIR ST	DUNN
487	30-31HZ ALFRED	DUNN		533	31X-19H FBIR BI	DUNN
488	3-03-34H-150-92	DUNN		534	31X-19H FBIR ST	DUNN
489	3-03-35H-150-92	DUNN		535	31X-2 FBIR HUNT	DUNN
490	3-04-03H-149-91	DUNN		536	31X-33H MARTIN	DUNN
491	3-04-33H-150-92	DUNN		537	31X-9A FBIR YOU	DUNN
492	3-04-33H-150-92	DUNN		538	31X-9B FBIR YOU	DUNN
493	3-05-08H-147-92	DUNN		539	31X-9E FBIR YOU	DUNN
494	3-06-01H-149-92	DUNN		540	31X-9F FBIR YOU	DUNN
495	3-06-07H-147-92	DUNN		541	32-29H WELLS	DUNN
496	3-06-31H-150-92	DUNN		542	32-29H WELLS	DUNN
497	3-06-32H-150-92	DUNN		543	32-34H VOIGHT	DUNN
498	30B-31H NET 149	DUNN		544	3-24-12-3H3 TWO	DUNN
499	30B-31H NET 149	DUNN		545	3-24-12-3H3 TWO	DUNN
500	3-10-11H-149-91	DUNN		546	3-24-12-4H TWO	DUNN
501	3-10-15H-149-9	DUNN		547	3-24-12-4H TWO	DUNN
502	31-14H GOOD BEA	DUNN		548	3-24-25-13H SKU	DUNN
503	31-15H AZURE US	DUNN		549	3-24-25-13H SKU	DUNN
504	31-15TFH SWIFT	DUNN		550	3-24-25-14H3 SK	DUNN
505	31-18H IRENE KO	DUNN		551	3-24-25-14H3 SK	DUNN
506	31-18H IRENE KO	DUNN		552	3-31-25H-150-92	DUNN

	WELL ID	COUNTY			WELL ID	COUNTY
553	33-12H ELK CREE	DUNN		599	35HD PAUL PETER	DUNN
554	3-31-30H-150-91	DUNN		600	36-25HA GOOD BI	DUNN
555	3-31-36H-150-92	DUNN		601	36-25HA GOOD BI	DUNN
556	3-32-29H-150-91	DUNN		602	36-25HB GOOD BI	DUNN
557	3-32-33H-148-92	DUNN		603	36-25HB GOOD BI	DUNN
558	33-34H HELENA R	DUNN		604	36-25HC GOOD BI	DUNN
559	33-34H HELENA R	DUNN		605	36-25HC GOOD BI	DUNN
560	33C-28H TF CALY	DUNN		606	36-25HD GOOD BI	DUNN
561	33D-28-4H FORT	DUNN		607	36-25HW GOOD BI	DUNN
562	33D-28-5H FORT	DUNN		608	36-25HW GOOD BI	DUNN
563	34-11H T KUPPER	DUNN		609	36-25HX GOOD BI	DUNN
564	34-11H T KUPPER	DUNN		610	36-25HZ GOOD BI	DUNN
565	34-1H HAY DRAW	DUNN		611	36-35H BEAKS	DUNN
566	34-27H WICKER	DUNN		612	36-35H BEAKS	DUNN
567	34-27H WICKER	DUNN		613	36C-25-4H FORT	DUNN
568	34-7H DAVID BEC	DUNN		614	36D-25-2H FORT	DUNN
569	34-7H DAVID BEC	DUNN		615	3-9H BENSON	DUNN
570	34-7H KNUDSVIG	DUNN		616	3-9H BENSON	DUNN
571	34-7H KNUDSVIG	DUNN		617	3-9HA BENSON	DUNN
572	34-7H ROEHR USA	DUNN		618	3-9HA BENSON	DUNN
573	34-7H ROEHR USA	DUNN		619	3A-10-1H FORT B	DUNN
574	34X-14 FBIR DAR	DUNN		620	3A-10-2H FORT B	DUNN
575	34X-14D FBIR DA	DUNN		621	4-03-02H-149-92	DUNN
576	34X-14H FBIR DA	DUNN		622	4-03-35H-150-92	DUNN
577	34X-25 FBIR WAL	DUNN		623	4-04-03H-149-91	DUNN
578	34X-25 FBIR WAL	DUNN		624	4-04-33H-150-92	DUNN
579	34X-25A FBIR BA	DUNN		625	4-04-33H-150-92	DUNN
580	34X-25E FBIR BA	DUNN		626	4-05-04H-148-91	DUNN
581	34X-25F FBIR BA	DUNN		627	4-06-01H-149-92	DUNN
582	34X-28C ESTHER	DUNN		628	4-06-07H-147-92	DUNN
583	34X-28G ESTHER	DUNN		629	4-06-31H-150-92	DUNN
584	34X-33C FBIR GR	DUNN		630	4-06-32H-150-92	DUNN
585	34X-35 BOOMER	DUNN		631	4-10-11H-149-91	DUNN
586	34X-35D BOOMER	DUNN		632	4-11H WOMAN CRE	DUNN
587	34X-35G BOOMER	DUNN		633	4-11H WOMAN CRE	DUNN
588	34X-35H BOOMER	DUNN		634	4-11H WOMAN CRE	DUNN
589	34X-7 CLARENCE	DUNN		635	41-2H HUBER USA	DUNN
590	34X-7B CLARENCE	DUNN		636	41-2H HUBER USA	DUNN
591	34X-7C CLARENCE	DUNN		637	41-4H LBM TUHY	DUNN
592	34X-7D CLARENCE	DUNN		638	41-5H EAGLE USA	DUNN
593	34X-7H CLARENCE	DUNN		639	4-15H PATRICIA	DUNN
594	35HA PAUL PETER	DUNN		640	4-15H PATRICIA	DUNN
595	35HA PAUL PETER	DUNN		641	41-6H 2 IVAN HE	DUNN
596	35HC PAUL PETER	DUNN		642	41-6H 2 IVAN HE	DUNN
597	35HC PAUL PETER	DUNN		643	41X-16 BIG GULC	DUNN
598	35HD PAUL PETER	DUNN		644	41X-16 DAKOTA F	DUNN

	WELL ID	COUNTY			WELL ID	COUNTY
645	41X-1C FBIR GRI	DUNN		691	5-04-33H-150-92	DUNN
646	41X-28 SCHETTLE	DUNN		692	5-06-05H-149-92	DUNN
647	41X-28 SCHETTLE	DUNN		693	5-06-07H-147-92	DUNN
648	41X-29 INGA FED	DUNN		694	5-11H FREDERICK	DUNN
649	41X-29C INGA FE	DUNN		695	5-24H BUFFALO R	DUNN
650	41X-29D INGA FE	DUNN		696	5-31-25H-150-92	DUNN
651	41X-29H INGA FE	DUNN		697	5-7-8-1H TWO SH	DUNN
652	41X-6 WILLIAM	DUNN		698	5-7-8-1H TWO SH	DUNN
653	41X-6C WILLIAM	DUNN		699	5-7-8-1H3 TWO S	DUNN
654	41X-6H WILLIAM	DUNN		700	5-7-8-1H3 TWO S	DUNN
655	42-35H CHARGING	DUNN		701	6-04-33H-150-92	DUNN
656	42-35H CHARGING	DUNN		702	6-04-33H-150-92	DUNN
657	4-31-25H-150-92	DUNN		703	6-06-07H-147-92	DUNN
658	4-31H LOOK OUT	DUNN		704	6-31-1TH BICE	DUNN
659	4-32-29H-150-91	DUNN		705	6-31H FREDERICK	DUNN
660	4-32-33H-148-92	DUNN		706	6-7HC FETTIG (M	DUNN
661	43-26H FREDERIC	DUNN		707	6-7HC FETTIG (M	DUNN
662	4-3-34-3H3 MOCC	DUNN		708	7-04-33H-150-92	DUNN
663	4-3-34-4H MOCCA	DUNN		709	7-04-33H-150-92	DUNN
664	4-3-34-4H MOCCA	DUNN		710	7-06-07H-147-92	DUNN
665	43X-4 JORGENSON	DUNN		711	7-31-25H-150-92	DUNN
666	43X-4 KAYE	DUNN		712	8-04-33H-150-92	DUNN
667	43X-4B KAYE FED	DUNN		713	8-04-33H-150-92	DUNN
668	43X-4E KAYE FED	DUNN		714	8-06-07H-147-92	DUNN
669	43X-5 DEEP CREE	DUNN		715	9-1H POINT USA	DUNN
670	43X-5 JORGENSON	DUNN		716	9-1H POINT USA	DUNN
671	44-10H HANSEN R	DUNN		717	9-2-3-12HS SKUN	DUNN
672	44-10H HANSEN R	DUNN		718	9-2-3-12HS SKUN	DUNN
673	44-10H TYSVER F	DUNN		719	9-2-3-5H SKUNK	DUNN
674	44-10H VIANI US	DUNN		720	9-2-3-5H SKUNK	DUNN
675	44-10TFH HANSEN	DUNN		721	9C-04-3H FORT B	DUNN
676	44-10TFH HANSEN	DUNN		722	9C-04-4H FORT B	DUNN
677	44-19H BOB TUHY	DUNN		723	9C-04-5H FORT B	DUNN
678	44-19H BOB TUHY	DUNN		724	9D-04-1H FORT B	DUNN
679	44-34H WERRE TR	DUNN		725	9D-04-2H FORT B	DUNN
680	44X-32C FBIR HE	DUNN		726	9HD EDWARD GOOD	DUNN
681	4-8-17-13H SKUN	DUNN		727	9HD EDWARD GOOD	DUNN
682	4-8-17-13H SKUN	DUNN		728	FAC HALLIDAY CT	DUNN
683	4-8-17-13H3 SKU	DUNN		729	11-13TFH DRY CR	GOLDEN VALLEY
684	4-8-17-13H3 SKU	DUNN		730	11-1TFH ELLISON	GOLDEN VALLEY
685	4-8-17-14H SKUN	DUNN		731	1-20-1A BOYCE F	GOLDEN VALLEY
686	4-8-17-14H3 SKU	DUNN		732	14-12H FEDERAL	GOLDEN VALLEY
687	4-8-17-14H3 SKU	DUNN		733	14-23H FEDERAL	GOLDEN VALLEY
688	4-9H HIGH HAWK	DUNN		734	14-24H FEDERAL	GOLDEN VALLEY
689	4-9H HIGH HAWK	DUNN		735	14-7H FEDERAL	GOLDEN VALLEY
690	5-04-33H-150-92	DUNN		736	21-1PH ELLISON	GOLDEN VALLEY

	WELL ID	COUNTY			WELL ID	COUNTY
737	21-1PH ELLISON	GOLDEN VALLEY		783	1-11H FLORIDA	MCKENZIE
738	32-4HBKCE FEDER	GOLDEN VALLEY		784	11-1H JOSEPH	MCKENZIE
739	41-16H STATE	GOLDEN VALLEY		785	11-27TFH MOSSER	MCKENZIE
740	41-19H BN	GOLDEN VALLEY		786	11-29H GOODALL	MCKENZIE
741	41-24H PETERSON	GOLDEN VALLEY		787	11-29H GOODALL	MCKENZIE
742	44-23TFH BELL L	GOLDEN VALLEY		788	11-29TFH ANNIE	MCKENZIE
743	44-23TFH BELL L	GOLDEN VALLEY		789	1-12H KINGMAN	MCKENZIE
744	44-33TFH BANNER	GOLDEN VALLEY		790	11-3H DANKS USA	MCKENZIE
745	44-33TFH BANNER	GOLDEN VALLEY		791	11-3H DANKS USA	MCKENZIE
746	03-04 1H YAUCH	MCKENZIE		792	1-13H OTT	MCKENZIE
747	03-0805H CLARKS	MCKENZIE		793	11-3H1 ROLLEFST	MCKENZIE
748	03A-10H EMERALD	MCKENZIE		794	11-4HR FLATLAND	MCKENZIE
749	04-20H BEAR DEN	MCKENZIE		795	11-4TFH FLATLAN	MCKENZIE
750	04A-09H PRAIRIE	MCKENZIE		796	1-15-16H BEAR B	MCKENZIE
751	04A-09H PRAIRIE	MCKENZIE		797	1-15-16H BEAR B	MCKENZIE
752	04A-09H TF BOBC	MCKENZIE		798	1-15-16H BEAR B	MCKENZIE
753	04A-09H TF BOBC	MCKENZIE		799	11-5SEH JOHNSON	MCKENZIE
754	05-31H BEAR DEN	MCKENZIE		800	1-17H ROBINSON	MCKENZIE
755	06A-18H COURAGE	MCKENZIE		801	1-18 ERRMU	MCKENZIE
756	06A-18H TF PRID	MCKENZIE		802	1-19-20H STOCKE	MCKENZIE
757	06B-18H TF HONO	MCKENZIE		803	1-19-20H STOCKE	MCKENZIE
758	07-17H BEAR DEN	MCKENZIE		804	1-19-20H STOCKE	MCKENZIE
759	08-1621H BEAR D	MCKENZIE		805	1-19-20H STOCKE	MCKENZIE
760	100-0805H CLARK	MCKENZIE		806	11B-2-2H USA	MCKENZIE
761	100-2017H BEAR	MCKENZIE		807	11B-2-2H USA	MCKENZIE
762	100-2413H WEST	MCKENZIE		808	11B-2-2H USA	MCKENZIE
763	100-2501H HAWKE	MCKENZIE		809	1-1H HODGES	MCKENZIE
764	100-2501H HAWKE	MCKENZIE		810	11X-14 MONDAK F	MCKENZIE
765	101-1819H CLARK	MCKENZIE		811	11X-34 HATTER	MCKENZIE
766	101-2019H BEAR	MCKENZIE		812	12-0719H CLARKS	MCKENZIE
767	101-2425H WEST	MCKENZIE		813	1-20H BUELINGO	MCKENZIE
768	102-1708H BEAR	MCKENZIE		814	1-20H MAYS	MCKENZIE
769	102-2413H WEST	MCKENZIE		815	1-2-11H BOWLINE	MCKENZIE
770	102-2501H HAWKE	MCKENZIE		816	1-2-11H BOWLINE	MCKENZIE
771	103-17H CLARKS	MCKENZIE		817	1-2-11H BOWLINE	MCKENZIE
772	103-21H BEAR DE	MCKENZIE		818	1-2-11H BOWLINE	MCKENZIE
773	103-21H BEAR DE	MCKENZIE		819	1-2-11H BOWLINE	MCKENZIE
774	10-3H2 ROLLEFST	MCKENZIE		820	12-12H BICENTEN	MCKENZIE
775	104-2116H BEAR	MCKENZIE		821	12-18H ANDERSON	MCKENZIE
776	104-2116H BEAR	MCKENZIE		822	12-18H ANDERSON	MCKENZIE
777	108-1708H BEAR	MCKENZIE		823	12-1H HUNTS ALO	MCKENZIE
778	10B-2-4H USA	MCKENZIE		824	12-1H HUNTS ALO	MCKENZIE
779	10B-2-4H USA	MCKENZIE		825	1-21H MANTLE	MCKENZIE
780	10B-2-4H USA	MCKENZIE		826	1-21H SAND CREE	MCKENZIE
781	11-0706H CLARKS	MCKENZIE		827	12-26H DEBBIE B	MCKENZIE
782	1-10H MANDAREE	MCKENZIE		828	12-26H DEBBIE B	MCKENZIE

	WELL ID	COUNTY			WELL ID	COUNTY
829	1-22H MCGRIFF	MCKENZIE		875	13-1806H CLARKS	MCKENZIE
830	12-35H WINDY BO	MCKENZIE		876	13-19 ERRMU	MCKENZIE
831	1-23H SAND CREE	MCKENZIE		877	13-19 ERRMU	MCKENZIE
832	1-23H WINFIELD	MCKENZIE		878	1-31H DAVIS	MCKENZIE
833	1-23H2 ANTELOPE	MCKENZIE		879	13-23H TAT USA	MCKENZIE
834	12-3H3 ROLLEFST	MCKENZIE		880	13-24-10H DARLE	MCKENZIE
835	1-2413H WEST CL	MCKENZIE		881	13-24ENH WOLFF	MCKENZIE
836	1-2413H WEST CL	MCKENZIE		882	1-32H HARMS	MCKENZIE
837	1-24H GEHRIG	MCKENZIE		883	1-33H POLK	MCKENZIE
838	1-2501H HAWKEYE	MCKENZIE		884	13-3H ROLLEFSTA	MCKENZIE
839	1-26-35H BERG T	MCKENZIE		885	1-34H MCKENZIE	MCKENZIE
840	1-27H COLAVITO	MCKENZIE		886	1-34H PVT. FRAZ	MCKENZIE
841	1-27H MCGWIRE	MCKENZIE		887	13A-24-3H FORT	MCKENZIE
842	1-27H SALERS *(	MCKENZIE		888	13A-24-4H FORT	MCKENZIE
843	1-27HA SAND CRE	MCKENZIE		889	13B-24-1H FORT	MCKENZIE
844	1-27H-R GRIZZLY	MCKENZIE		890	13X-35R SAKAKAW	MCKENZIE
845	1-28 WRRMU	MCKENZIE		891	14-10H ZACHERY	MCKENZIE
846	1-28H KILLEBREW	MCKENZIE		892	14-10H ZACHERY	MCKENZIE
847	1-29 WRRMU	MCKENZIE		893	14-11H MANDAREE	MCKENZIE
848	1-29H JACKSON	MCKENZIE		894	14-11H MANDAREE	MCKENZIE
849	1-29H OLE	MCKENZIE		895	14-12H INGA	MCKENZIE
850	1-2H LAZORENKO	MCKENZIE		896	14-12H INGA	MCKENZIE
851	1-2H MYRMIDON	MCKENZIE		897	14-12H INGA	MCKENZIE
852	1-2H MYRMIDON	MCKENZIE		898	14-14H JONES US	MCKENZIE
853	12X-20 MARIANA	MCKENZIE		899	14-16H DARREL Q	MCKENZIE
854	12X-20C MARIANA	MCKENZIE		900	14-16TFH CHEETA	MCKENZIE
855	12X-20G2 MARIAN	MCKENZIE		901	14-1819H CLARKS	MCKENZIE
856	12X-20H MARIANA	MCKENZIE		902	14-19-23 USA	MCKENZIE
857	12X-21 ROEDESKE	MCKENZIE		903	14-21/16H LEVAN	MCKENZIE
858	1-3-10BH PONCHO	MCKENZIE		904	14-22-15-4H3 GR	MCKENZIE
859	1-3-10H BARNSTO	MCKENZIE		905	14-22MBH DAYTON	MCKENZIE
860	1-3-10H BOWLINE	MCKENZIE		906	14-22MBH DAYTON	MCKENZIE
861	1-3-10H BOWLINE	MCKENZIE		907	14-22MBH JACKSO	MCKENZIE
862	1-3-10H BOWLINE	MCKENZIE		908	14-22MBH JACKSO	MCKENZIE
863	1-3-10H BOWLINE	MCKENZIE		909	14-32H GRASSY B	MCKENZIE
864	1-3-10H BOWLINE	MCKENZIE		910	14-3H2 ROLLEFST	MCKENZIE
865	1-3-10H BOWLINE	MCKENZIE		911	149-94-33D-28H	MCKENZIE
866	1-3-10H BOWLINE	MCKENZIE		912	149-94-33D-28H	MCKENZIE
867	1-3-10H BOWLINE	MCKENZIE		913	149-97-30-31-1H	MCKENZIE
868	1-3-10H BOWLINE	MCKENZIE		914	149-97-30-31-2H	MCKENZIE
869	1-3-10H BOWLINE	MCKENZIE		915	149-97-30-31-3H	MCKENZIE
870	1-3-10TH PONCHO	MCKENZIE		916	149-98-11-2-3H	MCKENZIE
871	13-12HW LINSETH	MCKENZIE		917	14C-11-1H FORT	MCKENZIE
872	13-12HW LINSETH	MCKENZIE		918	14C-11-2H FORT	MCKENZIE
873	1-31-30H WOLVER	MCKENZIE		919	14D-11-3H FORT	MCKENZIE
874	13-16TFH FLICKA	MCKENZIE		920	14D-11-4H FORT	MCKENZIE

	WELL ID	COUNTY			WELL ID	COUNTY
921	14D-4-1H USA	MCKENZIE		967	1-5-8H BEAR BUT	MCKENZIE
922	14D-4-1H USA	MCKENZIE		968	1-5-8H BEAR BUT	MCKENZIE
923	14D-4-1H USA	MCKENZIE		969	1-5-8H BEAR BUT	MCKENZIE
924	1-4H NETTLES	MCKENZIE		970	1-5-8H BEAR BUT	MCKENZIE
925	14X-11 MONDAK F	MCKENZIE		971	1-5-8H BEAR BUT	MCKENZIE
926	14X-31 MCKENZIE	MCKENZIE		972	15-8H STEVENSON	MCKENZIE
927	14X-34 BENNIE P	MCKENZIE		973	15-8H STEVENSON	MCKENZIE
928	14X-34 CRYSTAL	MCKENZIE		974	15-8HD STEVENSO	MCKENZIE
929	14X-34 DRANNEN	MCKENZIE		975	15-8HD STEVENSO	MCKENZIE
930	14X-35H CHARLSO	MCKENZIE		976	15A-22-7H FORT	MCKENZIE
931	14X-36 ROLFSRUD	MCKENZIE		977	15B-22-3H FORT	MCKENZIE
932	15-0805H CLARKS	MCKENZIE		978	15B-22-4H FORT	MCKENZIE
933	15-0805H CLARKS	MCKENZIE		979	15B-22-5H FORT	MCKENZIE
934	150-94-04A-09H	MCKENZIE		980	15B-22-6H FORT	MCKENZIE
935	150-94-04A-09H	MCKENZIE		981	1-5H BENCH	MCKENZIE
936	150-94-06B-07H	MCKENZIE		982	1-5H GARFIELD	MCKENZIE
937	150-94-3B-10-1H	MCKENZIE		983	16-0706H CLARKS	MCKENZIE
938	150-94-3B-10-1H	MCKENZIE		984	16-22H LUCY LON	MCKENZIE
939	150-94-3B-10-2H	MCKENZIE		985	16-22H LUCY LON	MCKENZIE
940	15-12-1-2H GRIZ	MCKENZIE		986	16-24H RUBIA	MCKENZIE
941	151-95-0403H-1	MCKENZIE		987	16-24H RUBIA	MCKENZIE
942	151-95-0817H-1	MCKENZIE		988	16-3H BENSON	MCKENZIE
943	151-95-0910H-1	MCKENZIE		989	16-3H BENSON	MCKENZIE
944	151-95-1615H-1	MCKENZIE		990	1-6-7H BEAR BUT	MCKENZIE
945	15-22-34-15H SM	MCKENZIE		991	1-6-7H BEAR BUT	MCKENZIE
946	15-22-34-15H SM	MCKENZIE		992	1-6-7H BEAR BUT	MCKENZIE
947	152-94-18B-19H	MCKENZIE		993	1-6-7H BEAR BUT	MCKENZIE
948	152-96-9-4-10H	MCKENZIE		994	1-6-7H BEAR BUT	MCKENZIE
949	152-96-9-4-3H A	MCKENZIE		995	17-16H BEAR DEN	MCKENZIE
950	152-96-9-4-3H A	MCKENZIE		996	17-44H DANKS	MCKENZIE
951	152-97-13-24-1H	MCKENZIE		997	17-44H DANKS	MCKENZIE
952	152-97-13-24-1H	MCKENZIE		998	17C-08-1H FORT	MCKENZIE
953	152-97-13-24-2H	MCKENZIE		999	17C-08-2H FORT	MCKENZIE
954	152-97-13-24-3H	MCKENZIE		1000	17C-08-3H FORT	MCKENZIE
955	15-33-28-2H KOA	MCKENZIE		1001	17C-08-4H FORT	MCKENZIE
956	15-33-28-2H KOA	MCKENZIE		1002	17D-08-5H FORT	MCKENZIE
957	15-33-28-2H3 KO	MCKENZIE		1003	17D-08-6H FORT	MCKENZIE
958	15-33-28-2H3 KO	MCKENZIE		1004	17D-08-7H FORT	MCKENZIE
959	153-94-2215H-1	MCKENZIE		1005	1-7H RIPKIN, JR	MCKENZIE
960	153-94-2215H-1	MCKENZIE		1006	18-19H ROLFSRUD	MCKENZIE
961	153-94-2215H-1	MCKENZIE		1007	1819H-1 HA-SANF	MCKENZIE
962	153-94-2215H-2	MCKENZIE		1008	1819H-1 HA-SANF	MCKENZIE
963	153-94-2215H-2	MCKENZIE		1009	18-19HC PLENTY	MCKENZIE
964	153-94-2215H-2	MCKENZIE		1010	18-19HC PLENTY	MCKENZIE
965	15-5H SORENSON	MCKENZIE		1011	18-21H BEAR DEN	MCKENZIE
966	15-5H SORENSON	MCKENZIE		1012	18-21H BEAR DEN	MCKENZIE

	WELL ID	COUNTY			WELL ID	COUNTY
1013	18B-19-1H FORT	MCKENZIE		1059	21-6 6-7H TRUE	MCKENZIE
1014	18B-19-1H FORT	MCKENZIE		1060	2-18 ERRMU	MCKENZIE
1015	18B-19-2H FORT	MCKENZIE		1061	2-1HB PATRICIA	MCKENZIE
1016	18B-19-2H FORT	MCKENZIE		1062	2-1HB PATRICIA	MCKENZIE
1017	18B-19-3H FORT	MCKENZIE		1063	21X-13 BADLANDS	MCKENZIE
1018	18B-19-3H FORT	MCKENZIE		1064	21X-24 101 FEDE	MCKENZIE
1019	18B-19H TF HOGN	MCKENZIE		1065	21X-28 EDWARD (	MCKENZIE
1020	18B-1H USA *(M	MCKENZIE		1066	21X-29 VIOLET	MCKENZIE
1021	18B-2H USA (MWP	MCKENZIE		1067	22-15HB SWEET G	MCKENZIE
1022	1-8H GONZALEZ	MCKENZIE		1068	22-15HB SWEET G	MCKENZIE
1023	19-18 1-H GARMA	MCKENZIE		1069	2-23H ANTELOPE	MCKENZIE
1024	19-18 2TFH GARM	MCKENZIE		1070	2-2425H WEST CL	MCKENZIE
1025	19-18 3H GARMAN	MCKENZIE		1071	2-26-35BH PAUL	MCKENZIE
1026	19-2116H BEAR D	MCKENZIE		1072	2-26-35TH PAUL	MCKENZIE
1027	19-2116H BEAR D	MCKENZIE		1073	2-27H SALERS (M	MCKENZIE
1028	1-9H ANGUS *(MW	MCKENZIE		1074	22C-15-2H USA 1	MCKENZIE
1029	1-9H CARTER	MCKENZIE		1075	22D-15-1H FORT	MCKENZIE
1030	1X-18 MULE CREE	MCKENZIE		1076	22D-15-1H FORT	MCKENZIE
1031	20-1708H BEAR D	MCKENZIE		1077	22D-15-2H FORT	MCKENZIE
1032	20-41H DANKS	MCKENZIE		1078	22D-15-2H FORT	MCKENZIE
1033	20-41H DANKS	MCKENZIE		1079	2-31-30H WOLVER	MCKENZIE
1034	2-09H MANDAREE	MCKENZIE		1080	23-14HZ KATE SO	MCKENZIE
1035	20HC CORN STALK	MCKENZIE		1081	23-14HZ KATE SO	MCKENZIE
1036	20HC CORN STALK	MCKENZIE		1082	23-2019H BEAR D	MCKENZIE
1037	20HC CORN STALK	MCKENZIE		1083	23-25 30-29H HA	MCKENZIE
1038	20HD CORN STALK	MCKENZIE		1084	2-32H HARMS	MCKENZIE
1039	20HD CORN STALK	MCKENZIE		1085	2-33-28TH TAT (	MCKENZIE
1040	20HD CORN STALK	MCKENZIE		1086	2-36H BEAR DEN	MCKENZIE
1041	21-10SH SAND CR	MCKENZIE		1087	2-36H HENDRICKS	MCKENZIE
1042	21-14MBH CRATER	MCKENZIE		1088	23X-3 FEDERAL	MCKENZIE
1043	2-11H FLORIDA	MCKENZIE		1089	24-10H ROEN FED	MCKENZIE
1044	21-25MBH AIDEN	MCKENZIE		1090	24-12H INGA	MCKENZIE
1045	21-25MBH AIDEN	MCKENZIE		1091	24-12H INGA	MCKENZIE
1046	21-29H CHUCK QU	MCKENZIE		1092	24-12H INGA	MCKENZIE
1047	21-29TFH SCOTT	MCKENZIE		1093	24-13H2 BEAR DE	MCKENZIE
1048	21-3 3-10H TRUE	MCKENZIE		1094	24-13H2 BEAR DE	MCKENZIE
1049	21-30H JOANNE Q	MCKENZIE		1095	24-1621H BEAR D	MCKENZIE
1050	21-30TFH JOANNE	MCKENZIE		1096	24-1H KLOSE (DW	MCKENZIE
1051	2-13H CROSS	MCKENZIE		1097	24-20-1H TARPON	MCKENZIE
1052	2-13H CROSS	MCKENZIE		1098	24-20-1RTF TARP	MCKENZIE
1053	21-4-1H TARPON	MCKENZIE		1099	24-20-2RH TARPO	MCKENZIE
1054	21-4-3H TARPON	MCKENZIE		1100	24-20-2RTF TARP	MCKENZIE
1055	21-4H TARPON FE	MCKENZIE		1101	24-20-3RTF TARP	MCKENZIE
1056	21-5-2H WRIGHT	MCKENZIE		1102	24-23H KNUTE	MCKENZIE
1057	2-15H DAHL FEDE	MCKENZIE		1103	24-2HR ERRMU	MCKENZIE
1058	21-5H WRIGHT FE	MCKENZIE		1104	24-30H STORM FE	MCKENZIE

	WELL ID	COUNTY			WELL ID	COUNTY
1105	24-4 USA	MCKENZIE		1151	3-11H FLORIDA	MCKENZIE
1106	24X-12 MONDAK F	MCKENZIE		1152	31-20H QUALE US	MCKENZIE
1107	25-26H CLIFFSID	MCKENZIE		1153	31-26MBH HAMMER	MCKENZIE
1108	26-1 SILURIAN 2	MCKENZIE		1154	31-28H JAIR	MCKENZIE
1109	26-35H SPOTTED	MCKENZIE		1155	31-28H JAIR	MCKENZIE
1110	26-35H SPOTTED	MCKENZIE		1156	31-29H HILMAN	MCKENZIE
1111	26B-35-1H KLOSE	MCKENZIE		1157	31-29H HILMAN	MCKENZIE
1112	27-34H KYW	MCKENZIE		1158	31-29H HILMAN	MCKENZIE
1113	27-34H KYW	MCKENZIE		1159	3-12H KUHN FEDE	MCKENZIE
1114	27-34H WOLF	MCKENZIE		1160	31-30 1H YOUNG	MCKENZIE
1115	27-34H WOLF	MCKENZIE		1161	31-30 1H YOUNG	MCKENZIE
1116	28-21-1-H STUBB	MCKENZIE		1162	31-30HA RUBY *(	MCKENZIE
1117	28-44H SHERWOOD	MCKENZIE		1163	31-30HB RUBY (M	MCKENZIE
1118	28-44H SHERWOOD	MCKENZIE		1164	31-30HB RUBY (M	MCKENZIE
1119	28D-21H TF MILE	MCKENZIE		1165	31-30HW RUBY (M	MCKENZIE
1120	28D-21H TF MILE	MCKENZIE		1166	31-30HX RUBY (M	MCKENZIE
1121	29-20 1-TFH ELD	MCKENZIE		1167	31-32 TRUE FEDE	MCKENZIE
1122	29-20 1-TFH ELD	MCKENZIE		1168	31-32 TRUE FEDE	MCKENZIE
1123	29-32-2H MOBERG	MCKENZIE		1169	31-4-1H JOHNSTO	MCKENZIE
1124	29-32-3H MOBERG	MCKENZIE		1170	3-14H ALPHA (M	MCKENZIE
1125	29-32H DELORES	MCKENZIE		1171	31-4H CROW FLIE	MCKENZIE
1126	29-32H DELORES	MCKENZIE		1172	31-4H CROW FLIE	MCKENZIE
1127	29-32HA LUCY EV	MCKENZIE		1173	31-6 1H GYDA (M	MCKENZIE
1128	29-32HB LUCY EV	MCKENZIE		1174	3-16H COLUMBUS	MCKENZIE
1129	29-32HX LUCY EV	MCKENZIE		1175	31X-9 LUNDIN FE	MCKENZIE
1130	2-9H ANGUS (MWP	MCKENZIE		1176	3-21H BLUE BUTT	MCKENZIE
1131	2D-3-1H USA	MCKENZIE		1177	3-21H BLUE BUTT	MCKENZIE
1132	2D-3-1H USA	MCKENZIE		1178	32-29 1H LARSEN	MCKENZIE
1133	2D-3-1H USA	MCKENZIE		1179	32-29H BEARSTAI	MCKENZIE
1134	30-19 1H EVELAN	MCKENZIE		1180	32-29H BEARSTAI	MCKENZIE
1135	30-31 1-H BRODE	MCKENZIE		1181	3-23H ANTELOPE	MCKENZIE
1136	30-31 1-H BRODE	MCKENZIE		1182	3-2413H HAWKEYE	MCKENZIE
1137	30-31 2H BRODER	MCKENZIE		1183	3-2413H HAWKEYE	MCKENZIE
1138	30-31 3H BRODER	MCKENZIE		1184	3-2413H HAWKEYE	MCKENZIE
1139	30-31 4TFH BROD	MCKENZIE		1185	3-2413H WEST CL	MCKENZIE
1140	3031147102-BTF	MCKENZIE		1186	3-25-13-3H EAST	MCKENZIE
1141	30-31H SNOWSHOE	MCKENZIE		1187	3-25-36-15H EAS	MCKENZIE
1142	31-13H AIDEN	MCKENZIE		1188	3-27H SALERS FE	MCKENZIE
1143	31-13H AIDEN	MCKENZIE		1189	3-28HR FEDERAL	MCKENZIE
1144	31-13MBH AIDEN	MCKENZIE		1190	3-28HR FEDERAL	MCKENZIE
1145	31-13MBH AIDEN	MCKENZIE		1191	32D-29H MONARCH	MCKENZIE
1146	31-13MBH AIDEN	MCKENZIE		1192	32D-29H TF VICE	MCKENZIE
1147	31-14H BRADFIEL	MCKENZIE		1193	33-11H AUDREY R	MCKENZIE
1148	31-14MBH CRATER	MCKENZIE		1194	33-11H RED TIPP	MCKENZIE
1149	31-16-3H FINSAA	MCKENZIE		1195	33-28H GERALD H	MCKENZIE
1150	31-16-4H FINSAA	MCKENZIE		1196	33-28H GERALD H	MCKENZIE

	WELL ID	COUNTY			WELL ID	COUNTY
1197	3328H-1 BB-EIDE	MCKENZIE		1243	4-11H KODIAK FE	MCKENZIE
1198	3328H-1 BB-EIDE	MCKENZIE		1244	4-12/13H DAILEY	MCKENZIE
1199	3328H-1 BB-EIDE	MCKENZIE		1245	4-12R ERRMU	MCKENZIE
1200	3328H-2 BB-EIDE	MCKENZIE		1246	41-3-1H SKAAR F	MCKENZIE
1201	3328H-2 BB-EIDE	MCKENZIE		1247	41-3-2H SKAAR F	MCKENZIE
1202	3328H-2 BB-EIDE	MCKENZIE		1248	41-3-3H SKAAR F	MCKENZIE
1203	33-35 2H MB1 TR	MCKENZIE		1249	4-13H LEVANG	MCKENZIE
1204	3-34 1H LUND	MCKENZIE		1250	41-3TFH SKAAR F	MCKENZIE
1205	3-34 1H LUND	MCKENZIE		1251	41-3TFHU SKAAR	MCKENZIE
1206	33-4 1-H SEDLAC	MCKENZIE		1252	41-5-2H GREGORY	MCKENZIE
1207	3-35-26BH ZORRO	MCKENZIE		1253	41-5H GREGORY W	MCKENZIE
1208	3-35H BOHMBACH	MCKENZIE		1254	41-6SWH SERRAHN	MCKENZIE
1209	33D-28H NIMBUS	MCKENZIE		1255	4-1H HENDERSON	MCKENZIE
1210	33D-28H NIMBUS	MCKENZIE		1256	41X-15 ALKALI C	MCKENZIE
1211	33D-28H NIMBUS	MCKENZIE		1257	41X-19D WALTON	MCKENZIE
1212	33DHTF COYOTE	MCKENZIE		1258	41X-19G WALTON	MCKENZIE
1213	33DHTF COYOTE	MCKENZIE		1259	41X-19H WALTON	MCKENZIE
1214	34-22H TAT USA	MCKENZIE		1260	41X-30 BURNS FE	MCKENZIE
1215	34-27HB GOOD VO	MCKENZIE		1261	41X-5G NELSON F	MCKENZIE
1216	34-27HD GOOD VO	MCKENZIE		1262	41X-6 JORGENSON	MCKENZIE
1217	34-27HZ GOOD VO	MCKENZIE		1263	4-23H ANTELOPE	MCKENZIE
1218	34-9H CONNER	MCKENZIE		1264	4-2425H WEST CL	MCKENZIE
1219	34-9H CONNER	MCKENZIE		1265	4-25H HENDERSON	MCKENZIE
1220	34X-12B CHARLSO	MCKENZIE		1266	4-25H NATHAN HA	MCKENZIE
1221	34X-14 FEDERAL	MCKENZIE		1267	4-25H NATHAN HA	MCKENZIE
1222	34X-14 JOHNSRUD	MCKENZIE		1268	4-28 WRRMU	MCKENZIE
1223	34X-31-1 USA	MCKENZIE		1269	42X-12 ALBERT F	MCKENZIE
1224	34X-36G RUBY ST	MCKENZIE		1270	42X-36 DAKOTA	MCKENZIE
1225	35-26 1H KNIGHT	MCKENZIE		1271	4-30H BEAR DEN	MCKENZIE
1226	35-26 1H KNIGHT	MCKENZIE		1272	4-31-30TFH WOLV	MCKENZIE
1227	35-26 2H KNIGHT	MCKENZIE		1273	4-35H BOHMBACH	MCKENZIE
1228	35-26 3TFH KNIG	MCKENZIE		1274	4-36H STATE	MCKENZIE
1229	35-26 4H KNIGHT	MCKENZIE		1275	43X-19 VAN DYKE	MCKENZIE
1230	35-26H MORSETTE	MCKENZIE		1276	43X-19 VAN DYKE	MCKENZIE
1231	35-26H MORSETTE	MCKENZIE		1277	43X-19 WALTON	MCKENZIE
1232	35-26HD MORSETT	MCKENZIE		1278	43X-19 WALTON	MCKENZIE
1233	35-26HX MORSETT	MCKENZIE		1279	44-14MBH ULW OL	MCKENZIE
1234	35-26HZ MORSETT	MCKENZIE		1280	44-19-1RH TARPO	MCKENZIE
1235	36-31H TF1 LIBE	MCKENZIE		1281	44-19-1RTF TARP	MCKENZIE
1236	3-9H ANGUS (MWP	MCKENZIE		1282	44-19-2RH TARPO	MCKENZIE
1237	41-11H BICENTEN	MCKENZIE		1283	44-19-2RTF TARP	MCKENZIE
1238	41-14MBH AMANDA	MCKENZIE		1284	44-19-3RTF TARP	MCKENZIE
1239	41-14MBH AMANDA	MCKENZIE		1285	44-19TFHU TARPO	MCKENZIE
1240	41-14MBH AMANDA	MCKENZIE		1286	44-23H WOLSKI	MCKENZIE
1241	41-14MBH OLE BO	MCKENZIE		1287	44-31H BUCKHORN	MCKENZIE
1242	41-14TFH CRATER	MCKENZIE		1288	44-32H CHARLSON	MCKENZIE

	WELL ID	COUNTY			WELL ID	COUNTY
1289	44-33 4-9H SLAS	MCKENZIE		1335	7-1X SILURIAN 7	MCKENZIE
1290	44-33H CHARLSON	MCKENZIE		1336	7-1X SILURIAN 7	MCKENZIE
1291	44X-1 DWYER FED	MCKENZIE		1337	7-1X SILURIAN 7	MCKENZIE
1292	44X-10 ALKALI C	MCKENZIE		1338	7-1X SILURIAN 7	MCKENZIE
1293	44X-16 STATE FE	MCKENZIE		1339	7-28H WRRMU	MCKENZIE
1294	44X-20A BULLY F	MCKENZIE		1340	7-3H1 ROLLEFSTA	MCKENZIE
1295	44X-20B BULLY F	MCKENZIE		1341	7-6 1-H JOHNSTO	MCKENZIE
1296	44X-20E BULLY F	MCKENZIE		1342	7-6 2TFH JOHNST	MCKENZIE
1297	44X-20F BULLY F	MCKENZIE		1343	7-6 7H JOHNSTON	MCKENZIE
1298	44X-31H CHARLSO	MCKENZIE		1344	7D-6-1H FORT BE	MCKENZIE
1299	44X-4 TRACY FED	MCKENZIE		1345	7D-6-2H FORT BE	MCKENZIE
1300	4-9H ANGUS FEDE	MCKENZIE		1346	7D-6-3H FORT BE	MCKENZIE
1301	519 ANTELOPE-MA	MCKENZIE		1347	7D-6-4H FORT BE	MCKENZIE
1302	519 ANTELOPE-MA	MCKENZIE		1348	8-3H3 ROLLEFSTA	MCKENZIE
1303	519HR ANTELOPE-	MCKENZIE		1349	8-5 1-H RICHARD	MCKENZIE
1304	5-2 1H FOREMAN	MCKENZIE		1350	8-5-6-5H3 KOALA	MCKENZIE
1305	520HR ANTELOPE-	MCKENZIE		1351	9-04H MANDAREE	MCKENZIE
1306	520HR ANTELOPE-	MCKENZIE		1352	9-04H MANDAREE	MCKENZIE
1307	520HR ANTELOPE-	MCKENZIE		1353	9-1 SIL UNIT 9	MCKENZIE
1308	523 ANTELOPE-MA	MCKENZIE		1354	9-1 SIL UNIT 9	MCKENZIE
1309	523 ANTELOPE-MA	MCKENZIE		1355	9-1 SIL UNIT 9	MCKENZIE
1310	523 ANTELOPE-MA	MCKENZIE		1356	9-3H ROLLEFSTAD	MCKENZIE
1311	5-2425H WEST CL	MCKENZIE		1357	9-4H WOLF	MCKENZIE
1312	54-1 SILURIAN 5	MCKENZIE		1358	9-5-6-5H KOALA	MCKENZIE
1313	54-1 SILURIAN 5	MCKENZIE		1359	9-5-6-5H KOALA	MCKENZIE
1314	54-1 SILURIAN 5	MCKENZIE		1360	9C-10-1H FORT B	MCKENZIE
1315	54-1 SILURIAN 5	MCKENZIE		1361	9C-10-2H FORT B	MCKENZIE
1316	5-8H SAFELY USA	MCKENZIE		1362	9C-10-3H FORT B	MCKENZIE
1317	5-8H SAFELY USA	MCKENZIE		1363	A203X CMNU	MCKENZIE
1318	5-9H ANGUS FEDE	MCKENZIE		1364	A203X CMNU	MCKENZIE
1319	5C-2-3 CHARLSON	MCKENZIE		1365	A203X CMNU	MCKENZIE
1320	5C-2-3 CHARLSON	MCKENZIE		1366	A203X CMNU	MCKENZIE
1321	5C-2-3 CHARLSON	MCKENZIE		1367	B151-95-2122H1	MCKENZIE
1322	5D-4-4HR USA	MCKENZIE		1368	F208XHR BBMU	MCKENZIE
1323	5D-4-4HR USA	MCKENZIE		1369	F24-34-2H AKOVE	MCKENZIE
1324	5D-4-4HR USA	MCKENZIE		1370	G208 BBMU	MCKENZIE
1325	6-1 SILURIAN 6	MCKENZIE		1371	H-517HR AMU (DW	MCKENZIE
1326	6-1 SILURIAN 6	MCKENZIE		1372	H-517HR AMU (DW	MCKENZIE
1327	6-1 SILURIAN 6	MCKENZIE		1373	H-517HR AMU (DW	MCKENZIE
1328	6-17H JAMESTOWN	MCKENZIE		1374	1-01-02H-149-91	MCLEAN
1329	6-24H ROCHESTER	MCKENZIE		1375	1-05-06H-149-90	MCLEAN
1330	6A-7-1H USA 1	MCKENZIE		1376	1-08H-149-90 MH	MCLEAN
1331	6D-4-4H MCKENZI	MCKENZIE		1377	1-09-16H-149-90	MCLEAN
1332	6D-4-4H MCKENZI	MCKENZIE		1378	11-17H ONE FEAT	MCLEAN
1333	6D-4-4H MCKENZI	MCKENZIE		1379	11-28H THOMAS M	MCLEAN
1334	7-17H JAMESTOWN	MCKENZIE		1380	1-13-14H-150-91	MCLEAN

	WELL ID	COUNTY			WELL ID	COUNTY
1381	1-18H-150-90 MH	MCLEAN		1427	11-16H LUTHER U	MOUNTRAIL
1382	1-19H-150-90 MH	MCLEAN		1428	11-16H LUTHER U	MOUNTRAIL
1383	1-29-30H-150-90	MCLEAN		1429	11-17H ELK USA	MOUNTRAIL
1384	1-32-31H-150-90	MCLEAN		1430	11-18H BAKER US	MOUNTRAIL
1385	14-34H VORWERK	MCLEAN		1431	11-18TFH BAKER	MOUNTRAIL
1386	14-8H TORGERSON	MCLEAN		1432	11-1H HOWARD US	MOUNTRAIL
1387	2-01-02H-149-91	MCLEAN		1433	11-1H HOWARD US	MOUNTRAIL
1388	2-04-03H-149-90	MCLEAN		1434	1-12H OLSON	MOUNTRAIL
1389	2-05-06H-149-90	MCLEAN		1435	1-12H OLSON	MOUNTRAIL
1390	2-07-18H-149-90	MCLEAN		1436	11-2HC GEORGE E	MOUNTRAIL
1391	21-16H WALDOCK	MCLEAN		1437	1-12HW OLSON	MOUNTRAIL
1392	21-28H THOMAS M	MCLEAN		1438	11-2HZ GEORGE E	MOUNTRAIL
1393	2-13-14H-150-91	MCLEAN		1439	1-13-12H PALERM	MOUNTRAIL
1394	2-29-30H-150-90	MCLEAN		1440	1-13-12H PALERM	MOUNTRAIL
1395	2-32-31H-150-90	MCLEAN		1441	1-13-12H PALERM	MOUNTRAIL
1396	31-16H BLACK HA	MCLEAN		1442	1-13-12H PALERM	MOUNTRAIL
1397	31-17H ONE FEAT	MCLEAN		1443	1-13-12H PALERM	MOUNTRAIL
1398	34-7H GOODBIRD	MCLEAN		1444	1-13-12H PALERM	MOUNTRAIL
1399	34-8H SITTING O	MCLEAN		1445	1-13-12H PALERM	MOUNTRAIL
1400	34-9H DRIVER US	MCLEAN		1446	1-13-12H PALERM	MOUNTRAIL
1401	44-7H GOODBIRD	MCLEAN		1447	11-4H MHA USA	MOUNTRAIL
1402	44-7H GOODBIRD	MCLEAN		1448	11-4H PETERSON	MOUNTRAIL
1403	5-05-06H-149-90	MCLEAN		1449	11-4TFH MHA USA	MOUNTRAIL
1404	5-13-14H-150-91	MCLEAN		1450	12-1HC OLSON *(	MOUNTRAIL
1405	5-29-30H-150-90	MCLEAN		1451	12-1HD OLSON (M	MOUNTRAIL
1406	5-32-31H-150-90	MCLEAN		1452	12-1HD OLSON (M	MOUNTRAIL
1407	6-05-06H-149-90	MCLEAN		1453	12-1HY OLSON (M	MOUNTRAIL
1408	6-32-31H-150-90	MCLEAN		1454	12-27TFH LEE FE	MOUNTRAIL
1409	10-11 1-H ESTHE	MOUNTRAIL		1455	12-32TFH KNIFE	MOUNTRAIL
1410	10-11 2TFH ESTH	MOUNTRAIL		1456	1-24-25H 1 PALE	MOUNTRAIL
1411	10-11 6TFH ESTH	MOUNTRAIL		1457	1-24-25H 1 PALE	MOUNTRAIL
1412	10-11 7H ESTHER	MOUNTRAIL		1458	1-24-25H 1 PALE	MOUNTRAIL
1413	10-3H STATE OF	MOUNTRAIL		1459	126-2523H VAN H	MOUNTRAIL
1414	10-3H STATE OF	MOUNTRAIL		1460	1-27H-152-92 FE	MOUNTRAIL
1415	10-3H STATE OF	MOUNTRAIL		1461	13-14H LIBERTY	MOUNTRAIL
1416	10-3HA STATE OF	MOUNTRAIL		1462	13-14H MANDAN	MOUNTRAIL
1417	10-3HC STATE OF	MOUNTRAIL		1463	13-24H FBIR	MOUNTRAIL
1418	10-3HC STATE OF	MOUNTRAIL		1464	13-24H FBIR	MOUNTRAIL
1419	10-3HW STATE OF	MOUNTRAIL		1465	13-24HA GLENN F	MOUNTRAIL
1420	10-3HZ STATE OF	MOUNTRAIL		1466	13-24HC FBIR (M	MOUNTRAIL
1421	10-3HZ STATE OF	MOUNTRAIL		1467	13-24HD FBIR (M	MOUNTRAIL
1422	106-0107H LIBER	MOUNTRAIL		1468	13-24HW GLENN F	MOUNTRAIL
1423	106-0107H LIBER	MOUNTRAIL		1469	13-24HX GLENN F	MOUNTRAIL
1424	1-10-11-12H PER	MOUNTRAIL		1470	13-24HZ FBIR (M	MOUNTRAIL
1425	11-16H ELLA USA	MOUNTRAIL		1471	13-32H KNIFE RI	MOUNTRAIL
1426	11-16H ELLA USA	MOUNTRAIL		1472	13-32TFH KNIFE	MOUNTRAIL

	WELL ID	COUNTY			WELL ID	COUNTY
1473	13-3TFH BURL TT	MOUNTRAIL		1519	21-17H LONGORIA	MOUNTRAIL
1474	1-34-35H-152-92	MOUNTRAIL		1520	21-17H RED FEAT	MOUNTRAIL
1475	14-22H SHIRLEY	MOUNTRAIL		1521	21-17H RED FEAT	MOUNTRAIL
1476	14-22H SHIRLEY	MOUNTRAIL		1522	21-17TFH WHEELE	MOUNTRAIL
1477	14-23H LIBERTY	MOUNTRAIL		1523	2-11H MASON	MOUNTRAIL
1478	14-23H SPOTTED	MOUNTRAIL		1524	2-11H MASON	MOUNTRAIL
1479	14-23H SPOTTED	MOUNTRAIL		1525	2-11H MASON	MOUNTRAIL
1480	14-23HC GEORGE	MOUNTRAIL		1526	2-11HA MASON *(	MOUNTRAIL
1481	14-23HC GEORGE	MOUNTRAIL		1527	2-11HW-R MASON	MOUNTRAIL
1482	14-23HD GEORGE	MOUNTRAIL		1528	2-11HW-R MASON	MOUNTRAIL
1483	14-23HD GEORGE	MOUNTRAIL		1529	2-11HX MASON (M	MOUNTRAIL
1484	14-23HW SPOTTED	MOUNTRAIL		1530	2-11HX MASON (M	MOUNTRAIL
1485	14-23HY SPOTTED	MOUNTRAIL		1531	21-28H JACK PEN	MOUNTRAIL
1486	14-23HZ GEORGE	MOUNTRAIL		1532	21-28H JACK PEN	MOUNTRAIL
1487	14-23HZ GEORGE	MOUNTRAIL		1533	21-2H GLADYS US	MOUNTRAIL
1488	14-29TFX ELSIE	MOUNTRAIL		1534	21-2H GLADYS US	MOUNTRAIL
1489	14-29XH SMITH F	MOUNTRAIL		1535	21-33H LEVI FED	MOUNTRAIL
1490	14-4-3XH WALDOC	MOUNTRAIL		1536	21-33TFH SELMA	MOUNTRAIL
1491	14-6TFX ROHDE F	MOUNTRAIL		1537	21-3H HENRY CHA	MOUNTRAIL
1492	15-22H ADAM GOO	MOUNTRAIL		1538	21-3H HENRY CHA	MOUNTRAIL
1493	15-22H ADAM GOO	MOUNTRAIL		1539	21-4H BREHM	MOUNTRAIL
1494	15-22H ADAM GOO	MOUNTRAIL		1540	21-4TFH FOREMAN	MOUNTRAIL
1495	15-22HC ADAM GO	MOUNTRAIL		1541	21-5H FISHER US	MOUNTRAIL
1496	15-22HC ARIKARA	MOUNTRAIL		1542	21-5H FISHER US	MOUNTRAIL
1497	15-22HD ADAM GO	MOUNTRAIL		1543	21-6TFH JESSICA	MOUNTRAIL
1498	15-22HW ADAM GO	MOUNTRAIL		1544	21-6TFH JESSICA	MOUNTRAIL
1499	15-22HX ADAM GO	MOUNTRAIL		1545	2-33-4H LUNKER	MOUNTRAIL
1500	15-22HY ADAM GO	MOUNTRAIL		1546	2-35-4H 2 KING	MOUNTRAIL
1501	16-15H PENNINGT	MOUNTRAIL		1547	2-35-4H 2 KING	MOUNTRAIL
1502	16-15H PENNINGT	MOUNTRAIL		1548	2-35-4H 2 KING	MOUNTRAIL
1503	16-21H ELK	MOUNTRAIL		1549	2-35-4H 2 KING	MOUNTRAIL
1504	16-21HC DANCING	MOUNTRAIL		1550	2-35-4H 2 KING	MOUNTRAIL
1505	16-21HC DANCING	MOUNTRAIL		1551	2-35-4H 2 KING	MOUNTRAIL
1506	16-21HD DANCING	MOUNTRAIL		1552	2-35-4H 2 KING	MOUNTRAIL
1507	16-21HD DANCING	MOUNTRAIL		1553	24-20H SHOBE	MOUNTRAIL
1508	16-21HW ELK *(M	MOUNTRAIL		1554	24-20H SHOBE	MOUNTRAIL
1509	16-21HX ELK (MW	MOUNTRAIL		1555	24-31H JAHNKE U	MOUNTRAIL
1510	16-21HZ DANCING	MOUNTRAIL		1556	24-31H JAHNKE U	MOUNTRAIL
1511	16-21HZ DANCING	MOUNTRAIL		1557	24-31TFH JAHNKE	MOUNTRAIL
1512	16-4H VAN HOOK	MOUNTRAIL		1558	24-31TFH JAHNKE	MOUNTRAIL
1513	16-4H VAN HOOK	MOUNTRAIL		1559	24-7H GALEN FOX	MOUNTRAIL
1514	16-9H BRUNSELL	MOUNTRAIL		1560	24-7H GALEN FOX	MOUNTRAIL
1515	16-9H BRUNSELL	MOUNTRAIL		1561	24HD COYOTE NEC	MOUNTRAIL
1516	18-14H LIBERTY	MOUNTRAIL		1562	24HD COYOTE NEC	MOUNTRAIL
1517	19-23H LIBERTY	MOUNTRAIL		1563	25-0107H LIBERT	MOUNTRAIL
1518	19-2523H VAN HO	MOUNTRAIL		1564	25-0107H LIBERT	MOUNTRAIL

	WELL ID	COUNTY			WELL ID	COUNTY
1565	31-16H LUTHER U	MOUNTRAIL		1611	41-4H RAYMOND U	MOUNTRAIL
1566	31-16H LUTHER U	MOUNTRAIL		1612	41-4TFH PENNING	MOUNTRAIL
1567	31-17H CONKLIN	MOUNTRAIL		1613	41-4TFH PENNING	MOUNTRAIL
1568	31-17H RED FEAT	MOUNTRAIL		1614	41-5H FISHER US	MOUNTRAIL
1569	31-17H RED FEAT	MOUNTRAIL		1615	41-5H FISHER US	MOUNTRAIL
1570	31-17TFH SNOW B	MOUNTRAIL		1616	41-6H CUMMINGS	MOUNTRAIL
1571	31-18H ARVID BA	MOUNTRAIL		1617	41-6H EVERETT F	MOUNTRAIL
1572	31-18H ARVID BA	MOUNTRAIL		1618	41-6H EVERETT F	MOUNTRAIL
1573	31-2H WILLIAM U	MOUNTRAIL		1619	41-6TFH CUMMING	MOUNTRAIL
1574	31-2TFH WILLIAM	MOUNTRAIL		1620	41-8H BETTY SHO	MOUNTRAIL
1575	31-3TFH HENRY C	MOUNTRAIL		1621	41-8H BETTY SHO	MOUNTRAIL
1576	31-4H PENNINGTO	MOUNTRAIL		1622	42-4TFH BILL TT	MOUNTRAIL
1577	31-4H PENNINGTO	MOUNTRAIL		1623	4-25H REHAK FED	MOUNTRAIL
1578	31-6H EVERETT F	MOUNTRAIL		1624	4-25H REHAK FED	MOUNTRAIL
1579	31-6H EVERETT F	MOUNTRAIL		1625	42-8-2TFH RODNE	MOUNTRAIL
1580	31-6TFH OREN US	MOUNTRAIL		1626	4-33 1-H WRIGHT	MOUNTRAIL
1581	31-6TFH OREN US	MOUNTRAIL		1627	4-33 2TFH WRIGH	MOUNTRAIL
1582	34-12H TARA JO	MOUNTRAIL		1628	4-33 5H WRIGHT	MOUNTRAIL
1583	34-12TFH TARA J	MOUNTRAIL		1629	43-8H WALIEN US	MOUNTRAIL
1584	34-21H JERRY PE	MOUNTRAIL		1630	43-8TFH WALTOM	MOUNTRAIL
1585	34-21H JERRY PE	MOUNTRAIL		1631	44-19H CHARLES	MOUNTRAIL
1586	34-22H BOTTLESO	MOUNTRAIL		1632	44-19H CHARLES	MOUNTRAIL
1587	34-22H BOTTLESO	MOUNTRAIL		1633	44-31H BARTLESO	MOUNTRAIL
1588	34-3 1-H AFSETH	MOUNTRAIL		1634	44-31H BARTLESO	MOUNTRAIL
1589	34-3 1-H AFSETH	MOUNTRAIL		1635	44-33H EARL PEN	MOUNTRAIL
1590	34-31H JAY SAND	MOUNTRAIL		1636	44-34H WENINGER	MOUNTRAIL
1591	34-31H JAY SAND	MOUNTRAIL		1637	44-34H WENINGER	MOUNTRAIL
1592	34-35H ARNDT FE	MOUNTRAIL		1638	4-9HA ROGGENBUC	MOUNTRAIL
1593	34-4H JONES	MOUNTRAIL		1639	4-9HW ROGGENBUC	MOUNTRAIL
1594	34-5H JASPER L	MOUNTRAIL		1640	4-9HX ROGGENBUC	MOUNTRAIL
1595	34-5H JASPER L	MOUNTRAIL		1641	4-9HY ROGGENBUC	MOUNTRAIL
1596	34X-36 SORKNESS	MOUNTRAIL		1642	4HC VAN HOOK R/	MOUNTRAIL
1597	35-4H KING (DWO	MOUNTRAIL		1643	5-25H1 REHAK FE	MOUNTRAIL
1598	35-4H KING (DWO	MOUNTRAIL		1644	5-25H1 REHAK FE	MOUNTRAIL
1599	35-4H KING (DWO	MOUNTRAIL		1645	5792 24-9H EMIE	MOUNTRAIL
1600	35-4H KING (DWO	MOUNTRAIL		1646	5792 24-9H EMIE	MOUNTRAIL
1601	35-4H KING (DWO	MOUNTRAIL		1647	5792 24-9H EMIE	MOUNTRAIL
1602	41-15TFH RUDOLP	MOUNTRAIL		1648	5792 24-9H EMIE	MOUNTRAIL
1603	41-17H RANDI US	MOUNTRAIL		1649	5792 24-9H EMIE	MOUNTRAIL
1604	41-17H RANDI US	MOUNTRAIL		1650	5792 24-9H EMIE	MOUNTRAIL
1605	41-17TFH BIG EA	MOUNTRAIL		1651	5-8H MARY R SMI	MOUNTRAIL
1606	41-24TFX ROGGEN	MOUNTRAIL		1652	5-8H MARY R SMI	MOUNTRAIL
1607	41-28H BLANCHET	MOUNTRAIL		1653	5-8H MARY R SMI	MOUNTRAIL
1608	41-3H HENRY CHA	MOUNTRAIL		1654	5-8HC DORA SMIT	MOUNTRAIL
1609	41-4H GORDON TT	MOUNTRAIL		1655	5-8HC DORA SMIT	MOUNTRAIL
1610	41-4H RAYMOND U	MOUNTRAIL		1656	5-8HD DORA SMIT	MOUNTRAIL

	WELL ID	COUNTY			WELL ID	COUNTY
1657	5-8HD DORA SMIT	MOUNTRAIL		1703	15-31H THOMPSON	WILLIAMS
1658	5-8HW MARY R SM	MOUNTRAIL		1704	15-31H THOMPSON	WILLIAMS
1659	5-8HX MARY R SM	MOUNTRAIL		1705	15-33-28-2H THO	WILLIAMS
1660	5-8HY DORA SMIT	MOUNTRAIL		1706	15-33-28-2H THO	WILLIAMS
1661	5-8HY DORA SMIT	MOUNTRAIL		1707	155-97-0310H-1	WILLIAMS
1662	6-25H1 REHAK FE	MOUNTRAIL		1708	1-5-8-15H P BIB	WILLIAMS
1663	7-21H COTTONWOO	MOUNTRAIL		1709	1-5-8-15H P BIB	WILLIAMS
1664	7-25H REHAK FED	MOUNTRAIL		1710	1-5-8-16H3 P BI	WILLIAMS
1665	7-8-9HC EDWARD	MOUNTRAIL		1711	1-5-8-16H3 P BI	WILLIAMS
1666	8-5 1-H ROGER S	MOUNTRAIL		1712	159-102-8-5-1H	WILLIAMS
1667	8-5 1-H ROGER S	MOUNTRAIL		1713	19-20H GARY RUS	WILLIAMS
1668	8-5 1-H ROGER S	MOUNTRAIL		1714	20-17 1H LEOPAR	WILLIAMS
1669	9-4HB BRUNSELL	MOUNTRAIL		1715	2-17-20-15H P V	WILLIAMS
1670	9-4HZ BRUNSELL	MOUNTRAIL		1716	2-17-20-15H P V	WILLIAMS
1671	14-10PH KADRMAS	STARK		1717	2-27H BERGSTROM	WILLIAMS
1672	14-11PH KADRMAS	STARK		1718	2-27H BERGSTROM	WILLIAMS
1673	14-12PH RIDL FE	STARK		1719	2-28H BERGSTROM	WILLIAMS
1674	14-23H PAVEL	STARK		1720	23-21H HARDSCRA	WILLIAMS
1675	21-16H DACKER	STARK		1721	24-20H OPAL HOL	WILLIAMS
1676	21-16H DACKER	STARK		1722	24X-35 DONNELLY	WILLIAMS
1677	21-16H DIAMOND	STARK		1723	2-5H COLUMBIA	WILLIAMS
1678	21-16H WEILER	STARK		1724	29-32 1H OWAN (	WILLIAMS
1679	34-10PH KADRMAS	STARK		1725	29-32 1H OWAN (	WILLIAMS
1680	34-11PH KADRMAS	STARK		1726	2TFH JAKE 2-11	WILLIAMS
1681	34-12TFH RIDL(D	STARK		1727	31-30H IONE BAR	WILLIAMS
1682	41-25PH TALKING	STARK		1728	3-16-21-13H3 P	WILLIAMS
1683	42-4PH NEWTON F	STARK		1729	3-16-21-13H3 P	WILLIAMS
1684	42-4PH NEWTON F	STARK		1730	3-16-21-14H P S	WILLIAMS
1685	44-10PH KADRMAS	STARK		1731	3-16-21-14H P S	WILLIAMS
1686	44-11PH KADRMAS	STARK		1732	31X-13C AMES	WILLIAMS
1687	44-4PH NEWTON F	STARK		1733	31X-3 LONNIE	WILLIAMS
1688	44-4PH NEWTON F	STARK		1734	31X-3 LONNIE	WILLIAMS
1689	44-7PH BOCK FED	STARK		1735	32-29 1H SYLVES	WILLIAMS
1690	11X-15B KANYER	WILLIAMS		1736	32-29 1H SYLVES	WILLIAMS
1691	11X-15F KANYER	WILLIAMS		1737	32-29 2TFH BEAG	WILLIAMS
1692	11X-16 OLSON ST	WILLIAMS		1738	32-29 2TFH BEAG	WILLIAMS
1693	11X-16 TRUAX ST	WILLIAMS		1739	32-29 3H BEAGLE	WILLIAMS
1694	1-2-11H PASTERN	WILLIAMS		1740	32-29 3H BEAGLE	WILLIAMS
1695	1-22H FASCHING	WILLIAMS		1741	32-29 3TFH SYLV	WILLIAMS
1696	1-23-14H C RASM	WILLIAMS		1742	32-29 3TFH SYLV	WILLIAMS
1697	1-27-34H QUARNE	WILLIAMS		1743	32-29 4TFH SYLV	WILLIAMS
1698	1-29-32H BOYDS	WILLIAMS		1744	32-29 4TFH SYLV	WILLIAMS
1699	12X-18 MENDENHA	WILLIAMS		1745	33-28 2H HUSKY	WILLIAMS
1700	13-24H HARP (DW	WILLIAMS		1746	33-28 2H HUSKY	WILLIAMS
1701	1-34H1 PAMELA A	WILLIAMS		1747	33-28 4TFH HUSK	WILLIAMS
1702	13-8-20-13H3 WI	WILLIAMS		1748	33-28 4TFH HUSK	WILLIAMS

	WELL ID	COUNTY			WELL ID	COUNTY
1749	33-28 6H HUSKY	WILLIAMS				
1750	33-28 6H HUSKY	WILLIAMS				
1751	33-28 8TFH HUSK	WILLIAMS				
1752	33-28 8TFH HUSK	WILLIAMS				
1753	34-35H KAY ARNS	WILLIAMS				
1754	34X-13 BJARNE	WILLIAMS				
1755	34X-34C ROSE FE	WILLIAMS				
1756	3-5H COLUMBIA	WILLIAMS				
1757	3TFH JAKE 2-11	WILLIAMS				
1758	4-10H SACRAMENT	WILLIAMS				
1759	41X-21 CROWDER	WILLIAMS				
1760	41X-21 DEANGELI	WILLIAMS				
1761	4H JAKE 2-11 (M	WILLIAMS				
1762	5-10-11-1H P TH	WILLIAMS				
1763	5-10-11-1H P TH	WILLIAMS				
1764	5-10H SACRAMENT	WILLIAMS				
1765	6-10H SACRAMENT	WILLIAMS				
1766	6-21H1 PIERRE F	WILLIAMS				
1767	6-5H COLUMBIA F	WILLIAMS				
1768	7-10H1 SACRAMEN	WILLIAMS				
1769	7-21H PIERRE FE	WILLIAMS				
1770	7-5H COLUMBIA F	WILLIAMS				

Appendix B. Reasonably Foreseeable Development for this EA and Gas Capture Projections by Year

The Reasonably Foreseeable Development (RFD) scenario for this EA is based on information and assumptions contained in the RFD developed in 2009, revised in 2011 for the NDFO Resource Management Plan (RMP), and revised again in 2014 for the NDFO RMP to consider the increased rate of development in the Williston Basin portion of North Dakota. The 2014 RFD revision contains projections of oil and gas wells for the western portion of the NDFO area.

The 2014 RFD revision took into consideration the assumptions and methodology from the previous reports completed. It also incorporated current changes in development that resulted in an increase projection of oil and gas development for the next 20 years. For the RFD of this EA, only the first 5 years of projected development was used to complete this analysis. In the next 5 years, the 2014 RFD revision projects a baseline total of 6,648 wells to be producing wells in the western portion of North Dakota. Of those, 1,263 are Federal, 399 are Indian, and 4,986 are Fee/State administered wells.

Based on 2014 RFD, the BLM assumes a total of 6,648 wells are projected to produce gas and flare an average 121 MCFPD per well for the five year analysis period. The gas capture percentages requirements from NDIC revised Order 24665 were applied to the projected number of wells for each of the next five years to identify quantities of gas projected to be captured and projected to be flared short-term and long-term by year. Projections per year and percentages applied are listed below.

1st Year: 5 percent of the flared gas flow is attributed to the pending SN requests which would be required to be capture per BLM,
77 percent of the flared gas flow would be flared short-term (1-year gas capture plan, pipeline pressure)
18 percent of the flared gas flow would be flared long-term (ROW, poor gas quality, etc)

2nd Year: 3 percent of the flared gas flow is attributed to the pending SN requests which would be required to capture per BLM,
80 percent of the flared gas flow would be flared short-term (1-year gas capture plan, pipeline pressure)
17 percent of the flared gas flow would be flared long-term (ROW, poor gas quality, etc)

3rd-4th Year: 3 percent of the flared gas flow is attributed to the pending SN requests which would be required to capture per BLM,
85 percent of the flared gas flow would be flared short-term (1-year gas capture plan, pipeline pressure)
12 percent of the flared gas flow would be flared long-term (ROW, poor gas quality, etc)

5th Year: 3 percent of the flared gas flow is attributed to the pending SN requests which would be required to capture per BLM,
88 percent of the flared gas flow would be flared short-term (1-year gas capture plan, pipeline pressure)
9 percent of the flared gas flow would be flared long-term (ROW, poor gas quality, etc)

6th Year: 3 percent of the flared gas flow is attributed to the pending SN requests which would be required to capture per BLM,
88 percent of the flared gas flow would be flared short-term (1-year gas capture plan, pipeline pressure)
9 percent of the flared gas flow would be flared long-term (ROW, poor gas quality, etc)

For this analysis, short-term is defined as flaring up to 1 year, long-term is defined as greater than 1 year up to 5 years. For the 12,383 existing wells it was assumed that 80% of the produced gas is captured and 20% is flared based on data obtained from NDIC. For new wells that produce gas in years 1 through year 6, NDIC Order 24665 capture rates were assumed. This order requires that by January 1, 2015, the gas capture rate should be at 77 percent which means that 23 percent would be flared; and by November 1, 2020, the gas capture rate should be at least 91 percent which means that 9 percent would be flared. The flaring request inventory generated by BLM in 2014 was used to develop the initial assumption of 80% of flared gas flaring short term, 15% of flared gas being flared long term, and an additional 5% required to be captured by BLM in year 1. The NDIC's gas capture requirements and an assumption of an additional 3% required to be captured by BLM was assumed for years 2-6. Although BLM determines this additional requirement on a case-by-case basis, the 5% and 3% assumptions are conservative. Therefore, the short-term flaring percentages would rise over the years based upon additional infrastructure, which in turn would reduce those wells that need long-term flaring.

Based on February 2015 information maintained by NDIC (May 2015 Director's Cut), total gas production was 1,475,395 MCF/day (or 1.47 BCF/day). Total producing wells in Feb 2015 was 12,199 and the gas capture rate was at 80 percent. Therefore, it can be assumed that 20 percent of the gas is flared and then apply this percentage to all of the producing wells in the analysis area.

1,475,395 MCF per day/12,199 wells = 121 MCF per well per day

The 121 Mcf per day would be an average over the life of the well. Wells in the Williston Basin will produce most of their gas in the first few years of production, and then will steadily produce low volumes of gas for the remaining life of the well.

For the EA, there are 1,770 SN requests for 1,306 wells that have flared gas and are connected to pipeline (i.e. pipeline capacity/pressure issues). There are multiple SN requests for the same well, thus unequal number of requests and wells.

There are 238 SN requests for 173 wells currently flaring gas and not connected to a pipeline.

Therefore, assumptions discussed above (80% flared short term, 15% flared long term, and 5% additional capture by BLM) would be applied to estimate the number of wells to flare short-term, flare long-term, and those required to capture. For the SN requests for wells currently flaring, short-term would not consider pipeline capacity/pressure requests. They are being considered as part of the 1,770 SN requests for wells that flared gas. Again, there are multiple SN requests for the same well, resulting in an unequal number of requests and number of wells.

The flow rates of flared gas developed using BLM's RFD, SN requests, and NDIC requirements were used to estimate air pollutant emissions and impacts to air quality. The calculated flow rates for year 1 through 6 are shown in Table B-1.

Table B-1. EA Reasonable Foreseeable Development and specific yearly percentages, gas capture, and gas flared estimates.

# of Wells currently flaring with Pending SNs (not connected to a pipeline)			Calculated Average MCFPD per well	Total MCFPD	MCFPD Captured	MCFPD being Flared	MCFPD w/ required BLM capture (5%)	MCFPD expected to flare short-term (1yr plan, eventually capture gas within 1 yr) (80%)	MCFPD expected to flare long-term (poor quality, no ROW, low quantity, etc.) (15%)
173			121	20,933	0	20,933	1,047	16,746	3,140
							# of EA wells required to capture (5%)	# of EA wells expected to flare short term (1yr plan to capture gas within 1 yr) (80%)	# of wells expected to flare long term (poor quality, no ROW, low quantity, etc.) (15%)
							9	138	26
NDFO RFD Projected Wells to Produce Gas	Year (% capture required)	NDIC Capture Requirement %	Calculated Average MCFPD per well	Total MCFPD	MCFPD Captured	MCFPD Flared	MCFPD w/required BLM capture (5%, 3%)	MCFPD flaring short-term (1yr plan to capture gas within 1 yr and pipeline capacity/pressure)	MCFPD flaring long-term (poor quality, no ROW, low quantity, etc.)

								(80%,77%, 80%, 85%, 88%)	**(15%, 18%,17%, 12%, 9%)**
1,294	2015 (77%)	77	121	156,590	120,574	36,016	1,801	27,732	6,483
1,237	2016 (80%)	80	121	149,652	119,721	29,930	898	23,944	5,088
1,097	2017 (85%)	85	121	132,733	112,823	19,910	597	16,924	2,389
1,083	2018 (85%)	85	121	130,993	111,344	19,649	589	16,702	2,358
1,022	2019 (88%)	88	121	123,679	108,837	14,841	445	13,060	1,336
915	2020 (88%)	88	121	110,716	97,430	13,286	399	11,692	1,196
6,648									
Existing # of Wells producing gas	**Year**	**Estimated current capture rate**	**Calculated Average MCFPD per well**	**Total MCFPD**	**MCFPD Captured**	**MCFPD Flared**	**MCFPD w/required BLM capture (5%)**	**MCFPD flaring short-term (1yr plan to capture gas dependent on pipeline capacity/pressure) (80%)**	**MCFPD flaring long-term (poor quality, no ROW, low quantity, etc.) (15%)**
12,383	2015	80	121	1,498,343	1,198,674	299,669	14,983	239,735	44,950
Total Cumulative Wells to Produce Gas	**Year**	**Estimated / Required Capture Rate**	**Calculated Average MCFPD per well**	**Total MCFPD**	**MCFPD Captured**	**MCFPD Flared**	**MCFPD w/ required BLM capture (5%, 3%)**	**MCFPD flaring short-term (1yr plan to capture gas within 1 yr and pipeline capacity/pressure) (80%,77%,**	**MCFPD flaring long-term (poor quality, no ROW, low quantity, etc.) (15%,**

								80%, 85%, 88%)	**18%,17%, 12%, 9%)**
13,850	2015	80, 77	121	1,675,866	1,319,248	356,617	17,831	284,213	54,573
15,087	2016	80	121	1,825,517	1,438,970	386,548	18,729	308,158	59,661
16,184	2017	85	121	1,958,251	1,551,793	406,458	19,326	325,081	62,050
17,266	2018	85	121	2,089,244	1,663,138	426,107	19,916	341,783	64,408
18,289	2019	88	121	2,212,923	1,771,975	440,948	20,361	354,843	65,744
19,204	2020	88	121	2,323,639	1,869,405	454,234	20,759	366,535	66,940

Appendix C. Flaring Emissions

Flaring occurs when pipeline infrastructure is not available to capture and transport associated gas to a sales pipeline, pipeline upsets cause temporary flaring, or gas quality is not conducive to sales. North Dakota Department of Health (ND DOH) air quality regulations (NDAC 33-15-07-02) require oil and gas flaring to meet US Environmental Protection Agency (EPA) New Source Performance Standards in 40 CFR 60.18. These regulations impose operational requirements that are equivalent to 98% destruction efficiency for organic compounds.

Heating value of associated gas 1571 Btu/scf WRAP

Heating Value Emission Factors

Pollutant	Emission Factor (lb/MMBtu)	Emission Factor Source	Emission Factor (lb/MMscf)
CO	0.37	WRAP	581.27
NOx	0.068	WRAP	106.828

Emissions	Flaring (uncombusted)		Flaring (combusted)		Total Flaring Emissions (lb/MMscf)	Beneficial Combustion (lb/MMscf)
Pollutant	Emission Factor (lb/MMscf)	Emission Factor Source	Emission Factor (lb/MMscf)	Emission Factor Source		
PM_{10}	Negligible	Gas Analysis (GA)	7.60	AP 42 Section 1.4	7.45	7.60
$PM_{2.5}$	Negligible	GA	7.60	AP 42 Section 1.4	7.45	7.60
NOx	Negligible	GA	106.83	WRAP	104.69	106.83
SO_2	Negligible	GA	115.41	WRAP	113.10	115.41
CO	Negligible	GA	84.00	AP 42 Section 1.4	82.32	84.00
VOC	20136	GA	5.50	AP 42 Section 1.4	408.10	5.50
HAP	812	GA	1.88	AP 42 Section 1.4	18.09	1.88

CO_2	442	GA	120000.00	AP 42 Section 1.4	117608.84	120000.00
CH_4	18203	GA	2.30	AP 42 Section 1.4	366.32	2.30
N_2O	Negligible	GA	2.20	AP 42 Section 1.4	2.16	2.20

MMscf = Million standard cubic feet

Wellhead Gas Analysis (GA)

Gas Component	Mole Fraction	Source	Molecular Weight	Gas Weight	Weight Percent	Weight
	(%)		(lb/ b-mol)	(lb/ b-mol)	(wt%)	(lb/MMscf))
Methane	70.00	WRAP	16.04	11.23	42.87	18203
Carbon Dioxide	0.62	MCFO	43.99	0.27	1.04	442
VOC	23.00	WRAP	54.00	12.42	47.42	20136
HAPs	0.50	ND DOH	100.21	0.50	1.91	812
Other Compounds (primarily ethane)	5.88	---	30.07	1.77	6.75	2867
Totals	**100.00**		**---**	**26.19**	**100.00**	**42460**

Sources:
AP 42: US Environmental Protection Agency, AP 42 Fifth Edition, Volume 1, Section 1.4, Natural Gas Combustion, Supplement D, July 1998. http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf
MCFO: Gas analysis data provided by Charles Laakso, BLM Miles City Field Office, 2010.
ND DOH: North Dakota Department of Health Emission Calculation Workbook, March 2013, http://www.ndhealth.gov/aq/bakken.aspx.
WRAP: Western Regional Air Partnership, Williston Basin 2011 Baseline Emission Inventory, August 2014, http://www.wrapair2.org/ND-SD-MT.aspx.

Proposed Action Estimated Annual Emissions

	Year					
	2015	**2016**	**2017**	**2018**	**2019**	**2020**
Methane Flared (MSCF/day)						
Short-term (no more than 1 year)	27,732	23,944	16,924	16,702	13,060	11,692
Long-term (5 years)	6,483	5,088	2,389	2,358	1,336	1,196
Emissions (short tons/year)						
PM_{10}	47	39	26	26	20	18
$PM_{2.5}$	47	39	26	26	20	18
NOx	654	555	369	364	275	246
SO_2	706	599	399	393	297	266
CO	514	436	290	286	216	194
VOC	2,548	2,162	1,438	1,420	1,072	960
HAP	113	96	64	63	48	43
CO_2	734,378	623,132	414,527	409,096	308,990	276,623
CH_4	2,287	1,941	1,291	1,274	962	862
N_2O	13	11	8	7	6	5
GHG Emissions (metric tons/year)						
CO_2	666,213	565,293	376,050	371,124	280,310	250,947
CH_4	2,075	1,761	1,171	1,156	873	782
N_2O	12	10	7	7	5	5

CO_2e	***721,729***	***612,399***	***407,387***	***402,050***	***303,668***	***271,859***

MSCF = thousand standard cubic feet per day
CO2e emissions are calculated using 100-year global warming potentials (GWPs) of CO2 =1, CH4 = 25, and N2O = 298, as provided in EPA regulations in 40 CFR Part 98, Subpart A, Table A-1. Other GWPs can be used by multiplying the quantity of each gas by its GWP and summing the results.

Emission estimates in this table are based on 12,383 existing wells, 173 pending SNs, and 6,648 new wells (over 5 years).

Cumulative Estimated Emissions

	Year					
	2015	**2016**	**2017**	**2018**	**2019**	**2020**
Methane Flared (MSCF/day)						
Short-term (no more than 1 year)	284,213	308,158	325,081	341,783	354,843	366,535
Long-term (5 years)	54,573	59,661	62,050	64,408	65,744	66,940
Emissions (short tons/year)						
PM_{10}	460	500	526	552	572	589
$PM_{2.5}$	460	500	526	552	572	589
NOx	6,473	7,028	7,397	7,761	8,036	8,282
SO_2	6,993	7,592	7,991	8,384	8,681	8,947
CO	5,090	5,526	5,816	6,102	6,319	6,512
VOC	25,233	27,395	28,833	30,253	31,325	32,285
HAP	1,118	1,214	1,278	1,341	1,388	1,431
CO_2	7,271,580	7,894,725	8,309,230	8,718,327	9,027,317	9,303,940
CH_4	22,649	24,590	25,881	27,155	28,118	28,979

N_2O	133	145	152	160	165	171
GHG Emissions (metric tons/year)						
CO_2	6,596,632	7,161,937	7,537,968	7,909,092	8,189,401	8,440,348
CH_4	20,547	22,307	23,479	24,635	25,508	26,289
N_2O	121	131	138	145	150	155
CO_2e	***7,146,335***	***7,758,747***	***8,166,113***	***8,568,164***	***8,871,832***	***9,143,690***

MSCF = thousand standard cubic feet per day
CO2e emissions are calculated using 100-year global warming potentials (GWPs) of CO2 =1, CH4 = 25, and N2O = 298, as provided in EPA regulations in 40 CFR Part 98, Subpart A, Table A-1. Other GWPs can be used by multiplying the quantity of each gas by its GWP and summing the results.

Emission estimates in this table are based on 12,383 existing wells, 173 pending SNs, and 6,648 new wells (over 5 years).

Criteria Pollutant Emission Comparison for North Dakota

	North Dakota NEI (short tons/year)	**Max. Year Proposed Action Emissions (% of ND Emissions)**	**Max. Year Cumulative Emissions (% of ND Emissions)**	**Source for North Dakota Emissions**
PM_{10}	365,857	0.01%	0.16%	EPA 2011 NEI, Version 2, March 4, 2015, http://www.epa.gov/ttnchie1/net/2011inventory.html
$PM_{2.5}$	90,086	0.05%	0.65%	
NOx	163,788	0.40%	5.06%	
SO_2	1,074,343	0.07%	0.83%	
CO	488,511	0.11%	1.33%	
VOC	281,219	0.91%	11.48%	

NEI = National Emissions Inventory

GHG Emission Comparison

	CO_2e (metric tons/year)	Max. Year Proposed Action Emissions	Max. Year Cumulative Emissions	Source
North Dakota GHG Emissions (2013)	37,003,286	1.95%	24.71%	EPA FLIGHT website, http://ghgdata.epa.gov/ghgp/main.do#/, data current through August 18, 2014.
US Emissions (2014)	6,673,000,000	0.01%	0.14%	U.S. Greenhouse Gas Inventory Report: 1990-2013, EPA, http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html

Appendix D. Viewshed Analysis Method for Historic Properties

According to Section 106 of the National Historic Preservation Act, the introduction of visual elements that diminish the integrity of a historic property's significant historic features are an example of an adverse effect (36 CFR 800.5(2)(v)). Cultural resource specialists can employ various geospatial processing programs to simulate the geographic area that is visible from a historic property's location. The simulated geographic areas are known as viewsheds.

Geospatial processing programs simulate viewsheds by employing the data contained within a digital elevation model and a historic property's Universal Transverse Mercator (UTM) coordinates. The software produces a boolean overlay that indicates geographic areas that are "true" (can be seen) or "false" (can't be seen). The variables typically employed in the analysis are the average height of a person (1.77m) or the average height of a proposed element, such as a flare stack, building, or facility.

Digital elevation models for North Dakota can be obtained from the North Dakota GIS hub found at http://www.nd.gov/gis/. The North Dakota Information Technology Department and the North Dakota GIS Technical Committee operate the GIS Hub.

The purpose of the viewshed analysis is to test two hypotheses:

Hypothesis # 1. The proposed action introduces elements that can be observed from a historic property.

Hypothesis # 2. Existing modern elements have diminished the integrity of a historic property's significant historic features.

If the viewshed analysis does not support Hypothesis # 1 then the proposed action will not introduce a visual element to the historic property.

If the viewshed analysis supports Hypothesis # 1 then the potential to introduce a visual element remains. The specialists will employ Hypothesis # 2 to analyze the historic "setting."

The historic "setting" refers to the "character of the place in which the property played its historical role" (National Register Bulletin 15). When other modern elements exist and have introduced visual elements, then the "setting" may lack the ability to convey the property's historic significance.

The viewsheds will indicate if any modern elements exist. If modern elements exist, the participants in the Section 106 process will employ the viewshed analysis and visual inspections to determine if the proposed action will introduce elements that diminish the integrity of a historic property.

Appendix E. Summary of 30-day Public Comments and BLM Responses.

	NAME, PRVCY REQST, TYPE	COMMENT SUMMARY	CHANGE IN Analysis	RESPONSE/RATIONAL
1	EOG Resources - Heather N. Smith; None; Written	BLM should clarify that not all 2,211 Sundry Notices will be subject to a royalty determination. BLM's continued reference to 2,211 Sundry Notices overlooks the fact that only a very small number of those Sundry Notices are actually pending before the agency for adjudication.	None	Outside the scope if this analysis. Section 1.1 Introduction states "The EA now better describes the proposed action and decision to be made by the BLM, and clarifies that royalty (avoidable/unavoidable loss) determination will be made on a case-by-case basis as a separate decision on each Sundry Notice (SN) request to flare oil-well gas". In addition, Section 1.6 Issues Not Analyzed states, "This EA does not contain discussion of flaring approvals or avoidable/unavoidable loss determinations."
2	EOG Resources - Heather N. Smith; None; Written	Of the 298 Sundry Notices EOG submitted that are included in Appendix A, at least 44 represent notice of EOG's intent to engage in authorized venting or flaring of natural gas consistent with the terms of NTL-4A Section III. Copies of 298 Sundry Notices providing "notice" to BLM in Attachment B.	None	The NEPA process is initiated when a proposal for Federal action exists. The BLM must meet NEPA requirements whenever it is the BLM's decision that would result in an effect on the human environment, even when the effect would be beneficial and regardless of who proposes the action or where it would take place (40 CFR 1508.18). A Sundry Notice request to flare requires a decision to be made by the BLM Authorized Officer; therefore, require NEPA compliance which can be met by completing a CX, EA, or EIS, or a DNA (Section 3.3 in NEPA Handbook H-1790-1). This includes compliance with existing Land Use Plan, laws (e.g. NHPA), regulations, and policies.

3	EOG Resources - Heather N. Smith; None; Written	At least 2 of EOG Sundry Notices have been approved by NDFO, see Attachment C. Previously approved 11/01/2011 and 2/15/2013	Yes	Appendix A was updated to show dates covered by the list of Sundry Notices for this EA. Added, "…*from January 1, 2012 to April 16, 2015 (AFMSS database, accessed April 16, 2015*)" to table heading. The Sundry Notice, provided by EOG Resources in Appendix C of their comment letter, for the Clarks Creek 03-0805H well, approved on 11/1/2011 by NDFO is not the Sundry Notice request to flare being referenced in Appendix A of the EA. The Sundry Notice being referenced in Appendix A of the EA was received by NDFO on 11/11/2014 (EC# 278363). The latter Sundry Notice was returned to EOG on March 29, 2015 requesting additional information for the petroleum engineers to complete their review in accordance to NTL-4A. An avoidable/unavoidable loss determination still needs to be made for this well in accordance to NTL-4A. The Sundry Notice, provided by EOG Resources in Appendix C of their comment letter, for the Hawkeye 102-2501H well, approved on 2/15/2013 by NDFO is not the Sundry Notice request to flare being referenced in Appendix A of the EA. The Sundry Notice being referenced in Appendix A of the EA was received by NDFO on 5/7/2013 (EC# 205802). The latter Sundry Notice is awaiting review in accordance to NTL-4A.All the Sundry Notices listed in Appendix A of the EA require review by NDFO in accordance with NTL-4A. This review will be completed on a case-by-case basis as stated in the EA as a separate decision for each Sundry Notice.
4	EOG Resources - Heather N. Smith; None; Written	Vast majority of the Sundry Notices EOG submitted are simply annual updates to ongoing requests to flare gas when safety conditions or temporary capacity limitations require; these updates do not represent a distinct request to flare and do not require separate agency decision-making. To the extent that BLM assigns a royalty obligation or mitigating conditions to venting or flaring associated with these Sundry Notices, that imposition has no basis in law.	None	Same as #1 and #2.

5	EOG Resources - Heather N. Smith; None; Written	Before proceeding with any royalty determinations, BLM should identify the specific Sundry Notices on which BLM intends to make royalty determinations. BLM should disclose the data BLM will use when making royalty determinations under NTL-4A Section IV for previously filed Sundry Notices.	None	Same as #1
6	EOG Resources - Heather N. Smith; None; Written	EOG believes that BLM has overestimated the administrative benefit adopting Alternative B will have. BLM's overestimates the burden that previously filed Sundry Notices present. There are not 2,211 decisions to be made. Based on EOG's review of Sundry Notices that EOG submitted, EOG believes that the actual number of Sundry Notices that need to be reviewed and acted upon may be less than one-sixth of that amount.	None	Same as #1 and #2, and text below. When a Decision Record is signed and implemented, the NDFO will be able to complete DNAs, as necessary, for decisions made with pending and future SNs with similar actions as those analyzed in this EA. Alternative B allows the NDFO to disclose the reasonably foreseeable impacts from flaring oil-well gas in the western portion of North Dakota, and identify potential mitigation measures for future flaring on new facilities (Section 2.2) in one document and not continually disclosing the latter impacts in individual EAs for each SN.
7	EOG Resources - Heather N. Smith; None; Written	EOG is concerned with BLM's representation that the No Action alternative would prevent BLM from considering the "environmental conditions of a larger area in the western portion of North Dakota" when evaluating an individual Sundry Notice. BLM has not explained this statement and there is no evidence so support this representation. Nothing stops BLM from considering broader environmental impacts when processing an individual request to flare. BLM in fact, regularly performs this exact analysis when processing APDs, requests to flare, and other authorizations that require environmental review as a condition of approval.	None	Alternative B allows the NDFO to disclose the reasonably foreseeable impacts from flaring oil-well gas in the western portion of North Dakota, and identify potential mitigation measures for future flaring on new facilities (Section 2.2) in one document and not continually disclosing the latter impacts in individual EAs for each SN.

8	EOG Resources - Heather N. Smith; None; Written	BLM should clarify that this list is illustrative, not exhaustive, and that operators retain the operational flexibility they currently possess under Order 24665 to propose alternative methods that might be equally (or more) effective on a project-specific basis.	None	Section 2.2 Alternative B states, "Below is a list of potential mitigation measures that BLM could apply, as appropriate, to future flaring requests on new facilities. For past flaring refer to Chapter 4 for the disclosure of the impacts to cultural resources." Section 4.4.3.2 states, "The BLM has the authority to protect the viewsheds of cultural and historic properties for federally administered wells on both federal and non-federal surface under the NHPA and 36 CFR 800 – Protection of Historic Properties. In addition, mitigation requirements for venting and flaring within the viewsheds of historic or cultural properties are authorized under the NEPA, section 6.8.4.The pending 1,770 SN requests on existing locations would not require the application or implementation of design features/mitigation measures. Application and implementation of the project design features/mitigation measures would be applied to future flaring requests on new facilities, or future APDs, with the potential to introduce visual, atmospheric or audible elements diminishing the integrity of a property's setting or feel in accordance with Section 106. Project design features/mitigation measures would provide the necessary measures to reduce, avoid, or minimize potential impacts to cultural or historic properties. Site specific mitigation measures, including design features proposed by the operator would be developed during review of the application to reduce, avoid, or minimize potential impacts to historic or cultural property's setting or feel in accordance with Section 106. For future APDs, application of standard lease terms, stipulations, and cultural lease notices on the APD would provide additional mechanisms to protect cultural or historic properties that may be affected by flaring. The NDFO would conduct necessary viewshed analysis, as outlined in Appendix D, to identify potential impacts to a historic property's setting or feel and where viewshed is integral to the sites integrity and therefore its eligibility to the NRHP. Site specific mitigation measures could include but are not limited to the project design features/mitigation measures addressed in the proposed action to reduce, avoid, or minimize potential impacts to a historic property's setting or feel in accordance with Section 106."

9	EOG Resources - Heather N. Smith; None; Written	BLM has not included any analysis in the EA regarding the costs the listed mitigation measure would impose on well development. For each well on which EOG is required to capture gas, EOG estimates that implementing the gas-capture methods the EA enumerates will impose incremental costs, on average, in a range of approximately $10K to $50K beyond what EOG presently spends to ensure compliance with Order 24665 and other applicable operational regulations.	None	Section 4.4.5.1 states, "Application of mitigation measures to future APDs could result in cost increase to the operator. Mitigation would be determined during the APD review and associated NEPA document, and would depend on factors such as proposed facilities, topography, proximity to historic properties, etc."
10	EOG Resources - Heather N. Smith; None; Written	Some of the gas-capture and mitigation measures listed in the EA have the potential to compromise the integrity of both well infrastructure and the resource reservoir EOG seeks to develop. To the extent that the resource reservoir is damaged or compromised, EOG's ability to maximize recovery and minimize waste will be permanently injured.	None	Same as #8
11	EOG Resources - Heather N. Smith; None; Written	To ensure that BLM meets its legal obligations, the agency must clarify that the operators retain the flexibility to use mitigation techniques beyond those enumerated in the EA, when appropriate, to ensure that mitigation is conducted in the most environmentally sensitive and cost effective method.	None	Same as #8
12	North Dakota Petroleum Council - Kari Cutting; None; Written	BLM should exercise its explicit authority under NTL-4A to ratify or accept North Dakota's gas capture rules.	None	The Montana/Dakotas State Office has chosen not to ratify the State's gas capture rules to ensure BLM meets its fiduciary Trust responsibilities and as stated in Section 1.1 [t]he BLM is currently developing a national rule that will update NTL-4A. The new rule will focus on waste prevention and royalty collection..."

13	North Dakota Petroleum Council - Kari Cutting; None; Written	NDPC disagrees the EA's implicit claim that the filing of a Sundry Notice is an "undertaking" sufficient to trigger the provisions of the National Historic Preservation Act, and believes that federal law requires BLM to impose any necessary mitigation requirements during the Application for Permit to Drill (APD) approval process, not after.	None	Same as #2
14	North Dakota Petroleum Council - Kari Cutting; None; Written	NDPC seeks clarification as to how the various conditions of approval contemplated in the EA will be applied when fee and federal wells are drilled in the same NDIC spacing unit and produce to the same facilities. NDPC is concerned that this proposed EA will lead to improper attempts to exercise jurisdiction where there was none before.	Yes	Section 1.1 Introduction states, " This EA does not apply to private and state wells approved and administered by the State of North Dakota that have been committed to Federal units or communitization agreements in accordance with Instruction memorandum No MT-95-025. The BLM has authority to make avoidable or unavoidable loss determinations for private and state wells committed to Federal units or CAs." ." After further review of Appendix A, the NDFO removed 441 SNs from private and state wells approved and administered by the State of North Dakota that are within a federal communitization agreement. These SNs were erroneously captured from the AFMSS database query for the initial EA review. As stated in Section 1.1, the private and state well committed to federal units or CAs SNs are not subject to this EA review; however, NTL-4A reviews will be completed as a separate review and decision at a later date by the NDFO. The EA was updated to show 1770 SNs, from Federal and Indian wells administered by the BLM, as being reviewed in this EA. The change in the number of SNs being reviewed did not result in changes in Chapter 4 analysis for any of the resources except for Air Resource (see Section 4.4.1 Air Resources and Appendices B and C for specific changes).
15	North Dakota Petroleum Council - Kari Cutting; None; Written	Appendix B to the EA makes a reference to requirements for "metering to the flare" and NDPC believes that this should be modified to allow for the use of gas-oil ratio calculations to measure flared gas.	Yes	Deleted Appendix B from EA. Site specific COAs may be applied on a case by case basis by the petroleum engineer during review of each Sundry Notice in accordance with NTL-4A.

16	North Dakota Petroleum Council - Kari Cutting; None; Written	The BLM should clarify how the proposed decision will affect the operation of spacing units that contain federal and fee wells subject to the same communitization agreement.	None	Same as #8 and #14.
17	North Dakota Petroleum Council - Kari Cutting; None; Written	The EA appears to assert that BLM has authority under NHPA to impose requirements both at the APD approval stage and when an operator submits a Sundry Notice on flaring. This is incorrect, for two reasons. First, mitigation measures imposed under NHPA review triggered by the sale of a lease must be imposed during the APD approval process, not after. Second, the filing of a Sundry Notice is not an "undertaking" that would trigger a new NHPA review. Sundry Notice approvals previously received by NDPC members from the field office have noted that "[i]f flaring continues past [approval date], approval may be needed or royalties may be due," language that clearly concedes that flaring can and does occur without BLM "approval." BLM has no authority to impose new NHPA mitigation requirements when approving a Sundry Notice for flaring, and the EA should be revised to reflect this.	None	Same as #2.

18	North Dakota Petroleum Council - Kari Cutting; None; Written	The BLM has not adequately examined the technical feasibility or compliance costs associated with the potential mitigation measures listed in the EA.The Acting State Director has specifically ordered the field office to consider economic factors when considering mediation alternatives.	None	Same as #9.
19	North Dakota Petroleum Council - Kari Cutting; None; Written	NDPC urges BLM to consider the harm that well shut-ins can cause to the Bakken and Three Forks reservoirs, and the mutual duty of BLM and operators to ensure "the maximum recovery of oil and gas with minimum waste," before ordering any well to be shut-in.	None	Same as #1.
20	North Dakota Petroleum Council - Kari Cutting; None; Written	As federal courts have previously noted, NHPA review does not imposes substantive requirements on an agency's action: rather, NHPA "is a procedural statute" that primarily requires the identification of historic properties within a project area and consultation with relevant parties. Project cost remains an appropriate factor for an agency to consider when performing a NHPA review.	None	Same as #2.
21	North Dakota Petroleum Council - Kari Cutting; None; Written	NDPC is concerned about any remote gas capture requirements that the field office may seek to impose in the future. As the documents submitted by NDPC in the prior appeal indicate, ND operators that have examined the economics of remote gas capture have repeatedly concluded that "the technologies are not economically viable given their substantial cost in comparison to the nominal value of gas being flared."	None	Same as #1.

22	North Dakota Petroleum Council - Kari Cutting; None; Written	There are specific technical issues associated with several of the potential mitigation measures, such as the camouflaging requirements. Vegetation camouflaging could pose a fire and safety danger. Architectural camouflaging could, depending on the well location and requirements, degrade viewshed. Restricting flaring at night will not be feasible, given that flaring associated with maintenance and upset conditions are generally out of the control of the operator and occur any time of the day.	None	Same as #8.
23	North Dakota Petroleum Council - Kari Cutting; None; Written	NDPC has concerns with the metering requirement in the Standard Conditions of Approval for flaring requests, Appendix B. Requirements to meter flared gas do not recognize the technical limitations of meters to measure gas streams that vary substantially in pressure and volume. Current metering methodologies cannot reliably measure highly variable gas pressures and volumes tat are typical of flare stream during upset or emergency conditions, or when production into a gathering line is interrupted. Under the currently controlling BLM rule, OO#5, orifice meters are the default method for gas measurement. BLM regulations to not require that gas be measured exclusively by metering. OO#5 explicitly notes that other acceptable measurement methods acceptable to the AO.	Yes	Same as #15.

24	North Dakota Petroleum Council - Kari Cutting; None; Written	BLM has failed to provide any reasoning that addresses why the historically acceptable GOR calculation is inadequate. NTL-4A allows for GOR. NDPC believes a refusal by BLM to allow operators to GOR calculations would be arbitrary and capricious, because BLM has not provided any supporting evidence as to why a GOR calculation is inadequate to meet the purpose of NTL-4A.	Yes	Same as #15.
25	SM Energy - Pas Laborda; None, Written	Are the requirements to the Notice to Operator dated March 29, 2015 still in effect in light of the new EA?	None	Same as #1.
26	SM Energy - Pas Laborda; None, Written	Many of the numbers associated with number of wells, CAs, etc. are based on June 2015 statistics. These numbers should be updated to show actual impacts as close to the date the EA, FONSI, and ROD are signed.	None	Well numbers listed in Table 3.7.1 in Section 3.7 Fluid Minerals of the EA are an approximate number of wells used to describe the existing environment/development in the analysis area. Updating the existing well numbers would result in negligible changes to each well value, and would not result in changes to impact analysis or proposed mitigation measures identified in the EA.
27	SM Energy - Pas Laborda; None, Written	Will there be any additional guidance or examples provided on the sundry notice and how you want the Evaluation Report and Action Plan formatted (template)? Doing so will also help streamline the preparation, review, and approval of these sundry notices.	None	Same as #1.

28	SM Energy - Pas Laborda; None, Written	EA Page 72 of 81 -- Appendix B – Standard Conditions of Approval for Flaring RequestsWith all the confusion that is caused between Industry, BLM, and ONRR regarding the proper “codes” to use for reporting when gas is being flared and determined to be either unavoidably/avoidably lost and whether or not royalties would be due, it is recommended that the COAs specify the “code” and how these are to be reported under the 2014 for Royalty Purposes and the OGORs for Production Reporting.In regards to metering of flared gas where royalty is due, it should also be specified what type of meters would be allowed. Quite frankly, we look at what we produce and then sell, and the difference would be the volume being flared and any use of the gas for beneficial use are accounted.	Yes	Same as #15.

BLM

United States Department of the Interior
Bureau of Land Management

Environmental Assessment DOI-BLM-MT-C030-2016-0212-EA

Finding of No Significant Impact

Project Title: Sundry Notice Flaring Requests

Location: Multiple Counties, North Dakota

North Dakota Field Office
99 23rd Avenue W, Suite A
Dickinson, ND 58601

Finding of No Significant Impact
North Dakota Field Office

INTRODUCTION:

The Bureau of Land Management (BLM) has conducted an Environmental Analysis (EA) (DOI-BLM-MT-C030-2016-0212-EA) to analyze the potential effects from Sundry Notice requests to flare oil-well gas from Federal and Indian leases in western North Dakota. The EA was prepared based on available information from BLM and State inventory and database files.

Impact identification and analysis of the Alternative A -No Action and the Alternative B-Proposed Action -BLM-Preferred has been completed. The No Action Alternative would be to analyze approximately 1,770 pending SN requests to flare oil-well gas from Federal and Indian oil wells on an individual basis in accordance with NEPA. The No Action Alternative means the analysis would be conducted on a case-by-case basis with limited consideration of the larger environmental context and requires significant review time. For Alternative B – Proposed Action – BLM preferred , the BLM would analyze 1,770 pending SN requests, Appendix A in the EA, to flare oil-well gas from Federal and Indian oil wells , disclose the reasonably foreseeable impacts from flaring in the western portion of North Dakota, and identify potential mitigation measures for future flaring on new facilities.

It is the policy of the BLM as derived from NTL-4A, and the Federal Land Policy and Management Act of 1976, and NEPA to respond to flaring requests to vent or flare oil-well gas from Federal and Indian wells and approve under certain conditions.

PLAN CONFORMANCE AND CONSISTENCY:

The proposed action and alternatives have been reviewed and found to be in conformance with the following plans and associated Record of Decision(s): BLM North Dakota Field Office (NDFO) Resource Management Plan (RMP) (April 1988); and its associated Environmental Impact Statement (EIS), the governing land use plan for the NDFO.

FINDING OF NO SIGNIFICANT IMPACT:

Based on my review of the EA and all other available information, I have determined that Alternative B- BLM Preferred Alternative, including the implementation of potential mitigation measures for future flaring on new facilities, is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area (as defined by 40 CFR 1508.27). Therefore, an EIS is not required. Any future proposed surface disturbance on the lease would be subject to additional site-specific National Environmental Policy Act (NEPA) analysis and documentation.

This finding is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the context and intensity of the impacts described in the EA:

Context:
The BLM Preferred Alternative would occur within the western portion of the NDFO and would have local impacts on the resources similar to and within the scope of those described and considered in the North Dakota RMP/FEIS (April 1988). The project is a site-specific action directly involving 1,770 Federal and Indian Sundry Notice requests to flare oil-well gas, and mitigation measures for future flaring on new facilities within the geographic area; by themselves they do not have international, national, regional, or state-wide importance.

Intensity:
The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27 and incorporated into resources and issues considered (includes supplemental authorities Appendix 1 H-1790-1) and supplemental Instruction Memorandum, Acts, regulations and Executive Orders. The following have been considered in evaluating intensity for this proposal:

1. Impacts may be both beneficial and adverse: Beneficial, adverse, direct, indirect and cumulative environmental impacts have been disclosed in the EA. Mitigating measures to reduce or eliminate impacts to the various resources and land uses were incorporated in the design of the BLM Preferred Alternative. The analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects would be limited to Sundry Notice requests on Federal and Indian leases and adjacent lands in western North Dakota.

2. The degree to which the selected alternative will affect public health or safety: The selected alternative does not authorize any surface disturbing activities and is designed to minimize or eliminate impacts to other resources as well as to public health and safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas: Historic and cultural resources in the analysis area have been reviewed by BLM. These characteristics have been deemed to not be affected by the BLM Preferred Alternative with implementation of design features/mitigating measures reserved for future flaring on new facilities. The well within the viewshed of Theodore Roosevelt Greater Elkhorn Ranchlands was determined to not impact the setting or feel of the historic property.

For future flaring on new facilities, the BLM would apply design features/mitigation measures as described in the EA to minimize and/or eliminate impacts to the visual, atmospheric or audible elements of a historic or cultural property's setting or feel in accordance with Section 106. When necessary, the BLM would coordinate with the appropriate Surface Management Agency (SMA) for NEPA reviews for future flaring on new facilities within viewsheds located on lands administered by another federal agency, and recommend design features/mitigation measures analyzed in the EA in consultation with SHPO. There are no impacts to park lands, prime farmlands, wilderness, wetlands, wild and scenic rivers, or ecologically critical areas from the BLM Preferred Alternative.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial: No anticipated effects have been identified that are controversial. The BLM Preferred Alternative conforms with the current land use plan guidance which analyzed impacts from oil and gas production activities which included flaring of natural gas. As a factor for determining (within the meaning of 40 CFR 1508.27(b) (4)) whether or not to prepare a detailed EIS, "controversy is not equated with "the existence of opposition to a use." N*orthwest Environmental Defense Center v. Bonneville Power Administration*, 117 F.3d 1520, 1536 (9th Cir. 1997).

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks: The BLM Preferred Alternative of analyzing flaring oil-well gas is not unique or unusual. The State of North Dakota also responds to operator requests to flare oil-well gas associated with State or private wells. The EA describes and discloses impacts from flaring oil-well gas from Federal and Indian wells, as well as identifies design features/mitigation measures designed to reduce, avoid, or minimize impacts to resources from flaring from future new facilities. The environmental effects to the human environment are fully analyzed in the EA. There are no predicted effects on the human environment that are considered to be highly uncertain or involve unique or unknown risks.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration: The BLM Preferred Alternative neither establishes a precedent nor represents a decision in principle about future actions. The Preferred Alternative does not authorize any surface disturbing activities. The actions considered in the selected alternative were considered within the context of past, present, and reasonably foreseeable future actions.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts – which include connected actions regardless of land ownership: The BLM evaluated the possible actions in context of past, present, and reasonably foreseeable actions. The BLM Preferred Alternative by itself or in connection with other activities would not have significant impacts. Future flaring in western North Dakota was analyzed in the EA to determine that there are no significant cumulative impacts. A complete disclosure of the effects of the proposed action is contained in Chapter 4 of the EA.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources: The BLM Preferred Alternative will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historic resources. Consultation with the North Dakota SHPO has been completed in accordance with Section 106 of the NHPA and they have concurred with a "no adverse effect" on cultural resources. For future flaring on new facilities within viewsheds of cultural or historic properties that would diminish the integrity of a property's setting and feel, the BLM would

apply mitigation measures that would reduce, avoid, or minimize potential impacts to the visual, atmospheric or audible elements of a historic or cultural property's setting or feel in accordance with Section 106. This would result in a no adverse effect to these properties by the BLM Preferred Alternative. When necessary, the BLM would coordinate with the appropriate SMA for NEPA reviews on future flaring within viewsheds located on lands administered by another federal agency. BLM would recommend the design features/mitigation measures analyzed in the EA.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, or the degree to which the action may adversely affect: 1) a proposed to be listed endangered or threatened species or its habitat, or 2) a species on BLM's sensitive species list: No threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified for the proposed action.

10. Whether the action threatens a violation of a Federal, State, local, or tribal law, regulation or policy imposed for the protection of the environment, where on-Federal requirements are consistent with Federal requirements: The BLM Preferred Alternative does not violate any known Federal, State, local or tribal law or requirements imposed for the protection of the environment. On June 29, 2015, the NDFO invited 17 federally recognized Indian tribes to consult about the NDFO's oil and gas program and the flaring of natural gas. The NDFO sent letters with maps to 17 Tribal Historical Preservation Officers or the respective cultural contacts, inviting them to submit issues and concerns BLM should consider in the environmental analysis. The Fort Belknap Indian Community requested to be consulted with on future NDFO APDs. Furthermore, the project is consistent with applicable land management plans, policies and programs.

_____ _____

Loren Wickstrom Date
Field Manager

United States Department of the Interior

Bureau of Land Management

North Dakota Field Office
99 23rd Avenue W, Suite A
Dickinson, ND 58601

Decision Record
Environmental Assessment DOI-BLM-MT-C030-2016-0212-EA

Decision:
Based on the analysis documented in the EA (DOI-BLM-MT-C030-2016-0212-EA) and the Finding of No Significant Impact (FONSI), it is my decision to implement Alternative B (Proposed Action – BLM Preferred Alternative) as identified in the North Dakota Field Office (NDFO) Sundry Notice Flaring Requests Environmental Assessment (EA), DOI-BLM-MT-C030-2016-0212-EA, in which 1,770 Sundry Notices (SNs) were submitted for BLM processing.

The BLM analyzed 1,770 pending SN requests (Appendix A: Sundry Notices in the NDFO from January 1, 2012 to April 16, 2015) to flare oil-well gas from BLM administered Federal and Indian oil wells concurrently with reasonably foreseeable flaring requests in the area to disclose impacts to the natural and human environment in the western portion of North Dakota.

BLM's decision would be to require additional mitigation measures associated with cultural or historic resources to future APDs that have the potential to introduce visual, atmospheric or audible elements that would diminish the integrity of a property's setting and feel in accordance to Section 106, as disclosed in section 4.4.3 Cultural Resources.

The following is a list of potential mitigation measures that the BLM could apply, as appropriate, to future flaring requests on new facilities that have the potential to introduce visual, atmospheric or audible elements that would diminish the integrity of a property's setting or feel in accordance with Section 106:

- Construct a gathering pipeline which will ultimately be connected to a trunk pipeline;
- Liquefy the gas on location and store on location until it can be transported via truck to a pipeline injection location;
- Reinject the natural gas into a formation for possible future use; and
- Reinject the natural gas into the reservoir for secondary enhanced oil recovery;
- Beneficial use on lease;
- Camouflaging of flare using vegetation or architectural structures;
- Reducing flare stack height;

- Restriction of active flaring at night;
- Coordination with the appropriate surface management agency future flaring requests within the viewshed of a cultural or historic property.

In addition to the potential mitigation measures listed above, site specific mitigation measures, including design features proposed by the operator developed during review of the application, that would reduce, avoid, or minimize potential impacts to historic or cultural property's setting or feel could be applied, as appropriate, to future flaring request on new facilities that have the potential to introduce visual, atmospheric or audible elements that would diminish the integrity of a property's setting or feel in accordance with Section 106.

BLM would not require additional mitigation measures associated with cultural or historic resources to the pending and future SN requests to flare gas on existing facilities (see impacts analyzed in section 4.4.3 Cultural Resources). These requests are located on existing facilities and therefore do not have the potential to introduce new or additional visual, atmospheric or audible elements that would diminish the integrity of a property's setting and feel in accordance to Section 106.

The pending Morgan Draw Federal 1 well SN request to flare oil-well within the viewshed of a historical cultural property would not be subject to specific mitigation measures (see impacts analyzed in section 4.4.3 Cultural Resources).

Authorities:
The authority for this decision is contained in 43 CFR 3160.

Compliance and Monitoring:
Should future flaring requests be approved to flare oil-well gas, compliance inspections and monitoring would be conducted as part of the inspection and enforcement program.

Terms, Conditions, and Stipulations:
Standard terms and conditions, as well as potential mitigation measures identified in the EA, would apply and be attached, as necessary, through conditions of approval to future flaring requests on new facilities.

Plan Conformance and Consistency:
The proposed action and alternatives have been reviewed and found to be in conformance with the following BLM plan and associated Record of Decision: North Dakota RMP (April 1988) and its associated Environmental Impact Statement (EIS), the governing land use plan for the NDFO.

Alternatives Considered:
Alternative A – No Action:
The No Action Alternative would be to analyze approximately 1,770 pending SN requests to flare gas from Federal and Indian oil wells on an individual basis in accordance with NEPA. The No Action Alternative means the analysis would be conducted on a case-by-case basis with limited consideration of the larger environmental context and requires significant review time.

Impacts and mitigation measures would be limited to the small geographic area of the individual request. Surface management would remain the same and ongoing oil and gas production would continue on surrounding Federal, Indian, private, and State leases. Future flaring SN requests would also be analyzed on a case-by-case basis.

Alternative B – Proposed Action-BLM Preferred:
The Proposed Action would be for the BLM to analyze 1,770 pending SN requests (Appendix A) to flare gas from Federal and Indian oil wells, disclose the reasonably foreseeable impacts from flaring in the western North Dakota, and identify potential mitigation measures for future flaring from new facilities.

Public Comments:
Public scoping for this project was conducted by posting the proposed action on the NDFO website - NEPA notification log. Therefore, scoping was initiated August 30, 2013, the date the EA was assigned a number and posted to the NEPA notification log. No public scoping comments were submitted.

On June 29, 2015, the NDFO sent letters with maps to 17 federally recognized Indian tribes to consult about the NDFO's oil and gas program and the flaring of natural gas, and inviting them to submit issues and concerns BLM should consider in the environmental analysis. To date, only the Fort Belknap Indian Community has requested to be consulted with on future NDFO APDs. Refer to Chapter 5 of the summary of public participation.

As a result of the concerns raised during the State Director Review, this EA was posted for a 30-day public comment period on June 1, 2016, and a two week extension was granted until July 14, 2016. Refer to Appendix E in the EA for a summary of substantive comments received and BLM responses to those comments.

Rationale for the Decision:
The decision to approve Alternative B, the preferred alternative, is based on the following: 1) consistency with resource management and land use plan; 2) consistency with national policy; 3) consistency with agency statutory requirements; 4) analysis of the relevant resource issues; and 5) required design features/measures to avoid or minimize environmental impacts. Further, the decision would have no impacts to environmental justice.

1. The decision is in conformance with the North Dakota RMP (April 1988) and its associated Environmental Impact Statement (EIS), the governing land use plan for the NDFO.

2. It is the policy of the Bureau of Land Management (BLM) as derived from various laws, including the Mineral Leasing Act of 1920, as amended [30 U.S.C. 181 *et seq*.] and the Federal Land Policy and Management Act of 1976, to make mineral resources available for disposal and to encourage development of mineral resources to meet national, regional, and local needs.

3. The decision is consistent with all federal, state, and county authorizing actions

required for implementation of the Preferred Alternative.

4. Standard terms and conditions would apply. Site specific mitigation was identified by the NDFO to address site specific resource concerns or new information not identified in the planning process. Additional coordination would be completed between BLM and the appropriate federal agency as needed for future requests on BLM administered Federal and Indian wells located within the viewshed of cultural or historical properties that have the potential to introduce visual, atmospheric or audible elements that would diminish the integrity of a property's setting or feeling.

5. The decision would allow for a timely review of flaring request which would result in timely mitigation of potential impacts from new facilities.

Appeal Language:
Under BLM regulation this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of the decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, 5001 Southgate Drive, Billings, Montana 59101 within 20 business days of receipt of this decision.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

_____ _____

Loren Wickstrom Date
Field Manager

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:56 AM

Conversation Contents

Status of Interim Final Rule

Attachments:

/12. Status of Interim Final Rule/1.1 2017 VF Interim Final Rule_only change portions.docx
/12. Status of Interim Final Rule/1.2 2017 VF Interim Final Rule_track changes.docx

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Mon May 22 2017 15:30:44 GMT-0600 (MDT)
To:	"Spisak, Timothy" <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>
Subject:	Status of Interim Final Rule
Attachments:	2017 VF Interim Final Rule_only change portions.docx 2017 VF Interim Final Rule_track changes.docx

Hi Tim,

Chris looked over the reg text track changes and ok'd these in principle. Faith is going to put the changes in "amendatory" form, should take 1-2 days. Chris is pulling together the regulatory and legislative history discussion. I'm working on other parts of the preamble. I think we're making progress.

After today's call, it because apparent that Chris, Faith, Sheila, and myself, will be doing the bulk of the writing and justification, so I gave the PEs relief from this effort for now (just FYI for workload). Michael Riches is still involved. We'll tap them again as needed.

We might run into some challenges with the PRA. It seems straightforward to me, but Jean is cautious because it's not something she's seen before and wants to run things by the DOI PRA chief (who is on leave until early June, his deputy won't assist in the meantime - she plans to reach out to OMB).

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

"Spisak, Timothy" <tspisak@blm.gov>

From:	"Spisak, Timothy" <tspisak@blm.gov>
Sent:	Wed May 24 2017 09:38:22 GMT-0600 (MDT)

To: Mike Nedd <mnedd@blm.gov>, Lonny Bagley <lbagley@blm.gov>

Subject: Fwd: Status of Interim Final Rule

Mike, here is the schedule that James and the team has pulled together. If this gets processed as #1 priority as it gets to folks, we should be able to keep to it. (b) (5) .
Thanks

---------- Forwarded message ----------
From: **Tichenor, James** <jtichenor@blm.gov>
Date: Mon, May 22, 2017 at 6:29 PM
Subject: Re: Status of Interim Final Rule
To: Timothy Spisak <tspisak@blm.gov>

Here is what I'm/we're thinking. (b) (5)

On Mon, May 22, 2017 at 3:20 PM, Timothy Spisak <tspisak@blm.gov> wrote:

> do you have a schedule?
>
> Sent from my iPad
>
> On May 22, 2017, at 5:31 PM, Tichenor, James <jtichenor@blm.gov> wrote:
>
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>
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<2017 VF Interim Final Rule_only change portions.docx>

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--
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--
Timothy 'Tim' R. Spisak
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§ 3162.3-1 Drilling applications and plans.

* * * * *

(j) Beginning on (b) (5) 2019, w~~W~~hen submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well…

***

§ 3179.7 Gas capture requirement.

(a) Except as provided in § 3179.8, on a monthly basis, each operator must capture for sale or use on site a volume of gas sufficient to meet the "capture percentage" requirement specified in paragraph (b) of this section.

(b) Beginning (b) (5) , 2019, the operator's capture percentage must equal:

(1) For each month during the period from (b) (5) 2019, (b) (5) until (b) (5) (b) (5) : 85 percent;

(2) For each month during the period from (b) (5) 2021, until (b) (5) : 90 percent;

(3) For each month during the period from (b) (5) 2024, until (b) (5) : 95 percent; and

(4) For each month beginning (b) (5) 2027: 98 percent.

(c) The term "capture percentage" in this section means the "total volume of gas captured" over the "relevant area" divided by the "adjusted total volume of gas produced" over the "relevant area."

(1) The term "total volume of gas captured" in this section means: for each month, the volume of gas sold from all of the operator's development oil wells in the relevant area plus the volume of gas from such wells used on lease, unit, or communitized area in the relevant area.

(2) The term "adjusted total volume of gas produced" in this section means: the total volume of gas captured over the month plus the total volume of gas flared over the month from high pressure flares from all of the operator's development oil wells that are in production in the relevant area, minus:

(i) For each month from (b) (5) 2019, until (b) (5) : 5,400 Mcf times the total number of development oil wells "in production" in the relevant area;

(ii) For each month (b) (5) rom (b) (5) 2020, to (b) (5) : 3,600 Mcf times the total number of development oil wells in production in the relevant area;

(iii) For each month (b) (5) from (b) (5) 2021, to (b) (5) : 1,800 Mcf times the total number of development oil wells in production in the relevant area; and

(iv) For each month (b) (5) from (b) (5) 2022, to (b) (5) : 1,500 Mcf times the total number of development oil wells in production in the relevant area;

(v) For each month (b) (5) from (b) (5) 2023, to (b) (5) : 1,200 Mcf times the total number of development oil wells in production in the relevant area;

(vi) For each month (b) (5) from (b) (5) 2025, to (b) (5) : 900 Mcf times the total number of development oil wells in production in the relevant area; and

(vii) For each month after (b) (5) 2026 (b) (5) : 750 Mcf times the total number of development oil wells in production in the relevant area.

***

§ 3179.9 Measuring and reporting volumes of gas vented and flared.

***

(b) The operator may estimate such volumes, except:

(1) If the operator estimates that the volume of gas flared from a high pressure flare stack or manifold equals or exceeds an average of 50 Mcf per day for the life of the flare, or the previous 12 months, whichever is shorter, then, beginning (b) (5) , 2019, the operator must either:

***

§ 3179.10 Determinations regarding royalty-free flaring.

(a) Approvals to flare royalty free, which are in effect as of the effective date of this rule, will continue in effect until (b) (5) 2019.

(b) The provisions of this subpart do not affect any determination made by the BLM before or after January 17, 2017, with respect to the royalty-bearing status of flaring that occurred prior to January 17, 2017.

§ 3179.101 Well drilling.

***

(c) The operator must comply with this section beginning on January 17, 2019.

§ 3179.102 Well completion and related operations.

***

(e) The operator must comply with this section beginning on January 17, 2019.

§ 3179.201 Equipment requirements for pneumatic controllers.

***

(b) (b) (5) 2019, t~~T~~he operator must replace a pneumatic controller subject to this section with a controller (including but not limited to a continuous or intermittent pneumatic controller) having a bleed rate of 6 scf per hour or less within the timeframes set forth in paragraph (d) of this section, unless:

***

(d) The operator must replace the pneumatic controller(s) (b) (5) by (b) (5) 2019, as required under paragraph (b) of this section. If, however, the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of this section, then the operator may notify the BLM through a Sundry Notice and replace the pneumatic controller no later than 3 years from the effective date of this section.

§ 3179.202 Requirements for pneumatic diaphragm pumps.

***

(h) The operator must replace the pneumatic diaphragm pump(s) or route the exhaust gas to capture or to a flare or combustion device (b) (5) by (b) (5), 2019, except that if the operator will comply with paragraph (c) of this section by replacing the pneumatic diaphragm pump with a zero-emission pump and the well or facility that the pneumatic diaphragm pump serves has an estimated remaining productive life of 3 years or less from the effective date of this section, the operator must notify the BLM through a Sundry Notice and replace the pneumatic diaphragm pump no later than 3 years from the effective date of this section.
***

§ 3179.203 Storage vessels.
(a) A storage vessel is subject to this section if the vessel:
(1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and
(2) Is not subject to any of the requirements of 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to one of those subparts if it were a new, modified or reconstructed source.
(b) (b) (5) Beginning on (b) (5) 2019, and within 30 days after any new source of production is added to the storage vessel after (b) (5), 2019, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority that limit the VOC emissions to less than 6 tpy.
(c) If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy under paragraph (b) of this section (b) (5) 2019, or (b) (5) if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:
***

§ 3179.204 Downhole well maintenance and liquids unloading.
***
(i) The operator must comply with this section beginning on (b) (5) 2019.

§ 3179.301 Operator responsibility.
***
(f) The operator must make the first inspection of each site:
(1) (b) (5) By (b) (5) 2019, for all existing sites (b) (5)
(2) Within 60 days of beginning production for new sites that begin production after (b) (5) 2019 (b) (5) and
(3) Within 60 days of the date when an existing site that was out of service is brought back into service and re-pressurized after (b) (5), 2019.

43 CFR Chapter II

For the reasons set out in the preamble, the Bureau of Land Management amends 43 CFR parts 3100 , 3160 and 3170 as follows:

PART 3100 – ONSHORE OIL AND GAS LEASING

1. Amend the authority citation for part 3100 to read as follows:

AUTHORITY: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359 and 1751; 43 U.S.C. 1732(b), 1733, and 1740; and the Energy Policy Act of 2005 (Pub. L. 109-58).

2. Revise § 3103.3-1 to read as follows:

§ 3103.3-1 Royalty on production.

(b) (5) [redacted]

(a) Royalty on production will be payable only on the mineral interest owned by the United States. Royalty must be paid in amount or value of the production removed or sold as follows:

(1) For leases issued on or before January 17, 2017, the rate prescribed in the lease or in applicable regulations at the time of lease issuance;

(2) For leases issued January 17, 2017:

(i) 12½ percent on all noncompetitive leases;

(ii) A rate of not less than 12½ percent on all competitive leases, exchange and renewal leases, and leases issued in lieu of unpatented oil placer mining claims under §3108.2–4 of this title;

(3) 16 2/3 percent on noncompetitive leases reinstated under § 3108.2-3 of this title plus an additional 2 percentage-point increase added for each succeeding reinstatement;

(4) The rate used for royalty determination that appears in a lease that is reinstated or that is in force for competitive leases at the time of issuance of the lease that is reinstated, plus 4 percentage points, plus an additional 2 percentage points for each succeeding reinstatement.

(b) Leases that qualify under specific provisions of the Act of August 8, 1946 (30 U.S.C. 226c) may apply for a limitation of a 12½ percent royalty rate.

(c) The average production per well per day for oil and gas will be determined pursuant to 43 CFR 3162.7-4.

(d) Payment of a royalty on the helium component of gas will not convey the right to extract the helium from the gas stream. Applications for the right to extract helium from the gas stream will be made under part 16 of this title.

PART 3160 – ONSHORE OIL AND GAS OPERATIONS

3. The authority citation for part 3160 continues to read as follows:

AUTHORITY: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

§ 3160.0-5 [Amended]

4. Amend § 3160.0-5 by removing the definition of "Avoidably lost."

5. Amend § 3162.3-1 by adding paragraph (j) to read as follows:

§ 3162.3-1 Drilling applications and plans.

(b) (5) [redacted]

* * * * *

(j) Beginning on (b) (5) 2019, ~~w~~When submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well. The waste minimization plan must accompany, but would not be part of, the Application for Permit to Drill. The waste minimization plan must set forth a strategy for how the operator will comply with the requirements of 43 CFR subpart 3179 regarding control of waste from venting and flaring, and must explain how the operator plans to capture associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture of the associated gas would be required. Failure to submit a complete and adequate waste

minimization plan is grounds for denying or disapproving an Application for Permit to Drill. The waste minimization plan must include the following information:
(1) The anticipated completion date of the proposed well(s);
(2) A description of anticipated production, including:
(i) The anticipated date of first production;
(ii) The expected oil and gas production rates and duration from the proposed well. If the proposed well is on a multi-well pad, the plan should include the total expected production for all wells being completed;
(iii) The expected production decline curve of both oil and gas from the proposed well; and
(iv) The expected Btu value for gas production from the proposed well.
(3) Certification that the operator has provided one or more midstream processing companies with information about the operator's production plans, including the anticipated completion dates and gas production rates of the proposed well or wells;
(4) Identification of a gas pipeline to which the operator plans to connect, with sufficient capacity to accommodate the anticipated production of the proposed well(s), and information on the pipeline, including, to the extent that the operator can obtain it, the following information:
(i) Maximum current daily capacity of the pipeline;
(ii) Current throughput of the pipeline;
(iii) Anticipated daily capacity of the pipeline at the anticipated date of first gas sales from the proposed well;
(iv) Anticipated throughput of the pipeline at the anticipated date of first gas sales from the proposed well; and
(v) Any plans known to the operator for expansion of pipeline capacity for the area that includes the proposed well; and
(5) If an operator cannot identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well(s), the waste minimization plan must also include:
(i) A gas pipeline system location map of sufficient detail, size, and scale as to show the field in which the proposed well will be located, and all existing gas trunklines within 20 miles of the well. The map should also contain:
(A) The name and location of the gas processing plant(s) closest to the proposed well(s), and of the intended destination processing plant, if different;
(B) The location and name of the operator of each gas trunkline within 20 miles of the proposed well;
(C) The proposed route and tie-in point that connects or could connect the subject well to an existing gas trunkline;
(ii) The total volume of produced gas, and percentage of total produced gas, that the operator is currently flaring or venting from wells in the same field and any wells within a 20-mile radius of that field; and
(iii) A detailed evaluation, including estimates of costs and returns, of opportunities for on-site capture approaches, such as compression or liquefaction of natural gas, removal of natural gas liquids, or generation of electricity from gas.

PART 3170 – ONSHORE OIL AND GAS PRODUCTION

6. The authority citation for part 3170continues to read as follows:
AUTHORITY: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

7. Add subparts 3178 and 3179 to part 3170, to read as follows:

Subpart 3178 – Royalty-Free Use of Lease Production

Sec.

3178.1 Purpose.
3178.2 Scope.
3178.3 Production on which a royalty is not due.
3178.4 Uses of oil or gas on lease, unit, or communitized area that do not require prior written BLM approval for royalty-free treatment of volumes used.
3178.5 Uses of oil or gas on a lease, unit, or communitized area that require prior written BLM approval for royalty-free treatment of volumes used.
3178.6 Uses of oil or gas moved off the lease, unit, or communitized area that do not require prior written approval for royalty-free treatment of volumes used.
3178.7 Uses of oil or gas moved off the lease, unit, or communitized area that require prior written approval for royalty-free treatment of volumes used.
3178.8 Measurement or estimation of volumes of oil or gas that are used royalty-free.
3178.9 Requesting approval of royalty-free treatment when approval is required.
3178.10 Facility and equipment ownership.

Subpart 3179 – Waste Prevention and Resource Conservation

Sec.

3179.1 Purpose.
3179.2 Scope.
3179.3 Definitions and acronyms.
3179.4 Determining when the loss of oil or gas is avoidable or unavoidable.
3179.5 When lost production is subject to royalty.
3179.6 Venting prohibition.
3179.7 Gas capture requirement.
3179.8 Alternative limits on venting and flaring.
3179.9 Measuring and reporting volumes of gas vented and flared from wells.
3179.10 Determinations regarding royalty-free venting or flaring.
3179.11 Other waste-prevention measures.
3179.12 Coordination with State regulatory authority.

Flaring and Venting Gas During Drilling and Production Operations

3179.101 Well drilling.
3179.102 Well completion and related operations.
3179.103 Initial production testing.
3179.104 Subsequent well tests.
3179.105 Emergencies.

Gas Flared or Vented from Equipment During Well Maintenance Operations

3179.201 Equipment requirements for pneumatic controllers.

3179.202 Requirements for pneumatic chemical injection pumps or pneumatic diaphragm pumps.
3179.203 Storage vessels.
3179.204 Downhole well maintenance and liquids unloading.

Leak Detection and Repair (LDAR)

3179.301 Operator responsibility.
3179.302 Approved instruments and methods.
3179.303 Leak detection and inspection requirements for natural gas wellhead equipment, facilities, and compressors.
3179.304 Repairing leaks.
3179.305 Leak detection inspection recordkeeping.

State or Tribal Variances

3179.401 State or tribal requests for variances from the requirements of this subpart.

§ 3178.1 Purpose.
The purpose of this subpart is to address the circumstances under which oil or gas produced from Federal and Indian leases may be used royalty-free in operations on the lease, unit, or communitized area. This subpart supersedes those portions of Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil or Gas Lost (NTL-4A), , pertaining to oil or gas used for beneficial purposes.
§ 3178.2 Scope.
(a) This subpart applies to:
(1) All onshore Federal and Indian (other than Osage Tribe) oil and gas leases, units, and communitized areas, except as otherwise provided in this subpart;
(2) Indian Mineral Development Act (IMDA) oil and gas agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement;
(3) Leases and other business agreements and contracts for the development of tribal energy resources under a Tribal Energy Resource Agreement entered into with the Secretary, unless specifically excluded in the lease, other business agreement, or Tribal Energy Resource Agreement;
(4) Committed State or private tracts in a federally approved unit or communitization agreement defined by or established under 43 CFR subpart 3105 or 43 CFR part 3180; and
(5) All onshore wells, and production equipment located on a Federal or Indian lease or a federally approved unit or communitized area, and compressors located on a Federal or Indian lease or a federally approved unit or communitized area and which compress production from the same Federal or Indian lease or federally approved unit or communitized area.
(b) For purposes of this subpart, the term “lease” also includes IMDA agreements.
§ 3178.3 Production on which royalty is not due.
(a) To the extent specified in §§ 3178.4 and 3178.5, royalty is not due on:

(1) Oil or gas that is produced from a lease or communitized area and used for operations and production purposes (including placing oil or gas in marketable condition) on the same lease or communitized area without being removed from the lease or communitized area; or
(2) Oil or gas that is produced from a unit PA and used for operations and production purposes (including placing oil or gas in marketable condition) on the unit, for the same unit PA, without being removed from the unit.
(b) For the uses described in § 3178.5, the operator must obtain prior written BLM approval for the volumes used for operational and production purposes to be royalty free.

§ 3178.4 Uses of oil or gas on a lease, unit, or communitized area that do not require prior written BLM approval for royalty-free treatment of volumes used.

(a) Oil or gas produced from a lease, unit, or communitized area may be used royalty-free for operations and production purposes on the lease, unit, or communitized area without prior written BLM approval in the following circumstances:
(1) Use of fuel to generate power or operate combined heat and power;
(2) Use of fuel to power equipment, including artificial lift equipment, equipment used for enhanced recovery, drilling rigs, and completion and workover equipment;
(3) Use of gas to actuate pneumatic controllers or operate pneumatic pumps at production facilities;
(4) Use of fuel to heat, separate, or dehydrate production;
(5) Use of gas as a pilot fuel or as assist gas for a flare, combustor, thermal oxidizer, or other control device;
(6) Use of fuel to compress or treat gas to place it in marketable condition;
(7) Use of oil to clean the well and improve production, e.g., hot oil treatments. The operator must document the removal of the oil from the tank or pipeline under Onshore Oil and Gas Order No. 3 (Site Security), or any successor regulation;
(8) Use of oil as a circulating medium in drilling operations, if the use is part of an approved Drilling Plan under Onshore Oil and Gas Order No. 1;
(9) Injection of gas for the purpose of conserving gas or increasing the recovery of oil or gas, if the BLM has approved the injection under applicable regulations in parts 3100, 3160, or 3180 of this title; and
(10) Injection of gas that is cycled in a contained gas-lift system.
(b) The volume to be treated as royalty free must not exceed the amount of fuel reasonably necessary to perform the operational function, using equipment of appropriate capacity.

§ 3178.5 Uses of oil or gas on a lease, unit, or communitized area that require prior written BLM approval for royalty-free treatment of volumes used.

(a) Oil or gas produced from a lease, unit, or communitized area may also be used royalty-free for the following operations and production purposes on the lease, unit, or communitized area, but prior written BLM approval is required to ensure that production accountability is maintained:
(1) Use of oil or gas that the operator removes from the pipeline at a location downstream of the Facility Measurement Point (FMP);
(2) Use of gas that has been removed from the lease, unit PA, or communitized area for treatment or processing because of particular physical characteristics of the gas that require the gas to be treated or processed prior to use, where the gas is returned to, and used on, the lease, unit PA, or communitized area from which it was produced; and

(3) Any other types of use of produced oil or gas for operations and production purposes, which are not identified in § 3178.4.
(b)(1) The operator must obtain BLM approval to conduct activities under paragraph (a) of this section by submitting a Form 3160-5, Sundry Notices and Reports on Wells (Sundry Notice) containing the information required under § 3178.9. If the BLM disapproves a request for royalty-free treatment for volumes used under this section, the operator must pay royalties on such volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed.
(2) With respect to uses under paragraph (a)(1) of this section, the operator must measure the volume of oil or gas used in accordance with Onshore Oil and Gas Orders No. 4 (oil) and 5 (gas) as applicable, or other successor regulations.
(3) With respect to removals under paragraph (a)(2) of this section, the operator must measure any gas returned to the lease, unit, or communitized area under such an approval in accordance with Onshore Oil and Gas Order No. 5 or other successor regulations.

§ 3178.6 Uses of oil or gas moved off the lease, unit, or communitized area that do not require prior written approval for royalty-free treatment of volumes used.

Oil or gas used after being moved off the lease, unit, or communitized area may be treated as royalty free without prior written BLM approval only if the use meets the criteria under § 3178.4 and when:
(a) The oil or gas is transported from one area of the lease, unit, or communitized area to another area of the same lease, unit, or communitized area where it is used, and no oil or gas is added to or removed from the pipeline while crossing lands that are not part of the lease, unit, or communitized area; or
(b) A well is directionally drilled, the wellhead is not located on the producing lease, unit, or communitized area, and oil or gas is used on the same well pad for operations and production purposes for that well.

§ 3178.7 Uses of oil or gas moved off the lease, unit, or communitized area that require prior written approval for royalty-free treatment of volumes used.

(a) Except as provided in § 3178.6(b) and paragraph (b) of this section, royalty is owed on all oil or gas used in operations conducted off the lease, unit, or communitized area.
(b) The BLM may grant prior written approval to treat oil or gas used in operations conducted off the lease, unit, or communitized area as royalty free (referred to as off-lease royalty-free use) if the use is among those listed in § 3178.4(a) and § 3178.5(a) and if:
(1) The equipment or facility in which the operation is conducted is located off the lease, unit, or communitized area for engineering, economic, resource protection, or physical accessibility reasons; and
(2) The operations are conducted upstream of the FMP.
(c) The operator must obtain BLM approval under paragraph (b) of this section by submitting a Sundry Notice containing the information required under § 3178.9. If the BLM disapproves a request for royalty-free treatment for volumes used under this section, the operator must pay royalties on such volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed.
(d) Approval of measurement or commingling off the lease, unit, or communitized area under other regulations does not constitute approval of off-lease royalty-free use. The operator or

lessee must expressly request, and submit its justification for, approval of off-lease royalty-free use.
(e) If equipment or a facility located on a particular lease, unit, or communitized area treats oil or gas produced from properties that are not unitized or communitized with the property on which the equipment or facility is located, in addition to treating oil or gas produced from the lease, unit, or communitized area on which the equipment or facility is located, the operator may report as royalty free only that portion of the oil or gas used as fuel that is properly allocable to the share of production contributed by the lease, unit, or communitized area on which the equipment is located, unless otherwise authorized by the BLM under this section.

§ 3178.8 Measurement or estimation of volumes of oil or gas that are used royalty-free.

(a) The operator must measure or estimate the volumes of royalty-free gas used in operations upstream of the FMP.
(b) The operator must measure the volume of gas that is removed from the product stream downstream of the FMP and used royalty-free pursuant to sections 3178.4 through 3178.7.
(c) The operator must measure the volume of oil that is used royalty-free pursuant to sections 3178.4 through 3178.7. The operator must also document removal of such oil from the tank or pipeline.
(d) If the operator removes oil or gas downstream of the FMP and that oil or gas is used royalty-free pursuant to sections 3178.4 through 3178.7, the operator must apply for an FMP under section 3173.12 to measure the oil or gas that is removed for use.
(e) When estimating gas volumes, the operator must use the best available information to make a reasonable estimate.
(f) Each of the volumes required to be measured or estimated, as applicable, under this subpart, must be reported by the operator following applicable ONRR reporting requirements.

§ 3178.9 Requesting approval of royalty-free treatment when approval is required.

To request written approval of royalty-free use when required under § 3178.5 or § 3178.7, the operator must submit a Sundry Notice that includes the following information:
(a) A complete description of the operation to be conducted, including the location of all facilities and equipment involved in the operation and the location of the FMP;
(b) The volume of oil or gas that the operator expects will be used in the operation, and the method of measuring or estimating that volume;
(c) If the volume of gas expected to be used will be estimated, the basis for the estimate (e.g., equipment manufacturer's published consumption or usage rates); and
(d) The proposed disposition of the oil or gas used (e.g., whether gas used would be consumed as fuel, vented through use of a gas-activated pneumatic controller, returned to the reservoir, or used in some other way).

§ 3178.10 Facility and equipment ownership.

The operator is not required to own or lease the equipment or facility that uses oil or gas royalty free. The operator is responsible for obtaining all authorizations, measuring production, reporting production, and all other applicable requirements.

Subpart 3179 – Waste Prevention and Resource Conservation

§ 3179.1 Purpose.

The purpose of this subpart is to implement and carry out the purposes of statutes relating to prevention of waste from Federal and Indian (other than Osage Tribe) leases, conservation of surface resources, and management of the public lands for multiple use and sustained yield. This

subpart supersedes those portions of Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A), , pertaining to, among other things, flaring and venting of produced gas, unavoidably and avoidably lost gas, and waste prevention.

§ 3179.2 Scope.

(a) This subpart applies to:

(1) All onshore Federal and Indian (other than Osage Tribe) oil and gas leases, units, and communitized areas, except as otherwise provided in this subpart;

(2) IMDA oil and gas agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement;

(3) Leases and other business agreements and contracts for the development of tribal energy resources under a Tribal Energy Resource Agreement entered into with the Secretary, unless specifically excluded in the lease, other business agreement, or Tribal Energy Resource Agreement;

(4) Committed State or private tracts in a federally approved unit or communitization agreement defined by or established under 43 CFR subpart 3105 or 43 CFR part 3180;

(5) All onshore wells, tanks, compressors, and other equipment located on a Federal or Indian lease or a federally approved unit or communitized area; and

(b) For purposes of this subpart, the term "lease" also includes IMDA agreements.

§ 3179.3 Definitions and acronyms.

As used in this subpart, the term:

Accessible component means a component that can be reached, if necessary, by safe and proper use of portable ladders or by built-in ladders and walkways. Accessible components also include components that can be reached by the safe use of an extension on a monitoring probe.

Automatic ignition system means an automatic ignitor and, where needed to ensure continuous combustion, a continuous pilot flame.

Capture means the physical containment of natural gas for transportation to market or productive use of natural gas, and includes reinjection and royalty-free on-site uses pursuant to subpart 3178.

Capture infrastructure means any pipelines, facilities, or other equipment (including temporary or mobile equipment) used to capture, transport, or process gas. Capture infrastructure includes, but is not limited to, equipment that compresses or liquefies natural gas, removes natural gas liquids, or generates electricity from gas.

Compressor station means any permanent combination of one or more compressors that move natural gas at increased pressure through gathering or transmission pipelines, or into or out of storage. This includes, but is not limited to, gathering and boosting stations and transmission compressor stations. The combination of one or more compressors located at a well site, or located at an onshore natural gas processing plant, is not a compressor station.

Continuous bleed means a continuous flow of pneumatic supply natural gas to a pneumatic controller.

Development oil well or development gas well means a well drilled to produce oil or gas, respectively, from an established field in which commercial quantities of hydrocarbons have been discovered and are being produced. For purposes of this subpart, the BLM will determine when a well is a development oil well or development gas well in the event of a disagreement between the BLM and the operator.

Gas-to-oil ratio (GOR) means the ratio of gas to oil in the production stream expressed in standard cubic feet of gas per barrel of oil.

Gas well means a well for which the energy equivalent of the gas produced, including its entrained liquefiable hydrocarbons, exceeds the energy equivalent of the oil produced. Unless more specific British thermal unit (Btu) values are available, a well with a gas-to-oil ratio greater than 6,000 standard cubic feet (scf) of gas per barrel of oil is a gas well. Except where gas has been re-injected into the reservoir, a mature oil well would not be reclassified as a gas well even after normal production decline has caused the GOR to increase beyond 6,000 scf of gas per barrel of oil.

High pressure flare means an open-air flare stack or flare pit designed for the combustion of natural gas leaving a pressurized production vessel (such as a separator or heater-treater) that is not a storage vessel.

Leak means a release of natural gas from a component that is not associated with normal operation of the component, when such release is:

(1) A visible hydrocarbon emission detected by use of an optical gas imaging instrument;

(2) At least 500 ppm of hydrocarbon detected using a portable analyzer or other instrument that can measure the quantity of the release; or

(3) Visible bubbles detected using soap solution.

Releases due to normal operation of equipment intended to vent as part of normal operations, such as gas-driven pneumatic controllers and safety release devices, are not considered leaks unless the releases exceed the quantities and frequencies expected during normal operations. Releases due to operator errors or equipment malfunctions or from control equipment at levels that exceed applicable regulatory requirements, such as releases from a thief hatch left open, a leaking vapor recovery unit, or an improperly sized combustor, are considered leaks.

Leak component means any component that has the potential to leak gas and can be monitored in the manner described in sections 3179.301 through 3179.305 of this subpart, including, but not limited to, valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings on a storage vessel, compressors, instruments, and meters.

Liquid hydrocarbon means chemical compounds of hydrogen and carbon atoms that exist as a liquid under the temperature and pressure at which they are measured. The term is used to refer to oil, condensate, liquefied petroleum gas (LPG), liquefied natural gas (LNG), and natural gas liquids (NGL).

Liquids unloading means the removal of an accumulation of liquid hydrocarbons or water from the wellbore of a completed gas well.

Lost oil or lost gas means produced oil or gas that escapes containment, either intentionally or unintentionally, or is flared before being removed from the lease, unit, or communitized area, and cannot be recovered.

Pneumatic controller means an automated instrument used for maintaining a process condition such as liquid level, pressure, delta-pressure, or temperature.

Storage vessel means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of non-earthen materials (such as wood, concrete, steel, fiberglass, or plastic), which provide structural support. A well completion vessel that receives recovered liquids from a well after startup of production following flowback, for a period that exceeds 60 days, is considered a storage vessel under this subpart unless the storage of the recovered liquids in the vessel is

governed by § 3162.3-3 of this title. For purposes of this subpart, the following are not considered storage vessels:
(1) Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. This exclusion does not apply to well completion vessels or to storage vessels that are located at a site for at least 180 consecutive days.
(2) Process vessels such as surge control vessels, bottoms receivers, or knockout vessels.
(3) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.
(4) Tanks holding hydraulic fracturing fluid prior to implementation of an approved permanent disposal plan under Onshore Oil and Gas Order No.7.

Volatile organic compounds (VOC) has the same meaning as defined in 40 CFR 51.100(s).

§ 3179.4 Determining when the loss of oil or gas is avoidable or unavoidable.

For purposes of this subpart:

Unavoidably lost oil or gas means lost oil or gas provided that the operator has not been negligent; the operator has complied fully with applicable laws, lease terms, regulations, provisions of a previously approved operating plan, or other written orders of the BLM; and the oil or gas is:
(1) Produced oil or gas that is lost from the following operations or sources, and that cannot be recovered in the normal course of operations, where the operator has taken prudent and reasonable steps to avoid waste:
(i) Well drilling;
(ii) Well completion and related operations;
(iii) Initial production tests, subject to the limitations in § 3179.103;
(iv) Subsequent well tests, subject to the limitations in § 3179.104;
(v) Exploratory coalbed methane well dewatering;
(vi) Emergencies, subject to the limitations in § 3179.105;
(vii) Normal operating losses from a natural gas-activated pneumatic controller or pump that is in compliance with § 3179.201 and § 3179.202;
(viii) Normal operating losses from a storage vessel or other low pressure production vessel that is in compliance with § 3179.203 and § 3174.5(b);
(ix) Well venting in the course of downhole well maintenance and/or liquids unloading performed in compliance with § 3179.204;
(x) Leaks, when the operator has complied with the leak detection and repair requirements in §§ 3179.301-305;
(xi) Facility and pipeline maintenance, such as when an operator must blow-down and depressurize equipment to perform maintenance or repairs; or
(xii) Flaring of gas from which at least 50 percent of natural gas liquids have been removed and captured for market, if the operator has notified the BLM through a Sundry Notice that the operator is conducting such capture; or
(2) Produced gas that is flared or vented from a well that is not connected to a gas pipeline, provided the BLM has not determined loss of gas through such venting or flaring is otherwise avoidable.

Avoidably lostoil or gas means: lost oil or gas that is not “unavoidably lost,” as defined in paragraph (a) of this section; waste oil that became waste oil through operator negligence; and, any “excess flared gas,” as defined in § 3179.7.

§ 3179.5 When lost production is subject to royalty.
(a) Royalty is due on all avoidably lost oil or gas.
(b) Royalty is not due on any unavoidably lost oil or gas.

§ 3179.6 Venting prohibition.
(a) Gas well gas may not be flared or vented, except where it is unavoidably lost pursuant to §3179.4(a).
(b) The operator must flare rather than vent any gas that is not captured, except:
(1) When flaring the gas is technically infeasible, such as when the gas is not readily combustible or the volumes are too small to flare;
(2) Under emergency conditions, as defined in § 3179.105, when the loss of gas is uncontrollable or venting is necessary for safety;
(3) When the gas is vented through normal operation of a natural gas-activated pneumatic controller or pump;
(4) When the gas is vented from a storage vessel, provided that § 3179.203 does not require the combustion or flaring of the gas;
(5) When the gas is vented during downhole well maintenance or liquids unloading activities performed in compliance with § 3179.204;
(6) When the gas is vented through a leak, provided that the operator is in full compliance with §§ 3179.301 through 3179.305;
(7) When the gas venting is necessary to allow non-routine facility and pipeline maintenance to be performed, such as when an operator must, upon occasion, blow-down and depressurize equipment to perform maintenance or repairs; or
(8) When a release of gas is unavoidable under § 3179.4 and flaring is prohibited by Federal, State, local or Tribal law, regulation, or enforceable permit term.
(c) For purposes of this subpart, all flares or combustion devices must be equipped with an automatic ignition system.

(b) (5) [redacted]

§ 3179.7 Gas capture requirement.
(a) Except as provided in § 3179.8, on a monthly basis, each operator must capture for sale or use on site a volume of gas sufficient to meet the "capture percentage" requirement specified in paragraph (b) of this section.
(b) Beginning (b) (5) [redacted], 2019, the operator's capture percentage must equal:
(1) For each month during the period from (b) (5) 2019 (b) (5) [redacted] until (b) (5) [redacted]: 85 percent;
(2) For each month during the period from (b) (5) [redacted] 2021, until (b) (5) [redacted]: 90 percent;
(3) For each month during the period from (b) (5) [redacted] 2024, until (b) (5) [redacted] 2027: 95 percent; and
(4) For each month beginning (b) (5) [redacted], 2027: 98 percent.
(c) The term "capture percentage" in this section means the "total volume of gas captured" over the "relevant area" divided by the "adjusted total volume of gas produced" over the "relevant area."
(1) The term "total volume of gas captured" in this section means: for each month, the volume of gas sold from all of the operator's development oil wells in the relevant area plus the volume of gas from such wells used on lease, unit, or communitized area in the relevant area.
(2) The term "adjusted total volume of gas produced" in this section means: the total volume of gas captured over the month plus the total volume of gas flared over the month from high

(b) (5) [redacted]

pressure flares from all of the operator's development oil wells that are in production in the relevant area, minus:
(i) For each month from (b) (5) , 2019, until (b) (5) : 5,400 Mcf times the total number of development oil wells "in production" in the relevant area;
(ii) For each month (b) (5) from (b) (5) 2020, to (b) (5) : 3,600 Mcf times the total number of development oil wells in production in the relevant area;
(iii) For each month (b) (5) from (b) (5) 2021, to (b) (5) : 1,800 Mcf times the total number of development oil wells in production in the relevant area; and
(iv) For each month (b) (5) from (b) (5), 2022, to (b) (5) 1,500 Mcf times the total number of development oil wells in production in the relevant area;
(v) For each month (b) (5) from (b) (5) 2023, to (b) (5) : 1,200 Mcf times the total number of development oil wells in production in the relevant area;
(vi) For each month (b) (5) from (b) (5) 2025, to (b) (5) : 900 Mcf times the total number of development oil wells in production in the relevant area; and
(vii) For each month after (b) (5) 2026 (b) (5) : 750 Mcf times the total number of development oil wells in production in the relevant area.
(3) The term "relevant area" in this section means:
(i) Each of the operator's leases, units, or communitized areas; or
(ii) All of the operator's development oil wells on leases, units, and communitized areas within a county or within a State, if the operator notifies the BLM by Sundry Notice by January 1, of the relevant year that the operator has chosen to comply on a county- or State-wide basis.
(4) An oil well is considered "in production" only after the well has begun producing oil, and only during a month in which it produces gas (that is sold or flared) for 10 or more days.
(d) In any month in which the operator fails to meet the required capture percentage, the "excess flared gas" is royalty-bearing under § 3179.4. The term "excess flared gas" means:

Excess flared gas = (required capture percentage * adjusted total volume of gas produced over the relevant area) - total volume of gas captured.

(e) For purposes of calculating royalties on an operator's excess flared gas in a given month, the operator must prorate the excess flared gas across the relevant area to each lease, unit or communitized area that reported high-pressure flaring during the month.

§ 3179.8 Alternative capture requirement.
(a) With respect to leases issued before the effective date of this regulation, for operators choosing to comply with the capture requirement in § 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis, the BLM may approve a capture percentage lower than the applicable capture percentage specified under § 3179.7, if the operator demonstrates, and the BLM agrees, that the applicable capture percentage under § 3179.7 would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.
(b) To support a demonstration under paragraph (a) of this section, the operator must submit a Sundry Notice that includes the following information:
(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;
(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available and the volumes being vented and flared from each well;

(3) Map(s) showing:
(i) The entire lease, unit, or communitized area and the surrounding lands to a distance and on a scale that shows the field in which the well or wells are or will be located (if applicable), and all pipelines that could transport the gas from the well or wells;
(ii) All of the operator's producing oil and gas wells, which are producing from Federal or Indian leases (both on Federal or Indian leases and on other properties) within the map area;
(iii) Identification of all of the operator's wells within the lease, unit, or communitized area from which gas is flared or vented, and the location and distance of the nearest gas pipeline(s) to each such well, with an identification of those pipelines that are or could be available for connection and use; and
(iv) Identification of all of the operator's wells within the lease, unit, or communitized area from which gas is captured;
(4) Data that show pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure, to the extent that the operator is able to obtain this information, as well as cost projections for alternative methods of transportation that do not require pipelines;
(5) Projected costs of and the combined stream of revenues from both gas and oil production, including:
(i) The operator's projections of gas prices, gas production volumes, gas quality (i.e., heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and
(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.
(c) In establishing an alternative capture requirement under this section, the BLM will set the capture percentage at the highest level that the BLM determines, considering the information identified in paragraph (b) of this section, will not cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

§ 3179.9 Measuring and reporting volumes of gas vented and flared.

(a) The operator must estimate or measure all volumes of gas vented or flared from wells, facilities and equipment on a lease, unit PA, or communitized area and report those volumes under applicable ONRR reporting requirements.
(b) The operator may estimate such volumes, except:
(1) If the operator estimates that the volume of gas flared from a high pressure flare stack or manifold equals or exceeds an average of 50 Mcf per day for the life of the flare, or the previous 12 months, whichever is shorter, then, beginning (b) (5) [redacted] 2019, the operator must either:
(i) Measure the volume of the flared gas; or
(ii) Calculate the volume of the flared gas based on the results of a regularly performed GOR test and measured values for the volumes of oil production and gas sales, so as to allow BLM to independently verify the volume, rate, and heating value of the flared gas; or
(2) If the BLM determines and informs the operator that the additional accuracy offered by measurement is necessary for effective implementation of this Subpart, then the operator must measure the volume of the flared gas.
(c) If measurement or calculation is required under paragraph (b) of this section for a flare that is combusting gas that is combined across multiple leases, unit PAs, or communitized areas, the

operator may measure or calculate the gas at a single point at the flare, but must use an allocation method approved by the BLM to allocate the quantities of flared gas to each lease, unit PA, or communitized area.

§ 3179.10 Determinations regarding royalty-free flaring.

(a) Approvals to flare royalty free, which are in effect as of the effective date of this rule, will continue in effect until (b) (5) , 2019.

(b) The provisions of this subpart do not affect any determination made by the BLM before or after January 17, 2017, with respect to the royalty-bearing status of flaring that occurred prior to January 17, 2017.

(b) (5) [redacted]

§ 3179.11 Other waste prevention measures.

(a) If production from an oil well newly connected to a gas pipeline results or is expected to result in one or more producing wells already connected to the pipeline being forced off the pipeline, the BLM may exercise its authority under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements, to limit the production level from the new well until the pressure of gas production from the new well stabilizes at levels that allow transportation of gas from all wells connected to the pipeline.

(b) If gas capture capacity is not yet available on a given lease, the BLM may exercise its authority under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements, to delay action on an APD for that lease, or approve the APD with conditions for gas capture or limitations on production. If the lease for which an APD is submitted is not yet producing, the BLM may direct or grant a lease suspension under 43 CFR 3103.4-4.

[redacted]

§ 3179.12 Coordination with State regulatory authority.

To the extent that any BLM action to enforce a prohibition, limitation, or order under this subpart may adversely affect production of oil or gas that comes from non-Federal and non-Indian mineral interests, the BLM will coordinate, on a case-by-case basis, with the State regulatory authority having jurisdiction over the oil and gas production from the non-Federal and non-Indian interests.

FLARING AND VENTING GAS DURING DRILLING AND PRODUCTION OPERATIONS.

§ 3179.101 Well drilling

(b) (5) [redacted]

(a) Except as provided in § 3179.6 of this subpart, and unless technically infeasible, gas that reaches the surface as a normal part of drilling operations must be:

(1) Captured and sold;

(2) Directed to a flare pit or flare stack to combust any flammable gasses;

(3) Used in operations on the lease, unit, or communitized area; or

(4) Injected.

(b) If gas is lost as a result of loss of well control, the BLM will make a determination of whether the loss of well control is due to operator negligence. Such gas is avoidably lost if the BLM determines that the loss of well control is due to operator negligence. The BLM will notify the operator in writing when it makes a determination that gas was lost due to operator negligence.

(c) The operator must comply with this section beginning on January 17, 2019.

§ 3179.102 Well completion and related operations.

(b) (5) [redacted]

(a) Except as provided in § 3179.6, and unless technically infeasible, after a well has been hydraulically fractured or refractured, gas that reaches the surface during well completion, post-completion, and fluid recovery operations must be:
(1) Captured and sold;
(2) Directed to a flare pit or flare stack to combust any flammable gasses, subject to the volumetric limitations in § 3179.103(a)(3);
(3) Used in operations on the lease, unit, or communitized area; or
(4) Injected.
(b) An operator will be deemed to be in compliance with the requirements of paragraph (a) of this section, if the operator is in compliance with the requirements for control of gas from well completions established under 40 CFR part 60, subpart OOOO or subpart OOOOa or if the well is not a "well affected facility" under either of those subparts.
(c) The requirements of paragraph (a) of this section will not apply where the operator demonstrates through a Sundry Notice, and the BLM agrees, that compliance with paragraph (a) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.
(d) To support a demonstration under paragraph (d) of this section, the operator must submit a Sundry Notice that includes the following information:
(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;
(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;
(3) Data that show the costs of compliance with paragraph (a) of this section on the lease; (4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator's projections of oil and gas prices, production volumes, quality (i.e., heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.
(e) The operator must comply with this section beginning on January 17, 2019.

§ 3179.103 Initial production testing.
(a) Gas flared during a well's initial production test is royalty-free under §§ 3179.4(a)(1)(iii) and 3179.5(b) of this subpart until one of the following occurs:
(1) The operator determines that it has obtained adequate reservoir information for the well;
(2) 30 days have passed since the beginning of the production test, except as provided in paragraph (b) and paragraph (d) of this section;
(3) The operator has flared 20 million cubic feet (MMcf) of gas, when volumes flared under this section are combined with volumes flared under § 3179.102(a)(2), except as provided in paragraph (c) of this section; or
(4) Production begins.
(b) The BLM may extend the period specified in paragraph (a)(2) not to exceed an additional 60 days, based on testing delays caused by well or equipment problems or if there is a need for further testing to develop adequate reservoir information.
(c) The BLM may increase the limit specified in paragraph (a)(3) by up to an additional 30 million cubic feet of gas for exploratory wells in remote locations where additional testing is needed in advance of development of pipeline infrastructure.

(b) (5) [redacted]

(d) During the dewatering and initial evaluation of an exploratory coalbed methane well, the 30-day period specified in paragraph (a)(2) of this section is extended to 90 days. The BLM may approve up to two extensions of this evaluation period, of up to 90 days each.
(e) The operator must submit its request for a longer test period or increased limit under paragraphs (b), (c), or (d) of this section using a Sundry Notice.

§ 3179.104 Subsequent well tests

(b) (5) [redacted]

During well tests subsequent to the initial production test, the operator may flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period. The operator must request a longer period under this section using a Sundry Notice.

§ 3179.105 Emergencies.

(a) An operator may flare or, if flaring is not feasible given the emergency, vent gas royalty-free under § 3179.4(a)(vi) of this subpart during an emergency. For purposes of this subpart, an "emergency" is a temporary, infrequent and unavoidable situation in which the loss of gas or oil is uncontrollable or necessary to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment. For purposes of royalty assessment, an "emergency" is limited to a short-term situation of 24 hours or less (unless the BLM agrees that the emergency conditions necessitating venting or flaring extend for a longer period) caused by an unanticipated event or failure that is out of the operator's control and was not due to operator negligence.
(b) The following do not constitute emergencies for the purposes of royalty assessment:
(1) More than 3 failures of the same component within a single piece of equipment within any 365-day period;
(2) The operator's failure to install appropriate equipment of a sufficient capacity to accommodate the production conditions;
(3) Failure to limit production when the production rate exceeds the capacity of the related equipment, pipeline, or gas plant, or exceeds sales contract volumes of oil or gas;
(4) Scheduled maintenance;
(5) A situation caused by operator negligence; or
(6) A situation on a lease, unit, or communitized area that has already experienced 3 or more emergencies within the past 30 days, unless the BLM determines that the occurrence of more than 3 emergencies within the 30 day period could not have been anticipated and was beyond the operator's control.
(c) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section.

GAS FLARED OR VENTED FROM EQUIPMENT AND DURING WELL MAINTENANCE OPERATIONS

§ 3179.201 Equipment requirements for pneumatic controllers.

(a) A pneumatic controller that uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, is subject to this section if the pneumatic controller:
(1) Has a continuous bleed rate greater than 6 standard cubic feet (scf) per hour; and
(2) Is not subject to any of the requirements of 40 CFR part 60, subpart OOOO or subpart OOOOa, but would be subject to one of those subparts if it were a new, modified, or reconstructed source.
(b) (b) (5) [redacted] 2019, t~~T~~he operator must replace a pneumatic controller subject to this section with a controller (including but not limited to a continuous or intermittent pneumatic controller)

having a bleed rate of 6 scf per hour or less within the timeframes set forth in paragraph (d) of this section, unless:
(1) Use of a pneumatic controller with a bleed rate greater than 6 scf per hour is required based on functional needs that may include, but are not limited to, response time, safety, and positive actuation, provided that the operator notifies the BLM through a Sundry Notice that describes the functional needs necessitating the use of a pneumatic controller with a bleed rate greater than 6 scf per hour;
(2) The pneumatic controller exhaust was, as of January 17, 2017 and continues to be, routed to a flare device or low-pressure combustor;
(3) The pneumatic controller exhaust is routed to processing equipment; or
(4) The operator notifies the BLM through a Sundry Notice and demonstrates, and the BLM agrees, based on the information identified in paragraph (c) of this section, that replacement of a pneumatic controller subject to paragraph (a)(1)(i) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.
(c) To support a demonstration under paragraph (b)(4) of this section, the operator must submit a Sundry Notice that includes the following information:
(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;
(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;
(3) Data that show the costs of compliance with paragraph (b) of this section on the lease;
(4) Projected costs of and the combined stream of revenues from both gas and oil production, including:
(i) The operator's projections of gas prices, gas production volumes, gas quality (i.e., heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and
(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.
(d) The operator must replace the pneumatic controller(s) (b) (5) [redacted] by (b) (5) 2019, as required under paragraph (b) of this section. If, however, the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of this section, then the operator may notify the BLM through a Sundry Notice and replace the pneumatic controller no later than 3 years from the effective date of this section.
(e) The operator must ensure pneumatic controllers are functioning within manufacturers' specifications.

§ 3179.202 Requirements for pneumatic diaphragm pumps.

(a) A pneumatic diaphragm pump is subject to this section if it:
(1) Uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and
(2) Is not subject to any of the requirements of 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if it were a new, modified or reconstructed source.

(b) An operator is not required to comply with paragraphs (c) through (h), with respect to a pneumatic diaphragm pump or pumps if:
(1) The pump does not vent exhaust gas to the atmosphere; or
(2) The operator submits a Sundry Notice to the BLM documenting that the pump(s) operated on less than 90 individual days in the prior calendar year.
(c) For each pneumatic diaphragm pump subject to this section and within the timeframes set forth in paragraph (h) of this section, the operator must:
(1) Replace the pump with a zero-emissions pump, which may be an electric-powered pump; or
(2) Route the pump exhaust gas to processing equipment for capture and sale.
(d) As an alternative to compliance with paragraph (c), the operator may route the pump exhaust gas to a flare or low pressure combustor device within the timeframes set forth in paragraph (h) of this section, if the operator determines and notifies the BLM through a Sundry Notice that:
(1) Replacing the pump with a zero-emissions pump is not viable because a pneumatic pump is necessary to perform the function required; and
(2) Routing the pump exhaust gas to processing equipment for capture and sale is technically infeasible or unduly costly.
(e) If the operator has met the criteria in paragraph (d) allowing the operator to use the compliance alternative provided in paragraph (d), but the operator has no flare or low pressure combustor device on site, or routing the exhaust gas to such a flare or low pressure combustor device would be technically infeasible, the operator need take no further action to comply with paragraphs (c) through (h).
(f) An operator that is required to replace a pump or route the exhaust gas from a pump to capture or a flare or combustion device under this section, may nonetheless be exempt from such requirement if the operator submits a Sundry Notice to the BLM that provides an economic analysis that demonstrates, and the BLM agrees, based on the information identified in paragraph (g) of this section, that compliance with the provisions of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.
(g) The Sundry Notice described in paragraph (f) must include the following information:
(1) Well information must include:
(i) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated; and
(ii) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;
(2) Data that show the costs of compliance with paragraphs (c) through (e) of this section on the lease;
(3) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide:
(i) The operator's projections of gas prices, gas production volumes, gas quality (i.e., heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and
(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(h) The operator must replace the pneumatic diaphragm pump(s) or route the exhaust gas to capture or to a flare or combustion device (b) (5) by (b) (5) 2019, except that if the operator will comply with paragraph (c) of this section by replacing the pneumatic diaphragm pump with a zero-emission pump and the well or facility that the pneumatic diaphragm pump serves has an estimated remaining productive life of 3 years or less from the effective date of this section, the operator must notify the BLM through a Sundry Notice and replace the pneumatic diaphragm pump no later than 3 years from the effective date of this section.

(i) The operator must ensure its pneumatic diaphragm pumps are functioning within manufacturers' specifications.

§ 3179.203 Storage vessels.

(a) A storage vessel is subject to this section if the vessel:

(1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and

(2) Is not subject to any of the requirements of 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to one of those subparts if it were a new, modified or reconstructed source.

(b) (b) (5) Beginning on (b) (5) 2019, and within 30 days after any new source of production is added to the storage vessel after (b) (5), 2019, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority that limit the VOC emissions to less than 6 tpy.

(c) If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy under paragraph (b) of this section, (b) (5) , 2019, or (b) (5) if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

(b) (5)

(1) Route all tank vapor gas from the storage vessel to a sales line;

(2) If the operator determines that compliance with paragraph (c)(1) of this section is technically infeasible or unduly costly, route all tank vapor gas from the storage vessel to a device or method that ensures continuous combustion of the tank vapor gas; or

(3) Submit an economic analysis to the BLM through a Sundry Notice that demonstrates, and the BLM agrees, based on the information identified in paragraph (d) of this section, that compliance with paragraph (c)(2) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(d) To support a demonstration under paragraph (c) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (c)(1) or (c)(2) of this section on the lease;

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide:

(i) The operator's projections of oil and gas prices, production volumes, quality (i.e., heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.
(e) If the rate of total uncontrolled VOCs released from a storage vessel declines to 4 tpy or less for any continuous 12 month period, the requirements of paragraph (c) no longer apply.
(f) Storage vessels subject to this section must be adequately sized to accommodate the operator's production levels and equipped to meet any applicable regulatory requirements regarding tank vapors.
(g) Storage vessels subject to this section may only vent through properly functioning pressure relief devices.

§ 3179.204 Downhole well maintenance and liquids unloading.

(b) (5) [redacted]

(a) The operator must minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading, consistent with safe operations.
(b) For wells equipped with a plunger lift system and/or an automated well control system, minimizing gas venting under paragraph (a) includes optimizing the operation of the system to minimize gas losses to the extent possible consistent with removing liquids that would inhibit proper function of the well.
(c) Before the operator manually purges a well for liquids unloading for the first time after the effective date of this section, the operator must consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly. The operator must provide information supporting that determination as part of the Sundry Notice required under paragraph (e) of this section.
(d) For any liquids unloading by manual well purging, the operator must:
(1) Ensure that the person conducting the well purging remains present on-site throughout the event to minimize to the maximum extent practicable any venting to the atmosphere;
(2) Record the cause, date, time, duration, and estimated volume of each venting event; and
(3) Maintain the records for the period required under § 3162.4-1 of this title and make them available to the BLM, upon request.
(e) The operator must notify the BLM by Sundry Notice within 30 calendar days after the first liquids unloading event by manual or automated well purging conducted after the effective date of this section. This requirement applies to each well the operator operates.
(f) The operator must notify the BLM by Sundry Notice, within 30 calendar days, if:
(1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or
(2) The estimated volume of gas vented in liquids unloading by manual well purging operations for a well exceeds 75 Mcf during any production month.
(g) For purposes of this section, "well purging" means blowing accumulated liquids out of a wellbore by reservoir gas pressure, whether manually or by an automatic control system that relies on real-time pressure or flow, timers, or other well data, where the gas is vented to the atmosphere, and it does not apply to wells equipped with a plunger lift system.
(h) Total estimated volumes vented as a result of downhole well maintenance and liquids unloading, including through the operation of plunger lifts and automated well controls, during the production month must be included in volumes reported to ONRR as vented.
(i) The operator must comply with this section beginning on (b) (5) [redacted] 2019.

LEAK DETECTION AND REPAIR (LDAR)

§ 3179.301 Operator responsibility.

(a) The requirements of §§ 3179.301 through 3179.305 of this subpart apply to:

(1) A site and all equipment associated with it used to produce, process, compress, treat, store, or measure natural gas (including oil wells that also produce natural gas) from or allocated to a Federal or Indian lease, unit, or communitized area, where the site is upstream of or contains the approved point of royalty measurement; and

(2) A site and all equipment operated by the operator and associated with a site used to store, measure, or dispose of produced water, where the site is located on a Federal or Indian lease.

(b) The requirements of §§ 3179.301 through 3179.305 of this subpart do not apply to:

(1) A site that contains a wellhead or wellheads and no other equipment; or

(2) A well or well equipment that has been depressurized.

(c) As prescribed in §§ 3179.302 and 3179.303 of this subpart, the operator must inspect all equipment covered under this section, as provided in paragraph (a) of this section, for gas leaks from leak components.

(d) The operator is not required to inspect or monitor a leak component that is not an accessible component.

(e) For purposes of §§ 3179.301 through 3179.305, the term "site" means a discrete area located on a lease, unit, or communitized area, and containing a wellhead, wellhead equipment, or other equipment used to produce, process, compress, treat, store, or measure natural gas or store, measure, or dispose of produced water, which is suitable for inspection in a single visit.

(f) The operator must make the first inspection of each site:

(1) (b) (5) By (b) (5) 2019, for all existing sites (b) (5) ;

(2) Within 60 days of beginning production for new sites that begin production after (b) (5) 2019 (b) (5) and

(3) Within 60 days of the date when an existing site that was out of service is brought back into service and re-pressurized after (b) (5) 2019.

(g) The operator must make subsequent inspections as prescribed in § 3179.303.

(h) All leak inspections must occur during production operations.

(i) The operator must fix identified leaks as prescribed in §§ 3179.304 and 3179.305 of this subpart. See 43 CFR 3162.5-1 for responsibility to repair oil leaks.

(j) With respect to new, modified or reconstructed equipment, an operator will be deemed to be in compliance with the requirements of this section for such equipment, if the operator is in compliance with the requirements of subpart OOOOa applicable to such equipment.

(k) For each lease, unit, or communitized area, for all covered sites and equipment not already deemed in compliance with the requirements of this section pursuant to paragraph (j), an operator may choose to satisfy the requirements of §§ 3179.301 through 3179.305 by:

(1) Treating each of those sources as if it were a collection of fugitive emissions components as defined in 40 CFR part 60 subpart OOOOa;

(2) Complying with the requirements of 40 CFR part 60 subpart OOOOa that apply to affected facility fugitive emissions components at a well site (or for compressor stations, that apply to affected facility fugitive emissions components at a compressor station) under 40 CFR part 60, subpart OOOOa; and

(3) Notifying the BLM through a Sundry Notice regarding such compliance.

§ 3179.302 Approved instruments and methods.

(a) The operator must use one or more of the following instruments, operated according to the manufacturer's specifications or as specified below, to detect leaks:
(1) An optical gas imaging device capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of less than or equal to 60 grams per hour from a quarter inch diameter orifice;
(2) A portable analyzer device capable of detecting leaks, such as catalytic oxidation, flame ionization, infrared absorption or photoionization devices, used for a leak detection survey conducted in compliance with the relevant sections of Method 21 at 40 CFR part 60, appendix A-7, including section 8.3.1. and assisted by audio, visual, and olfactory inspection; or
(3) A leak detection device not listed in this section that is approved by the BLM for use by any operator under § 3179.302(d) of this subpart.
(b) The person operating any of the leak detection devices listed in or approved under this section must be adequately trained in the proper use of the device.
(c) Any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice to BLM that includes the following information:
(1) Specifications of the proposed monitoring device, including a detection limit capable of supporting the desired function;
(2) The proposed monitoring protocol using the proposed monitoring device, including how results will be recorded;
(3) Records and data from laboratory and field testing, including but not limited to performance testing;
(4) A demonstration that the proposed monitoring device and protocol will achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a) of this subpart;
(5) Tracking and documentation procedures; and
(6) Proposed limitations on the types of sites or other conditions on deploying the device and the protocol to achieve the demonstrated results.
(d) The BLM may approve an alternative monitoring device and associated inspection protocol, if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a) of this subpart.
(1) The BLM will provide public notice of a submission for approval under section 3179.302(c).
(2) The BLM may approve an alternative device and monitoring protocol for use in all or most applications, or for use on a pilot or demonstration basis under specified circumstances that limit where and for how long the device may be used.
(3) The BLM will post on the BLM website a list of each approved alternative monitoring device and protocol, along with any limitations on its use.

§ 3179.303 Leak detection inspection requirements for natural gas wellhead equipment and other equipment.

(a) Except as provided below or otherwise authorized in paragraph (b) of this section, the operator must inspect leak components located on and around the equipment identified in § 3179.301(a) of this subpart for leaks using a leak detection device listed under § 3179.302 according to the following parameters:
(1) The operator must inspect each site at least semi-annually, and consecutive semiannual inspections must be conducted at least 4 months apart; and

(2) The operator must inspect each compressor station at least quarterly, and consecutive quarterly inspections must be conducted at least 60 days apart.
(b) The BLM may approve an operator's request to use an alternative instrument-based leak detection program, in lieu of compliance with the requirements of § 3179.303(a), if the BLM finds that the alternative program would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in §§ 3179.302(a)(1) and 3179.303(a) of this subpart. The operator must submit its request for an alternative leak detection program through a Sundry Notice that includes the following information:
(1) A detailed description of the alternative leak detection program, including how it will use one or more of the instruments specified in or approved under § 3179.302(a) and an identification of the specific instruments, methods and/or practices that would substitute for specific elements of the approach specified in §§ 3179.302(a) and 3179.303(a);
(2) The proposed monitoring protocol;
(3) Records and data from laboratory and field testing, including, but not limited to, performance testing, to the extent relevant;
(4) A demonstration that the proposed alternative leak detection program will achieve equal or greater reduction of gas lost through leaks compared to compliance with the requirements specified in §§ 3179.302(a) and 3179.303(a);
(5) A detailed description of how the operator will track and document its procedures, leaks found, and leaks repaired; and
(6) Proposed limitations on types of sites or other conditions on deployment of the alternative leak detection program.
(c) If the operator demonstrates, and the BLM agrees, that compliance with the requirements of §§ 3179.301-305, including the option for compliance with an alternative leak detection program under §3179.303(b) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease, the BLM may approve an alternative leak detection program for that operator that does not meet the criterion specified in §3179.303(b)(4), but is as effective as possible consistent with not causing the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.
(d) To support a demonstration under paragraph (c) of this section, the operator must submit a Sundry Notice that includes the following information:
(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;
(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;
(3) Data that show the costs of compliance on the lease with the requirements of §§ 3179.301-305 and with an alternative leak detection program that meets the requirements of §3179.303(b);
(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide the operator's projections of oil and gas prices, production volumes, quality (i.e., heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less;
(5) The information required under § 3179.303(b), except that in lieu of the demonstration required under § 3179.303(b)(4), the operator must demonstrate that the alternative program is as effective as possible, consistent with not imposing such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

(e) For any BLM approval of an operator's use of an alternative leak detection program under subparagraph (b) or (c) of this section, the BLM will post online the alternative program approved for that operator, including, at minimum, the information required in subparagraph (b)(1), (b)(2), (b)(5), and (b)(6) of this section.

§ 3179.304 Repairing leaks.

(a) The operator must repair any leak as soon as practicable, and in no event later than 30 calendar days after discovery, unless good cause exists for repair requiring a longer period. Good cause for delay of repair exists if the repair (including replacement) is technically infeasible (including unavailability of parts that have been ordered), would require a pipeline blowdown, a compressor station shutdown, a well shut-in, or would be unsafe to conduct during operation of the unit.

(b) If there is good cause for delaying the repair beyond 30 calendar days, the operator must notify the BLM of the cause by Sundry Notice and must complete the repair at the earliest opportunity, for example during the next compressor station shutdown, well shut-in, or pipeline blowdown. In no case may the repair be delayed beyond 2 years.

(c) Not later than 30 calendar days after completion of a repair, the operator must verify the effectiveness of the repair through a follow-up inspection using one of the instruments specified or approved under § 3179.302(a) or a soap bubble test under Section 8.3.3 of EPA Method 21 – Determination of Volatile Organic Compound
Leaks (40 CFR Appendix A-7 to part 60).

(d) If the repair is not effective, the operator must complete additional repairs within 15 calendar days, and conduct follow-up inspections and repairs until the leak is repaired.

(e) A follow-up inspection to verify the effectiveness of repairs does not constitute an inspection for purposes of § 3179.303.

§ 3179.305 Leak detection inspection recordkeeping and reporting.

(a) The operator must maintain the following records for the period required under § 3162.4-1 of this title and make them available to the BLM upon request:

(1) For each inspection required under § 3179.303 of this subpart, documentation of:

(i) The date of the inspection; and

(ii) The site where the inspection was conducted;

(2) The monitoring method(s) used to determine the presence of leaks;

(3) A list of leak components on which leaks were found;

(4) The date each leak was repaired; and

(5) The date and result of the follow-up inspection(s) required under § 3179.304 paragraph (c) or (d) of this subpart.

(b) By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes:

(1) The number of sites inspected;

(2) The total number of leaks identified, categorized by the type of component;

(3) The total number of leaks repaired;

(4) The total number leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak.

(5) A certification by a responsible officer that the information in the report is true and accurate to the best of the officer's knowledge.

(c) AVO checks are not required to be documented unless they find a leak requiring repair.

STATE OR TRIBAL VARIANCES

§ 3179.401 State or tribal requests for variances from the requirements of this subpart.

(a)(1) At the request of a State (for Federal land) or a tribe (for Indian lands), the BLM State Director may grant a variance from any provision(s) of this Subpart that would apply to all Federal leases, units, or communitized areas within a State or to all tribal leases, units, or communitized areas within that tribe's lands, or to specific fields or basins within the State or that tribe's lands, if the BLM finds that the variance would meet the criteria in paragraph (b) of this section.

(2) A State or tribal variance request must:

(i) Identify the provision(s) of this subpart from which the State or tribe is requesting the variance;

(ii) Identify the State, local, or tribal regulation(s) or rule(s) that would be applied in place of the provision(s) of this subpart;

(iii) Explain why the variance is needed; and

(iv) Demonstrate how the State, local, or tribal regulation(s) or rule(s) would perform at least equally well in terms of reducing waste of oil and gas, reducing environmental impacts from venting and or flaring of gas, and ensuring the safe and responsible production of oil and gas, compared to the particular provision(s) from which the State or tribe is requesting the variance.

(b) The BLM State Director, after considering all relevant factors, may approve the request for a variance, or approve it with one or more conditions, only if the BLM determines that the State, local or tribal regulation(s) or rule(s) would perform at least equally well in terms of reducing waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas, compared to the particular provision(s) from which the State or tribe is requesting the variance, and would be consistent with the terms of the affected Federal or Indian leases and applicable statutes. The decision to grant or deny the variance will be in writing and is within the BLM's discretion. The decision on a variance request is not subject to administrative appeals under 43 CFR part 4.

(c) A variance from any particular requirement of this rule does not constitute a variance from provisions of other regulations, laws, or orders.

(d) The BLM reserves the right to rescind a variance or modify any condition of approval.

(e) If the BLM approves a variance under this section, the State or tribe that requested the variance must notify the BLM in writing in a timely manner of any substantive amendments, revisions, or other changes to the State, local or tribal regulation(s) or rule(s) to be applied under the variance.

(f) If the BLM approves a variance under this section, the State, local or tribal regulation(s) or rule(s) to be applied under the variance can be enforced by the BLM as if the regulation(s) or rule(s) were provided for in this Subpart. The State, locality, or tribes' own authority to enforce its regulation(s) or rule(s) to be applied under the variance would not be affected by the BLM's approval of a variance.

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:57 AM

Conversation Contents

VF Memo

Attachments:

/13. VF Memo/1.1 2017 05 11 VF Briefing Memo CLEAN.docx
/13. VF Memo/3.1 2017 05 11 VF Briefing Memo CLEAN.docx
/13. VF Memo/5.1 2017 05 11 VF Briefing Memo_clean_v3.docx

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Thu May 11 2017 13:45:14 GMT-0600 (MDT)
To:	"Spisak, Timothy" <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
Subject:	VF Memo
Attachments:	2017 05 11 VF Briefing Memo CLEAN.docx

Hi Tim,
Please see attached VF memo.

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Thu May 11 2017 13:47:24 GMT-0600 (MDT)
To:	James Tichenor <jtichenor@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
Subject:	RE: VF Memo

Will do…thanks all!!!

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****

Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
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(202) 251-3079 cell
****

From: Tichenor, James [mailto:jtichenor@blm.gov]
Sent: Thursday, May 11, 2017 3:45 PM
To: Spisak, Timothy; Lonny Bagley; Christopher Rhymes
Subject: VF Memo

Hi Tim,
Please see attached VF memo.

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Thu May 11 2017 13:55:42 GMT-0600 (MDT)
To:	"Nedd, Michael D" <mnedd@blm.gov>
CC:	Shelley McGinnis <smcginnis@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	VF Memo
Attachments:	2017 05 11 VF Briefing Memo CLEAN.docx

Mike: as requested, here is the requested subject memo update (2 pages) and includes attachments for rule effective dates (1 page), proposed rule timeline (1 page) and team recommendations/options for modification (5 pages). While this had SOL staff review, it is not a SOL Office surname.

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
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Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Thu May 11 2017 16:52:10 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Shelley McGinnis <smcginnis@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, Peter Mali <pmali@blm.gov>
Subject:	Re: VF Memo

Tim,

Looks good and I had some changes primarily to fix the attachments so they flow with where they are identified in the paper. I gave a hard copy to Shelley and hopefully we can get it by mid-morning. I know the paper has not been surnamed beyond the staff level in SOL and I'll forward to Karen.

Take care and have wonderful day! :-)))

MDN 202-208-3801

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Sent from my mobile device, please excuse any typos.

On May 11, 2017, at 3:55 PM, Timothy Spisak <tspisak@blm.gov> wrote:

> Mike: as requested, here is the requested subject memo update (2 pages) and includes attachments for rule effective dates (1 page), proposed rule timeline (1 page) and team recommendations/options for modification (5 pages). While this had SOL staff review, it is not a SOL Office surname.
>
> Thanks
> Tim
>
> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
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>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
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>
> <2017 05 11 VF Briefing Memo CLEAN.docx>

"Spisak, Timothy" <tspisak@blm.gov>

From:	"Spisak, Timothy" <tspisak@blm.gov>
Sent:	Fri May 12 2017 10:51:59 GMT-0600 (MDT)

To:	Lonny Bagley <lbagley@blm.gov>, James Tichenor <jtichenor@blm.gov>
Subject:	Fwd: VF Memo
Attachments:	2017 05 11 VF Briefing Memo_clean_v3.docx

FYI
---------- Forwarded message ----------
From: **McGinnis, Shelley** <smcginnis@blm.gov>
Date: Fri, May 12, 2017 at 12:50 PM
Subject: Re: VF Memo
To: "Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Tim Spisak <tspisak@blm.gov>, Peter Mali <pmali@blm.gov>, Richard McNeer <Richard.McNeer@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>

All,

Attached is the revised memo that incorporates the changes sent by Karen and additional changes from Mike Nedd (mostly to the ordering of the attachments).

On Fri, May 12, 2017 at 11:04 AM, Hawbecker, Karen <karen.hawbecker@sol.doi.gov> wrote:

> Mike, Here are DMR's proposed edits to the briefing paper. Let us know if you have any questions. --Karen
>
> On Thu, May 11, 2017 at 6:59 PM, Michael Nedd <mnedd@blm.gov> wrote:
>
> > Tim and his team took the paper we (including ASLM) all saw and edited back in late March and dropped the reference to CRA and also made some small adjustments.
> >
> > I asked them to fix the attachments on this version so they flow with the order of the paper.
> >
> > The goal is for them to have another version to me/Peter by mid-morning so we can get it to ASLM around noon. I apologize for the short turn around, but wanted you to see it.
> >
> > Take care and have wonderful day! :-)))
> >
> > MDN 202-208-3801
> >
> > A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"
> >
> > Sent from my mobile device, please excuse any typos.
> >
> > Begin forwarded message:
> >
> > **From:** Timothy Spisak <tspisak@blm.gov>
> > **Date:** May 11, 2017 at 3:55:42 PM EDT
> > **To:** "Nedd, Michael D" <mnedd@blm.gov>
> > **Cc:** Shelley McGinnis <smcginnis@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, Peter Mali <pmali@blm.gov>
> > **Subject: VF Memo**
> >
> > Mike: as requested, here is the requested subject memo update (2 pages) and includes attachments for rule effective dates (1 page), proposed rule timeline (1 page) and team recommendations/options for modification (5 pages). While this had SOL staff review, it is not a SOL Office surname.

> Thanks
> Tim
>
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> 'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997
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INFORMATION/BRIEFING MEMORANDUM

DATE: May 11, 2017

FROM: Timothy R. Spisak, Acting Assistant Director, Energy, Minerals and Realty Management

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

The purpose of this memo is to outline the next steps and timeline for revising the Venting & Flaring Rule before many of the burdensome requirements become operative in January 2018.

BACKGROUND

Summary of the Final Rule: The "Venting & Flaring Rule" (the Rule) is formally the *Waste Prevention, Production Subject to Royalties, and Resource Conservation* rulemaking that replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). Recently, 12 percent of operators have reported flared gas from oil well production. The Rule is codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History: The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. §§ 188–287) subjects federal oil and gas leases to the condition that lessees will "use all reasonable precautions to prevent waste of oil and gas developed in the land . . . ." 30 U.S.C. § 225. Further, the MLA requires lessees to exercise "reasonable diligence, skill, and care" in their operations and requires lessees to observe "such rules for the health and safety of the miners and for the prevention of undue waste as may be prescribed by [the] Secretary [of the Interior]." 30 U.S.C. § 187. The Federal Oil and Gas Royalty Management Act (FOGRMA) makes lessees liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence or the failure to comply with applicable rules or regulations. 30 U.S.C. § 1756. Both the MLA and FOGRMA authorize the Secretary of the Interior to prescribe rules and regulations necessary to carry out the purposes of those statutes. 30 U.S.C. § 189; 30 U.S.C. § 1751.

Before promulgation of the Rule, the Bureau of Land Management (BLM) regulated the venting, flaring, and beneficial use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The Rule included many regulatory changes, including emissions-focused requirements that did not appear in NTL-4A. Many states and industry groups have asserted that these requirements are actually within the jurisdiction of the Administrator of the Environmental Protection Agency and the states under the Clean Air Act (CAA).

DISCUSSION

On May 10, the Senate voted against overturning the Rule using the Congressional Review Act. As such, the Rule will continue in effect unless/until the BLM rescinds or replaces it through the rulemaking process outlined below, or until it is overturned in pending litigation. Any new rule that the BLM promulgates would likely be challenged in court with an estimated litigation cost of $100,000. If the new rulemaking is overturned in litigation, the existing Rule would come back into effect.

Although the Rule went into effect in January 2017, many of its more onerous requirements are not yet operative. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare for compliance dates. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs), imposes restrictions on venting, and clarifies when lost gas is "avoidably lost" and therefore subject to royalties. Operators must comply with the Rule's flaring (or "gas capture") requirements, equipment upgrade/replacement requirements, and leak detection and repair (LDAR) requirements beginning on January 17, 2018 (see Attachment).

The BLM expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million, with first year compliance costs estimated to be $113 million, with $84 million of that cost being LDAR.

NEXT STEPS

The BLM proposes a dual-faceted approach, which would limit the compliance costs posed to Industry while the BLM revises the Rule:

1. **Suspend compliance deadlines for 1 year while the BLM revises the Rule.** The BLM is concerned that it will not be able to finalize a revised Rule before the Industry will assume burdensome compliance costs. Although the compliance deadline for most of the requirements is January 2018, operators will likely assume costs in advance of that deadline. The BLM may postpone the compliance dates through the notice-and-comment rulemaking process which would take about 6 months to publish (tentative estimate).
2. **Revise/Replace the current Rule.** The BLM would move forward with policy actions (see Attachment for detail) to curb waste to address the following. The BLM estimates that it could publish a proposed rule by October 31, 2017 and a final rule by May 31, 2018 (see Attachment). Publishing an Advanced Notice of Proposed Rulemaking is optional and would add 3 months to this process.
    - Encouraging beneficial use of oil or gas on lease;
    - Regulating flaring of unmarketable gas from oil wells;
    - Conserving unsold gas by reinjection;
    - Improving ROW timelines and removing obstacles to timely approval for pipeline infrastructure; and
    - Recognizing existing State/tribal policy/rules, such as those in North Dakota, Wyoming, Utah, New Mexico, Colorado, and Montana.

ATTACHMENTS

Attachment 1: Rulemaking Schedules for Concurrent Efforts

Activity	Description	Timing (Tentative) – Rulemaking to Suspend Rule Implementation	Timing – Rulemaking to Revise/Replace Rule
Advanced Notice of Proposed Rulemaking (ANPR)	OPTIONAL. The BLM would solicit input from the public on whether, and how, NTL-4A should be revised.	N/A	1 month to publish 2 months for public comment
Notice of Proposed Rulemaking (NPR)	The BLM would develop a NPR based on previous rule experiences or comments received from ANPR process. The Office of Management and Budget (OMB) needs to review and clear the proposal.	2 month to draft NPR ~1 month OMB review	3 months to draft NPR 3 months for OMB review
NPR comment period	The NPR is published in the Federal Register for notice-and-comment period.	1 month	2 months
Comment review/ Drafting final rule	The BLM reviews the comments and revises the rule in light of those comments. The BLM sends the revised/final rule to OMB for review.	1 month review/drafting 1 month OMB review	2 months review/drafting 3 months OMB review
Final rule is published	The BLM publishes the final rule in the Federal Register	After publishing, 1 month until effective	After publishing, 2 months until effective
Total time to publish		~6 months	13 months (for NPR) 16 months (including ANPR)
Total cost		~$0.75 million	$1.2 – 2.1 million

Attachment 2: Compliance Dates of the Rule

The following table summarizes the compliance dates for the requirements of the Rule.

Citation	Summary	Compliance Date
3162.3-1(j)	Operators must submit a waste minimization plan with their an Application for Permit to Drill	January 17, 2017
Subpart 3178	Royalty-free use requirements	January 17, 2017
3179.4, 3179.5	Determines when the loss of oil or gas is "avoidable" and therefore royalty bearing	January 17, 2017
3179.6	Requires operators to flare gas that is not captured rather than vent it, except in certain circumstances	January 17, 2017
3179.7	Requires operators to capture a certain percentage of the gas they produce	**January 17, 2018**
3179.9	Measurement requirements for flared gas	**January 17, 2018**
3179.101 – 3179.105	Limits on, and requirements for disposal of, gas lost during well drilling, well completion and related operations, initial production testing, subsequent well tests, and emergencies	January 17, 2017
3179.201, 3179.202	Operators must upgrade to lower-emission pneumatic equipment	**January 17, 2018**
3179.203	Operators must route tank vapors from covered storage vessels to sales line or to flare	**January 17, 2018**
3179.204	Requirements for minimizing gas losses from downhole well maintenance and liquids unloading	January 17, 2017
3179.301 – 3179.305	Leak detection and repair requirements	**January 17, 2018** for sites that have begun production prior to January 17, 2017 **60 days after beginning production** for sites that begin production after January 17, 2017 **60 days after** an out-of-service site is brought back into service and re-pressurized

Attachment 3: Options for Revising the Waste Prevention Rule

Background

Executive Order 13783, "Promoting Energy Independence and Economic Growth" (March 28, 2017), directs the Secretary of the Interior to review the Bureau of Land Management's (BLM) final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (effective January 17, 2017) for consistency with the policy set forth in the order: "to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation." Secretarial Order No. 3349 (March 29, 2017) directed the BLM Director to conduct the review required per Executive Order 13783 by April 19, 2017.

The BLM assembled the team that developed the original Waste Prevention Rule. The team reviewed the BLM's Waste Prevention Rule-related requirements and identified potential policy alternatives that might achieve the goals of waste prevention while reducing the regulatory burdens imposed by the rule.

Summary of Policy Options

The BLM review team has identified overarching policies that would alleviate the regulatory burden posed by the Waste Prevention Rule. In addition, we list specific policy alternatives to the rule's requirements in the table that follows.

Approaches to reduce general regulatory burden:

1. Rescind BLM requirements that create regulatory overlap with or duplicate EPA regulations and state regulations. Although the BLM carefully crafted the Waste Prevention Rule's requirements to avoid regulatory overlap and offer opportunities to sync regulations with states, one approach would be to defer to the existing EPA and state regulations.
2. Replace direct regulation with market-oriented strategies. Many provisions in the Waste Prevention Rule require operators to make investments in order to reduce the loss of gas. An alternative approach would be to evaluate those gas losses and assess royalty when the losses are avoidable, but stop short of requiring further operator action, equipment replacement, or installations.
3. Reduce administrative and compliance burdens by:
    a. Identifying categories of operations to be exempt from requirements, thereby reducing the administrative burden of requesting and reviewing exemption applications for operations that are likely to receive approval (e.g. marginal wells).
    b. Removing and/or streamlining reporting requirements.

Table of Waste Prevention Rule Requirements and Alternatives

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
Royalty Provisions 3103.3-1	Allows BLM to specify a royalty rate higher than 12.5% for new competitive leases. Although the MLA sets 12.5% as a floor for competitive lease royalties, the prior regulation had set 12.5% as the ceiling. (This provision allows the BLM to increase royalty rates and is not specific to leases that vent or flare gas).	No identified alternatives. This provision is important programmatically, because it allows BLM to close 2 GAO recommendations. Ultimately, the Administration's policy direction may dictate whether to retain or rescind.
Waste Management Plan 3162.3-1	BLM requires the operator to submit with its APD a Waste Management Plan containing information about expected completion dates, production rates, gas composition, and decline curves. Requires a certification of contact with midstream company and information about the capacity of the pipeline to which it plans to connect or extensive detail about pipelines within a 20 mile radius if it has not identified a pipeline to connect.	(1) Retain the operator certification that it contacted a midstream company, but rescind the rest. The certification demonstrates the operator's due diligence in seeking a market for gas. (2) Potential to add a checklist of items that the operator should consider, including commingling with other leases to avoid flaring.
Royalty Free Use 3178.1 to 3178.10	This section updated the beneficial purposes provisions of NTL-4A..	No identified alternatives. This section, with the use of "royalty free" terminology, clarifies issues that have arisen during litigation and implementation of NTL-4A.
Purpose, Scope, Definitions 3179.1 to 3179.3	Among other things, defines the new concepts addressed by the rule.	Expect to make conforming changes.
Avoidable Loss, Production Subject to Royalty 3179.4 to 3179.5	Defines "avoidably lost" and "unavoidably lost" gas (and oil) and circumstances under which royalty is due.	Expect to make conforming changes.
Venting Prohibition 3179.6	Prohibits the venting or flaring of gas-well gas except when unavoidably lost. Requires the operator to flare, rather than vent, any gas not captured except when flaring is technically infeasible, under emergency conditions, or when the gas comes from specified equipment or circumstances. Requires all flares or combustion devices to have auto-ignition systems.	No identified alternatives. This section is consistent with past policy and CDM implementation guidance. Expect to make conforming changes regarding the specified equipment or circumstances outlined in (b).
Gas Capture (Associated Gas) 3179.7 to 3179.8	The operator must capture specified percentage targets which increase over time. They are allowed to flare a certain volume of gas per well ("flaring allowable" decreasing over time) which they can average across wells in a lease, county, or state. Flaring in excess of the specified capture targets is considered avoidably lost and royalty bearing. Failing to meet capture target also comes with consequences greater than royalty assessment (outside of 3179.7, operators could be subject to assessments, penalties, shut-in or lease cancellation). The operator may apply for alternative capture targets if meeting the target would require cessation of production and abandonment of	Team expressed concern that the current regulations are overly complex while allowing operators to flare large amounts of associated gas royalty free. (1) Maintain current framework, but lessen the increase in capture percentages over time and decrease the flaring allowable. Issues: difficult to justify with record and data; legal concern that change would be arbitrary and capricious; and does not address deficiencies above. (2) Change the conceptual framework. Reset [royalty-free] flaring limits to lower levels, but limit the punishment to royalty only. Meaning, gas flared above XX Mcfd per well would be considered avoidably

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
	significant oil reserves under the lease (application quite extensive).	lost, but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months; make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells, which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options, but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications; and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Operators must estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	(1) Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement.
Regarding Existing Royalty Free Approvals 3179.10	Determinations made prior to Jan 17, 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	The BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	The BLM will coordinate with State RA, on a case-by-case basis, if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1) it does not place any substantive requirement upon the BLM, (2) coordination with states in the circumstances considered is generally a good practice, and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Rescind if desired. It aides in the continuity of timeline, but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related Operations	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Retain, but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the exploratory well limit due to potential lack of infrastructure to deliver to market.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
3179.102		(2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice; and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
Pneumatic Controllers 3179.201	Requires continuous bleed controllers to be low bleed, except when needed functionally, routed to combustion, or replacement would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present), some states, and general practice. We generally think this is self-correcting. And it is very difficult for PET to determine whether a device is high or low bleed. (2) Make distinction between operations that are selling gas, but objectives are conceptually covered under the beneficial use and general prohibition against venting sections. If the operator is selling the gas, we want it to use a device that minimizes the amount of gas used for beneficial use (maximizes efficiency). If the operator is not selling the gas, it would minimize the amount vented.
Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary, needed functionally, routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source, and therefore, may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions, i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	If potential VOC emissions exceed 6 tpy per vessel, then route to sales. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU's economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost, but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states. (3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
		unless it would force abandonment.
Downhole Well Maintenance and Liquids Unloading 3179.204	Operator must minimize venting for well maintenance and Liquids Unloading. Before first manual purging, operator must consider other methods and determine that they are technically infeasible or unduly costly. Operator must remain onsite during well purging. Reporting burdens. Estimate volumes.	No identified alternatives. Team views the requirements as being necessary to understand the problem of well purging.
Leak Detection and Repair (LDAR) 3179.301	Semi-annual inspections for well-sites and quarterly inspections for compressor stations; instrument specifications; alternative instrument approvals; repairing leaks and verification, and reporting. Specifies which components require inspection. Operator may apply for exemption if it would cause the operator to cease production and abandon significant recoverable oil or gas reserves.	(1) Rescind, due to overlap with EPA and some states. (2) More clearly exempt operations (without application) based on observable characteristics: operations not selling gas; marginal wells (or some other threshold); equipment after the FMP. (3) Broader allowable inspection standards, i.e. AVO-based. Lessen frequency. (4) Remove substantial reporting burdens. (5) Change the framework entirely. Return to a more conventional BLM/operator regulatory framework. BLM would check for leaks during I&E inspections and issue immediate assessments if/when leaks are found (exclude leaks where fixing would mean a net loss of gas). Raises potential issues: would this require BLM to conduct/verify with a sniffer or OGI; and is the immediate assessments concept viable, as opposed to INC process?
State or Tribal Variances 3179.401	State or Tribe may request variance if its requirements meet or exceed BLM's.	(1) Remove the "state and tribal variance" concept/terminology. Typically, an operator requests a variance to meet the requirements using an alternative method or technology, not a state to opt out of a BLM requirement. (2) Replace with concept of state/tribe requirements apply if equivalent or more stringent than Federal requirements. Coordination to determine cases where not as evident. (b) (5) [redacted]

INFORMATION/BRIEFING MEMORANDUM

DATE: May 11, 2017

FROM: Timothy R. Spisak, Acting Assistant Director, Energy, Minerals and Realty Management

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

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BACKGROUND

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    - Regulating flaring of unmarketable gas from oil wells;
    - Conserving unsold gas by reinjection;
    - Improving ROW timelines and removing obstacles to timely approval for pipeline infrastructure; and
    - Recognizing existing State/tribal policy/rules, such as those in North Dakota, Wyoming, Utah, New Mexico, Colorado, and Montana.

ATTACHMENTS

Attachment 1: Rulemaking Schedules for Concurrent Efforts

Activity	Description	Timing (Tentative) – Rulemaking to Suspend Rule Implementation	Timing – Rulemaking to Revise/Replace Rule
Advanced Notice of Proposed Rulemaking (ANPR)	OPTIONAL. The BLM would solicit input from the public on whether, and how, NTL-4A should be revised.	N/A	1 month to publish 2 months for public comment
Notice of Proposed Rulemaking (NPR)	The BLM would develop a NPR based on previous rule experiences or comments received from ANPR process. The Office of Management and Budget (OMB) needs to review and clear the proposal.	2 month to draft NPR ~1 month OMB review	3 months to draft NPR 3 months for OMB review
NPR comment period	The NPR is published in the Federal Register for notice-and-comment period.	1 month	2 months
Comment review/ Drafting final rule	The BLM reviews the comments and revises the rule in light of those comments. The BLM sends the revised/final rule to OMB for review.	1 month review/drafting 1 month OMB review	2 months review/drafting 3 months OMB review
Final rule is published	The BLM publishes the final rule in the Federal Register	After publishing, 1 month until effective	After publishing, 2 months until effective
Total time to publish		~6 months	13 months (for NPR) 16 months (including ANPR)
Total cost		~$0.75 million	$1.2 – 2.1 million

Attachment 2: Compliance Dates of the Rule

The following table summarizes the compliance dates for the requirements of the Rule.

Citation	Summary	Compliance Date
3162.3-1(j)	Operators must submit a waste minimization plan with their an Application for Permit to Drill	January 17, 2017
Subpart 3178	Royalty-free use requirements	January 17, 2017
3179.4, 3179.5	Determines when the loss of oil or gas is "avoidable" and therefore royalty bearing	January 17, 2017
3179.6	Requires operators to flare gas that is not captured rather than vent it, except in certain circumstances	January 17, 2017
3179.7	Requires operators to capture a certain percentage of the gas they produce	**January 17, 2018**
3179.9	Measurement requirements for flared gas	**January 17, 2018**
3179.101 – 3179.105	Limits on, and requirements for disposal of, gas lost during well drilling, well completion and related operations, initial production testing, subsequent well tests, and emergencies	January 17, 2017
3179.201, 3179.202	Operators must upgrade to lower-emission pneumatic equipment	**January 17, 2018**
3179.203	Operators must route tank vapors from covered storage vessels to sales line or to flare	**January 17, 2018**
3179.204	Requirements for minimizing gas losses from downhole well maintenance and liquids unloading	January 17, 2017
3179.301 – 3179.305	Leak detection and repair requirements	**January 17, 2018** for sites that have begun production prior to January 17, 2017 **60 days after beginning production** for sites that begin production after January 17, 2017 **60 days after** an out-of-service site is brought back into service and re-pressurized

Attachment 3: Options for Revising the Waste Prevention Rule

Background

Executive Order 13783, "Promoting Energy Independence and Economic Growth" (March 28, 2017), directs the Secretary of the Interior to review the Bureau of Land Management's (BLM) final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation" (effective January 17, 2017) for consistency with the policy set forth in the order: "to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation." Secretarial Order No. 3349 (March 29, 2017) directed the BLM Director to conduct the review required per Executive Order 13783 by April 19, 2017.

The BLM assembled the team that developed the original Waste Prevention Rule. The team reviewed the BLM's Waste Prevention Rule-related requirements and identified potential policy alternatives that might achieve the goals of waste prevention while reducing the regulatory burdens imposed by the rule.

Summary of Policy Options

The BLM review team has identified overarching policies that would alleviate the regulatory burden posed by the Waste Prevention Rule. In addition, we list specific policy alternatives to the rule's requirements in the table that follows.

Approaches to reduce general regulatory burden:

1. Rescind BLM requirements that create regulatory overlap with or duplicate EPA regulations and state regulations. Although the BLM carefully crafted the Waste Prevention Rule's requirements to avoid regulatory overlap and offer opportunities to sync regulations with states, one approach would be to defer to the existing EPA and state regulations.
2. Replace direct regulation with market-oriented strategies. Many provisions in the Waste Prevention Rule require operators to make investments in order to reduce the loss of gas. An alternative approach would be to evaluate those gas losses and assess royalty when the losses are avoidable, but stop short of requiring further operator action, equipment replacement, or installations.
3. Reduce administrative and compliance burdens by:
    a. Identifying categories of operations to be exempt from requirements, thereby reducing the administrative burden of requesting and reviewing exemption applications for operations that are likely to receive approval (e.g. marginal wells).
    b. Removing and/or streamlining reporting requirements.

Table of Waste Prevention Rule Requirements and Alternatives

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
Royalty Provisions 3103.3-1	Allows BLM to specify a royalty rate higher than 12.5% for new competitive leases. Although the MLA sets 12.5% as a floor for competitive lease royalties, the prior regulation had set 12.5% as the ceiling. (This provision allows the BLM to increase royalty rates and is not specific to leases that vent or flare gas).	No identified alternatives. This provision is important programmatically, because it allows BLM to close 2 GAO recommendations. Ultimately, the Administration's policy direction may dictate whether to retain or rescind.
Waste Management Plan 3162.3-1	BLM requires the operator to submit with its APD a Waste Management Plan containing information about expected completion dates, production rates, gas composition, and decline curves. Requires a certification of contact with midstream company and information about the capacity of the pipeline to which it plans to connect or extensive detail about pipelines within a 20 mile radius if it has not identified a pipeline to connect.	(1) Retain the operator certification that it contacted a midstream company, but rescind the rest. The certification demonstrates the operator's due diligence in seeking a market for gas. (2) Potential to add a checklist of items that the operator should consider, including commingling with other leases to avoid flaring.
Royalty Free Use 3178.1 to 3178.10	This section updated the beneficial purposes provisions of NTL-4A..	No identified alternatives. This section, with the use of "royalty free" terminology, clarifies issues that have arisen during litigation and implementation of NTL-4A.
Purpose, Scope, Definitions 3179.1 to 3179.3	Among other things, defines the new concepts addressed by the rule.	Expect to make conforming changes.
Avoidable Loss, Production Subject to Royalty 3179.4 to 3179.5	Defines "avoidably lost" and "unavoidably lost" gas (and oil) and circumstances under which royalty is due.	Expect to make conforming changes.
Venting Prohibition 3179.6	Prohibits the venting or flaring of gas-well gas except when unavoidably lost. Requires the operator to flare, rather than vent, any gas not captured except when flaring is technically infeasible, under emergency conditions, or when the gas comes from specified equipment or circumstances. Requires all flares or combustion devices to have auto-ignition systems.	No identified alternatives. This section is consistent with past policy and CDM implementation guidance. Expect to make conforming changes regarding the specified equipment or circumstances outlined in (b).
Gas Capture (Associated Gas) 3179.7 to 3179.8	The operator must capture specified percentage targets which increase over time. They are allowed to flare a certain volume of gas per well ("flaring allowable" decreasing over time) which they can average across wells in a lease, county, or state. Flaring in excess of the specified capture targets is considered avoidably lost and royalty bearing. Failing to meet capture target also comes with consequences greater than royalty assessment (outside of 3179.7, operators could be subject to assessments, penalties, shut-in or lease cancellation). The operator may apply for alternative capture targets if meeting the target would require cessation of production and abandonment of	Team expressed concern that the current regulations are overly complex while allowing operators to flare large amounts of associated gas royalty free. (1) Maintain current framework, but lessen the increase in capture percentages over time and decrease the flaring allowable. Issues: difficult to justify with record and data; legal concern that change would be arbitrary and capricious; and does not address deficiencies above. (2) Change the conceptual framework. Reset [royalty-free] flaring limits to lower levels, but limit the punishment to royalty only. Meaning, gas flared above XX Mcfd per well would be considered avoidably

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
	significant oil reserves under the lease (application quite extensive).	lost, but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months; make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells, which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options, but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications; and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Operators must estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	(1) Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement.
Regarding Existing Royalty Free Approvals 3179.10	Determinations made prior to Jan 17, 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	The BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	The BLM will coordinate with State RA, on a case-by-case basis, if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1) it does not place any substantive requirement upon the BLM, (2) coordination with states in the circumstances considered is generally a good practice, and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Rescind if desired. It aides in the continuity of timeline, but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related Operations	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Retain, but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the exploratory well limit due to potential lack of infrastructure to deliver to market.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
3179.102		(2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice; and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
Pneumatic Controllers 3179.201	Requires continuous bleed controllers to be low bleed, except when needed functionally, routed to combustion, or replacement would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present), some states, and general practice. We generally think this is self-correcting. And it is very difficult for PET to determine whether a device is high or low bleed. (2) Make distinction between operations that are selling gas, but objectives are conceptually covered under the beneficial use and general prohibition against venting sections. If the operator is selling the gas, we want it to use a device that minimizes the amount of gas used for beneficial use (maximizes efficiency). If the operator is not selling the gas, it would minimize the amount vented.
Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary, needed functionally, routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source, and therefore, may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions, i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	If potential VOC emissions exceed 6 tpy per vessel, then route to sales. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU's economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost, but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states. (3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
		unless it would force abandonment.
Downhole Well Maintenance and Liquids Unloading 3179.204	Operator must minimize venting for well maintenance and Liquids Unloading. Before first manual purging, operator must consider other methods and determine that they are technically infeasible or unduly costly. Operator must remain onsite during well purging. Reporting burdens. Estimate volumes.	No identified alternatives. Team views the requirements as being necessary to understand the problem of well purging.
Leak Detection and Repair (LDAR) 3179.301	Semi-annual inspections for well-sites and quarterly inspections for compressor stations; instrument specifications; alternative instrument approvals; repairing leaks and verification, and reporting. Specifies which components require inspection. Operator may apply for exemption if it would cause the operator to cease production and abandon significant recoverable oil or gas reserves.	(1) Rescind, due to overlap with EPA and some states. (2) More clearly exempt operations (without application) based on observable characteristics: operations not selling gas; marginal wells (or some other threshold); equipment after the FMP. (3) Broader allowable inspection standards, i.e. AVO-based. Lessen frequency. (4) Remove substantial reporting burdens. (5) Change the framework entirely. Return to a more conventional BLM/operator regulatory framework. BLM would check for leaks during I&E inspections and issue immediate assessments if/when leaks are found (exclude leaks where fixing would mean a net loss of gas). Raises potential issues: would this require BLM to conduct/verify with a sniffer or OGI; and is the immediate assessments concept viable, as opposed to INC process?
State or Tribal Variances 3179.401	State or Tribe may request variance if its requirements meet or exceed BLM's.	(1) Remove the "state and tribal variance" concept/terminology. Typically, an operator requests a variance to meet the requirements using an alternative method or technology, not a state to opt out of a BLM requirement. (2) Replace with concept of state/tribe requirements apply if equivalent or more stringent than Federal requirements. Coordination to determine cases where not as evident. (b) (5) [redacted] .

INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: May 12, 2017

FROM: Michael D. Nedd, Acting Director – Bureau of Land Management (BLM)

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

The purpose of this memo is to outline the next steps and timeline for revising the Venting & Flaring Rule before many of the burdensome requirements become operative in January 2018.

BACKGROUND

Summary of the Final Rule: The "Venting & Flaring Rule" (the Rule) is entitled *Waste Prevention, Production Subject to Royalties, and Resource Conservation*, which replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). Recently, 12 percent of operators have reported flared gas from oil well production. The Rule is codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History: The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. §§ 188–287) subjects federal oil and gas leases to the condition that lessees will "use all reasonable precautions to prevent waste of oil and gas developed in the land . . . ." 30 U.S.C. § 225. Further, the MLA requires lessees to exercise "reasonable diligence, skill, and care" in their operations and requires lessees to observe "such rules for the health and safety of the miners and for the prevention of undue waste as may be prescribed by [the] Secretary [of the Interior]." 30 U.S.C. § 187. The Federal Oil and Gas Royalty Management Act (FOGRMA) makes lessees liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence or the failure to comply with applicable rules or regulations. 30 U.S.C. § 1756. Both the MLA and FOGRMA authorize the Secretary of the Interior to prescribe rules and regulations necessary to carry out the purposes of those statutes. 30 U.S.C. § 189; 30 U.S.C. § 1751.

Before promulgation of the Rule, the Bureau of Land Management (BLM) regulated the venting, flaring, and beneficial use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The Rule included many regulatory changes, including emissions-focused requirements that did not appear in NTL-4A. Industry groups and a number of states have asserted that these requirements are more appropriately within the jurisdiction of the Administrator of the Environmental Protection Agency and the states under the Clean Air Act (CAA).

DISCUSSION

On May 10, the Senate voted against overturning the Rule using the Congressional Review Act. As such, the Rule will continue in effect unless/until the BLM rescinds or replaces it through the rulemaking process outlined below, or it is overturned in pending litigation. Any new rule that the BLM promulgates would likely be challenged in court with an estimated litigation cost of $100,000. If the new rulemaking is overturned in litigation, NTL-4Awould come back into effect.

Although the Rule went into effect in January 2017, many of its more onerous requirements are not yet operative. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare for compliance dates (Attachment 1). Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs), imposes restrictions on venting, and clarifies when lost gas is "avoidably lost" and therefore subject to royalties. Operators must comply with the Rule's flaring restrictions (or "capture percentage" requirements), equipment upgrade/replacement requirements, and leak detection and repair (LDAR) requirements beginning on January 17, 2018 (see Attachment 1).

The BLM expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million, with first year compliance costs estimated to be $113 million, with $84 million of that cost being LDAR.

NEXT STEPS

The BLM proposes a dual-faceted approach, which would limit the compliance costs posed to Industry while the BLM revises the Rule:

1. **Delay some or all of the compliance deadlines for 1 year (or some other reasonable period of time) while the BLM revises the Rule.** The BLM is concerned that it will not be able to finalize a revised Rule before the Industry will assume burdensome compliance costs. Although the compliance deadline for most of the requirements is January 2018, operators will likely assume costs in advance of that deadline. The BLM may postpone the compliance dates through notice-and-comment rulemaking, which the BLM estimates would take about 6 months to promulgate a final rule (tentative estimate).
2. **Revise/Replace the current Rule.** The BLM would move forward with policy actions (see Attachment 2 for detail) to curb waste and to address the following.
    - Encouraging beneficial use of oil or gas on lease;
    - Regulating flaring of unmarketable gas from oil wells;
    - Conserving unsold gas by reinjection;
    - Improving ROW timelines and removing obstacles to timely approval for pipeline infrastructure; and
    - Recognizing existing State/tribal policy/rules, such as those in North Dakota, Wyoming, Utah, New Mexico, Colorado, and Montana.

The BLM estimates that it could publish a proposed rule by October 31, 2017, and a final rule by May 31, 2018 (see Attachment 3). Publishing an Advance Notice of Proposed Rulemaking is optional and would add 3 months to this process.

ATTACHMENTS

1. Compliance Dates for the Waste Prevention Rule
2. Options for Revising the Waste Prevention Rule
3. Rulemaking Schedules for Concurrent Efforts
4. Table 1: Waste Prevention Rule Requirements and Alternatives

Attachment 1: Compliance Dates for the Waste Prevention Rule

The following table summarizes the compliance dates for the requirements of the Rule.

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Background

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The BLM assembled the team that developed the original Waste Prevention Rule. The team reviewed the BLM's Waste Prevention Rule-related requirements and identified potential policy alternatives that might achieve the goals of waste prevention while reducing the regulatory burdens imposed by the rule.

Summary of Policy Options

The BLM review team has identified overarching policies that would alleviate the regulatory burden posed by the Waste Prevention Rule. In addition, we list specific policy alternatives to the rule's requirements in Table 1 (pages 7-10).

Approaches to reduce general regulatory burden:

1. Rescind BLM requirements that create regulatory overlap with or duplicate EPA regulations and state regulations. Although the BLM crafted the Waste Prevention Rule's requirements to avoid regulatory overlap and offer opportunities to sync regulations with states, one approach would be to defer to the existing EPA and state regulations.
2. Replace direct regulation with market-oriented strategies. Many provisions in the Waste Prevention Rule require operators to make investments in order to reduce the loss of gas. An alternative approach would be to evaluate those gas losses and assess royalty when the losses are avoidable, but stop short of requiring further operator action, equipment replacement, or installations.
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    a. Identifying categories of operations to be exempt from requirements, thereby reducing the administrative burden of requesting and reviewing exemption applications for operations that are likely to receive approval (e.g. marginal wells).
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Notice of Proposed Rulemaking (NPR)	The BLM would develop a NPR based on previous rule experiences or comments received from ANPR process. The Office of Management and Budget (OMB) needs to review and clear the proposal.	2 month to draft NPR ~1 month OMB review	3 months to draft NPR 3 months for OMB review
NPR comment period	The NPR is published in the Federal Register for notice-and-comment period.	1 month	2 months
Comment review/ Drafting final rule	The BLM reviews the comments and revises the rule in light of those comments. The BLM sends the revised/final rule to OMB for review.	1 month review/drafting 1 month OMB review	2 months review/drafting 3 months OMB review
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Purpose, Scope, Definitions 3179.1 to 3179.3	Among other things, defines the new concepts addressed by the rule.	Expect to make conforming changes.
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Gas Capture (Associated Gas) 3179.7 to 3179.8	Requires operators to capture specified percentage targets which increase over time. They are allowed to flare a certain volume of gas per well ("flaring allowable" decreasing over time) that they can average across wells in a lease, county, or state. Flaring in excess of the specified capture targets is considered avoidably lost and royalty bearing. Failing to meet capture target also comes with consequences greater than royalty assessment (outside of 3179.7, operators could be subject to assessments, penalties, shut-in or lease cancellation). The operator may apply for alternative capture targets if meeting the target would require cessation of production and abandonment of	Team expressed concern that the current regulations are overly complex while allowing operators to flare large amounts of associated gas royalty free. (1) Maintain current framework, but lessen the increase in capture percentages over time and decrease the flaring allowable. Issues: difficult to justify with record and data; legal concern that change would be arbitrary and capricious; and does not address deficiencies above. (2) Change the conceptual framework. Reset [royalty-free] flaring limits to lower levels, but limit the punishment to royalty only. Meaning, gas flared above XX Mcfd per well would be considered avoidably

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
	significant oil reserves under the lease (application quite extensive).	lost, but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) Revert to NTL-4A framework with revisions: change action plan duration to 6 months; make all flaring from wells connected to pipelines for sale royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of wells are connected to pipelines for sale. Relies on economic evaluation for unconnected wells, which we could clarify in the regulation or policy. (4) Allow gas flared to be treated as royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options, but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications; and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Requires operators to estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement. For example if there are large volumes of flared gas that might be royalty bearing.
Regarding Existing Royalty Free Approvals 3179.10	Provides that determinations made prior to Jan 17, 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	Provides that the BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	Provides that the BLM will coordinate with State RA, on a case-by-case basis, if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1)) it does not constrain BLM if BLM and State RA cannot reach agreement,, (2) coordination with states in these circumstances is generally a good practice, and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Requires operators to capture, sell, flare use in operations on lease, or inject gas that reaches the surface, unless technically infeasible.	(1) Rescind if desired. It aides in the continuity of timeline, but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related	Requires operators to capture, sell, flare, use in operations on lease, or inject gas that reaches the surface, unless technically infeasible.	(1) Retain, but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
Operations 3179.102		exploratory well limit due to potential lack of infrastructure to deliver to market. (2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice; and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Alllows for royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Allows operators to flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
Pneumatic Controllers 3179.201	Requires continuous bleed controllers to be low bleed, except when needed functionally, routed to combustion, or replacement would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present), some states, and general practice. We generally think this is self-correcting. And it is very difficult for PET to determine whether a device is high or low bleed. (2) Make distinction between operations that are selling gas, but objectives are conceptually covered under the beneficial use and general prohibition against venting sections. If the operator is selling the gas, we want it to use a device that minimizes the amount of gas used for beneficial use (maximizes efficiency). If the operator is not selling the gas, it would minimize the amount vented.
Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary, needed functionally, routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source, and therefore, may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions, i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	Requires VOC emissions to be routed to sales, if potential for VOC emissions exceeds 6 tpy per vessel. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU's economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost, but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
		(3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare unless it would force abandonment.
Downhole Well Maintenance and Liquids Unloading 3179.204	Requires operators to minimize venting for well maintenance and Liquids Unloading. Before first manual purging, operator must consider other methods and determine that they are technically infeasible or unduly costly. Operator must remain onsite during well purging. Reporting burdens. Estimate volumes.	No identified alternatives. Team views the requirements as being necessary to understand the problem of well purging.
Leak Detection and Repair (LDAR) 3179.301	Requires semi-annual inspections for well-sites and quarterly inspections for compressor stations; instrument specifications; alternative instrument approvals; repairing leaks and verification, and reporting. Specifies which components require inspection. Operator may apply for exemption if it would cause the operator to cease production and abandon significant recoverable oil or gas reserves.	(1) Rescind, due to overlap with EPA and some states. (2) More clearly exempt operations (without application) based on observable characteristics: operations not selling gas; marginal wells (or some other threshold); equipment after the FMP. (3) Broader allowable inspection standards, i.e. AVO-based. Lessen frequency. (4) Remove substantial reporting burdens. (5) Change the framework entirely. Return to a more conventional BLM/operator regulatory framework. BLM would check for leaks during I&E inspections and issue immediate assessments if/when leaks are found (exclude leaks where fixing would mean a net loss of gas). Raises potential issues: would this require BLM to conduct/verify with a sniffer or OGI; and is the immediate assessments concept viable, as opposed to INC process?
State or Tribal Variances 3179.401	State or Tribe may request variance if its requirements meet or exceed BLM's.	(1) Remove the "state and tribal variance" concept/terminology. Typically, an operator requests a variance to meet the requirements using an alternative method or technology, not a state to opt out of a BLM requirement. (2) Replace with concept of state/tribe requirements apply if equivalent or more stringent than Federal requirements. Coordination to determine cases where not as evident.

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:57 AM

Conversation Contents

Draft Briefing Paper for Chris' Review

Attachments:

/14. Draft Briefing Paper for Chris' Review/1.1 2017 05 11 VF Briefing Memo.docx
/14. Draft Briefing Paper for Chris' Review/3.1 2017 05 11 VF Briefing Memo.docx
/14. Draft Briefing Paper for Chris' Review/3.2 VF Compliance Dates.docx
/14. Draft Briefing Paper for Chris' Review/6.1 2017 05 11 VF Briefing Memo.rev.docx
/14. Draft Briefing Paper for Chris' Review/9.1 2017 05 11 VF Briefing Memo.rev1.docx
/14. Draft Briefing Paper for Chris' Review/12.1 2017 05 11 VF Briefing Memo CLEAN.docx
/14. Draft Briefing Paper for Chris' Review/13.1 2017 05 11 VF Briefing Memo CLEAN.docx

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Thu May 11 2017 12:39:10 GMT-0600 (MDT)
To:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>
CC:	"Spisak, Timothy" <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Draft Briefing Paper for Chris' Review
Attachments:	2017 05 11 VF Briefing Memo.docx

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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Thu May 11 2017 12:40:48 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
CC:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>

Subject: Re: Draft Briefing Paper for Chris' Review

3:30?
But I'll start looking at it now.

Sent from my iPhone

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From:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
Sent:	Thu May 11 2017 12:50:36 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
CC:	"Spisak, Timothy" <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Draft Briefing Paper for Chris' Review
Attachments:	2017 05 11 VF Briefing Memo.docx VF Compliance Dates.docx

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"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Thu May 11 2017 12:52:42 GMT-0600 (MDT)
To:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
CC:	"Spisak, Timothy" <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
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To:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
CC:	"Spisak, Timothy" <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Draft Briefing Paper for Chris' Review
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Thu May 11 2017 13:17:00 GMT-0600 (MDT)
To:	James Tichenor <jtichenor@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
CC:	Lonny Bagley <lbagley@blm.gov>
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'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

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From: Tichenor, James [mailto:jtichenor@blm.gov]
Sent: Thursday, May 11, 2017 3:10 PM
To: Rhymes, Christopher
Cc: Spisak, Timothy; Lonny Bagley
Subject: Re: Draft Briefing Paper for Chris' Review

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"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Thu May 11 2017 13:18:13 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Draft Briefing Paper for Chris' Review

I'm not sure about the timing for the suspension rule. let me make a quick call to reg affairs.

On Thu, May 11, 2017 at 12:17 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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> **********
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202-573-0536

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Thu May 11 2017 13:32:03 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Draft Briefing Paper for Chris' Review
Attachments:	2017 05 11 VF Briefing Memo.rev1.docx

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INFORMATION/BRIEFING MEMORANDUM

DATE: May 11, 2017

FROM: Timothy R. Spisak Acting Assistant Director Energy Minerals and Realty Management

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

The purpose of this memo is to outline the next steps and timeline for revising the Venting & Flaring Rule before many of the burdensome requirements become operative in January 2018.

BACKGROUND

Summary of the Final Rule:

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The "Venting & Flaring Rule" (the Rule) is formally the *Waste Prevention, Production Subject to Royalties, and Resource Conservation* rulemaking that replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). Recently, 12 percent of operators have reported flared gas from oil well production. The Rule is codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History:

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Before promulgation of the (b) (5) -Rule, the Bureau of Land Management (BLM) regulated the venting, flaring, and beneficial use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The (b) (5) -Rule included many regulatory changes, including emissions-focused requirements that did not appear in NTL-4A. Many states and industry groups have asserted that these requirements are actually within the jurisdiction of the Administrator of the Environmental Protection Agency and the states under the Clean Air Act (CAA).

DISCUSSION

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On May 10 the Senate voted against overturning the Rule using the Congressional Review Act. As such t~~T~~he Rule will continue in effect unless/until the BLM rescinds or replaces (b) (5) it through the rulemaking process outlined below or until it (b) (5) is overturned in pending litigation. Any new rule that the BLM promulgates would likely be challenged in court with an estimated litigation cost of $100 000. If the new rulemaking is overturned in litigation the (b) (5) existing Rule would come back into effect.

Although the (b) (5) -Rule went into effect in January 2017, many of (b) (5) ts more onerous requirements are not yet operative. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare for compliance dates. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs), imposes restrictions on venting, and clarifies when lost gas is "avoidably lost" and therefore subject to royalties. Operators must comply with the Rule's flaring (or "gas capture") requirements, equipment upgrade/replacement requirements, and leak detection and repair (LDAR) requirements beginning on January 17, 2018.

The BLM expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million, with first year compliance costs estimated to be $113 million, with $84 million of that cost being LDAR.

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NEXT STEPS

The BLM proposes a dual-faceted approach which would limit the compliance costs posed to Industry while the BLM revises the Rule:

1. **Suspend compliance deadlines for 1 year while the BLM revises the Rule.** The BLM is concerned that it will not be able to finalize a revised Rule before the Industry will assume burdensome compliance costs. Although the compliance deadline for most of the requirements is January 2018 operators will likely assume costs in advance of that deadline. The BLM may postpone the compliance dates with a Federal Register Notice and through a Notice and Comment process.
   Revise/Replace the current Rule.
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2. The BLM would move forward with policy actions (see Attachment for detail) to curb waste (b) (5) -to address the following:
   - Encouraging beneficial use of oil or gas on lease;
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ATTACHMENTS

Attachment 1: Rulemaking Schedule

(b) (5) [redacted]

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Attachment 2: Options for Revising the Waste Prevention Rule

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Background

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The BLM assembled the team that developed the original Waste Prevention Rule. The team reviewed the BLM's Waste Prevention Rule-related requirements and identified potential policy alternatives that might achieve the goals of waste prevention while reducing the regulatory burdens imposed by the rule.

Summary of Policy Options

The BLM review team has identified overarching policies that would alleviate the regulatory burden posed by the Waste Prevention Rule. In addition we list specific policy alternatives to the rule's requirements in the table that follows.

Approaches to reduce general regulatory burden:

1. Rescind BLM requirements that create regulatory overlap with or duplicate EPA regulations and state regulations. Although the BLM carefully crafted the Waste Prevention Rule's requirements to avoid regulatory overlap and offer opportunities to sync regulations with states one approach would be to defer to the existing EPA and state regulations.
2. Replace direct regulation with market-oriented strategies. Many provisions in the Waste Prevention Rule require operators to make investments in order to reduce the loss of gas. An alternative approach would be to evaluate those gas losses and assess royalty when the losses are avoidable, but stop short of requiring further operator action, equipment replacement, or installations.
3. Reduce administrative and compliance burdens by:
    a. Identifying categories of operations to be exempt from requirements thereby reducing the administrative burden of requesting and reviewing exemption applications for operations that are likely to receive approval (e.g. marginal wells).
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Table of Waste Prevention Rule Requirements and Alternatives

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Royalty Free Use 3178.1 to 3178.10	This section updated the beneficial purposes provisions of NTL-4A..	No identified alternatives. This section with the use of "royalty free" terminology clarifies issues that have arisen during litigation and implementation of NTL-4A.
Purpose Scope Definitions 3179.1 to 3179.3	Among other things defines the new concepts addressed by the rule.	Expect to make conforming changes.
Avoidable Loss Production Subject to Royalty 3179.4 to 3179.5	Defines "avoidably lost" and "unavoidably lost" gas (and oil) and circumstances under which royalty is due.	Expect to make conforming changes.
Venting Prohibition 3179.6	Prohibits the venting or flaring of gas-well gas except when unavoidably lost. Requires the operator to flare rather than vent any gas not captured except when flaring is technically infeasible under emergency conditions or when the gas comes from specified equipment or circumstances. Requires all flares or combustion devices to have auto-ignition systems.	No identified alternatives. This section is consistent with past policy and CDM implementation guidance. Expect to make conforming changes regarding the specified equipment or circumstances outlined in (b).
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	significant oil reserves under the lease (application quite extensive).	lost but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Operators must estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	(1) Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement.
Regarding Existing Royalty Free Approvals 3179.10	Determinations made prior to Jan 17 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	The BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	The BLM will coordinate with State RA on a case-by-case basis if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1) it does not place any substantive requirement upon the BLM (2) coordination with states in the circumstances considered is generally a good practice and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Unless technically infeasible gas that reaches the surface must be captured and sold flared used in operations on lease or injected.	(1) Rescind if desired. It aides in the continuity of timeline but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related Operations	Unless technically infeasible gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Retain but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the exploratory well limit due to potential lack of infrastructure to deliver to market.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
3179.102		(2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
Pneumatic Controllers 3179.201	Requires continuous bleed controllers to be low bleed except when needed functionally routed to combustion or replacement would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind due to overlap with EPA (at present) some states and general practice. We generally think this is self-correcting. And it is very difficult for PET to determine whether a device is high or low bleed. (2) Make distinction between operations that are selling gas, but objectives are conceptually covered under the beneficial use and general prohibition against venting sections. If the operator is selling the gas, we want it to use a device that minimizes the amount of gas used for beneficial use (maximizes efficiency). If the operator is not selling the gas it would minimize the amount vented.
Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary needed functionally routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source and therefore may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	If potential VOC emissions exceed 6 tpy per vessel, then route to sales. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU s economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states. (3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
		unless it would force abandonment.
Downhole Well Maintenance and Liquids Unloading 3179.204	Operator must minimize venting for well maintenance and Liquids Unloading. Before first manual purging operator must consider other methods and determine that they are technically infeasible or unduly costly. Operator must remain onsite during well purging. Reporting burdens. Estimate volumes.	No identified alternatives. Team views the requirements as being necessary to understand the problem of well purging.
Leak Detection and Repair (LDAR) 3179.301	Semi-annual inspections for well-sites and quarterly inspections for compressor stations; instrument specifications; alternative instrument approvals repairing leaks and verification and reporting. Specifies which components require inspection. Operator may apply for exemption if it would cause the operator to cease production and abandon significant recoverable oil or gas reserves.	(1) Rescind due to overlap with EPA and some states. (2) More clearly exempt operations (without application) based on observable characteristics: operations not selling gas marginal wells (or some other threshold) equipment after the FMP. (3) Broader allowable inspection standards i.e. AVO-based. Lessen frequency. (4) Remove substantial reporting burdens. (5) Change the framework entirely. Return to a more conventional BLM/operator regulatory framework. BLM would check for leaks during I&E inspections and issue immediate assessments if/when leaks are found (exclude leaks where fixing would mean a net loss of gas). Raises potential issues: would this require BLM to conduct/verify with a sniffer or OGI and is the immediate assessments concept viable as opposed to INC process?
State or Tribal Variances 3179.401	State or Tribe may request variance if its requirements meet or exceed BLM s.	(1) Remove the "state and tribal variance" concept/terminology. Typically an operator requests a variance to meet the requirements using an alternative method or technology not a state to opt out of a BLM requirement. (2) Replace with concept of state/tribe requirements apply if equivalent or more stringent than Federal requirements. Coordination to determine cases where not as evident. (b) (5) [redacted]

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INFORMATION/BRIEFING MEMORANDUM

DATE: May 11, 2017

FROM: Timothy R. Spisak, Acting Assistant Director, Energy, Minerals and Realty Management

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

The purpose of this memo is to outline the next steps and timeline for revising the Venting & Flaring Rule before many of the burdensome requirements become operative in January 2018.

BACKGROUND

Summary of the Final Rule:

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The "Venting & Flaring Rule" (the Rule) is formally the *Waste Prevention, Production Subject to Royalties, and Resource Conservation* rulemaking that replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). Recently, 12 percent of operators have reported flared gas from oil well production. The Rule is codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History:

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From: jeanett@blm.gov
To: laun@westernlaw.org; king@westernlaw.org
Subject: FOIA Request BLM-2017-00883 Release 6 Part 2 of 3
Date: Friday, February 9, 2018 1:06:28 PM
Attachments: 2017-00883_Release_6_Redacted_Part2.pdf

Ms. Laun and Ms. King,

Please see the attached responsive documents to your FOIA request. This release is the sixth in a series of rolling releases. To ensure delivery of the records via email, the sixth interim release is broken into three parts. Parts 1 and 3 were sent in a separate email.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
	significant oil reserves under the lease (application quite extensive).	lost but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Operators must estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	(1) Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement.
Regarding Existing Royalty Free Approvals 3179.10	Determinations made prior to Jan 17 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	The BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	The BLM will coordinate with State RA on a case-by-case basis if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1) it does not place any substantive requirement upon the BLM (2) coordination with states in the circumstances considered is generally a good practice and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Unless technically infeasible gas that reaches the surface must be captured and sold flared used in operations on lease or injected.	(1) Rescind if desired. It aides in the continuity of timeline but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related Operations	Unless technically infeasible gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Retain but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the exploratory well limit due to potential lack of infrastructure to deliver to market.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
3179.102		(2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
Pneumatic Controllers 3179.201	Requires continuous bleed controllers to be low bleed except when needed functionally routed to combustion or replacement would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind due to overlap with EPA (at present) some states and general practice. We generally think this is self-correcting. And it is very difficult for PET to determine whether a device is high or low bleed. (2) Make distinction between operations that are selling gas, but objectives are conceptually covered under the beneficial use and general prohibition against venting sections. If the operator is selling the gas, we want it to use a device that minimizes the amount of gas used for beneficial use (maximizes efficiency). If the operator is not selling the gas it would minimize the amount vented.
Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary needed functionally routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source and therefore may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	If potential VOC emissions exceed 6 tpy per vessel, then route to sales. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU s economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states. (3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
		unless it would force abandonment.
Downhole Well Maintenance and Liquids Unloading 3179.204	Operator must minimize venting for well maintenance and Liquids Unloading. Before first manual purging operator must consider other methods and determine that they are technically infeasible or unduly costly. Operator must remain onsite during well purging. Reporting burdens. Estimate volumes.	No identified alternatives. Team views the requirements as being necessary to understand the problem of well purging.
Leak Detection and Repair (LDAR) 3179.301	Semi-annual inspections for well-sites and quarterly inspections for compressor stations; instrument specifications; alternative instrument approvals repairing leaks and verification and reporting. Specifies which components require inspection. Operator may apply for exemption if it would cause the operator to cease production and abandon significant recoverable oil or gas reserves.	(1) Rescind due to overlap with EPA and some states. (2) More clearly exempt operations (without application) based on observable characteristics: operations not selling gas marginal wells (or some other threshold) equipment after the FMP. (3) Broader allowable inspection standards i.e. AVO-based. Lessen frequency. (4) Remove substantial reporting burdens. (5) Change the framework entirely. Return to a more conventional BLM/operator regulatory framework. BLM would check for leaks during I&E inspections and issue immediate assessments if/when leaks are found (exclude leaks where fixing would mean a net loss of gas). Raises potential issues: would this require BLM to conduct/verify with a sniffer or OGI and is the immediate assessments concept viable as opposed to INC process?
State or Tribal Variances 3179.401	State or Tribe may request variance if its requirements meet or exceed BLM s.	(1) Remove the "state and tribal variance" concept/terminology. Typically an operator requests a variance to meet the requirements using an alternative method or technology not a state to opt out of a BLM requirement. (2) Replace with concept of state/tribe requirements apply if equivalent or more stringent than Federal requirements. Coordination to determine cases where not as evident. (b) (5) [redacted]

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The following table summarizes the compliance dates for the requirements of the Rule.

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3179.4, 3179.5	Determines when the loss of oil or gas is "avoidable" and therefore royalty bearing	January 17, 2017
3179.6	Requires operators to flare gas that is not captured rather than vent it, except in certain circumstances	January 17, 2017
3179.7	Requires operators to capture a certain percentage of the gas they produce	**January 17, 2018**
3179.9	Measurement requirements for flared gas	**January 17, 2018**
3179.101 – 3179.105	Limits on, and requirements for disposal of, gas lost during well drilling, well completion and related operations, initial production testing, subsequent well tests, and emergencies	January 17, 2017
3179.201, 3179.202	Operators must upgrade to lower-emission pneumatic equipment	**January 17, 2018**
3179.203	Operators must route tank vapors from covered storage vessels to sales line or to flare	**January 17, 2018**
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3179.301 – 3179.305	Leak detection and repair requirements	**January 17, 2018** for sites that have begun production prior to January 17, 2017 **60 days after beginning production** for sites that begin production after January 17, 2017 **60 days after** an out-of-service site is brought back into service and re-pressurized

INFORMATION/BRIEFING MEMORANDUM

DATE: May 11, 2017

FROM: Timothy R. Spisak Acting Assistant Director Energy Minerals and Realty Management

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

The purpose of this memo is to outline the next steps and timeline for revising the Venting & Flaring Rule before many of the burdensome requirements become operative in January 2018.

BACKGROUND

Summary of the Final Rule:

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The "Venting & Flaring Rule" (the Rule) is formally the *Waste Prevention, Production Subject to Royalties, and Resource Conservation* rulemaking that replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). Recently, 12 percent of operators have reported flared gas from oil well production. The Rule is codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History:

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The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. §§ 188–287) subjects federal oil and gas leases to the condition that lessees will "use all reasonable precautions to prevent waste of oil and gas developed in the land . . . ." 30 U.S.C. § 225. Further, the MLA requires lessees to exercise "reasonable diligence, skill, and care" in their operations and requires lessees to observe "such rules for the health and safety of the miners and for the prevention of undue waste as may be prescribed by [the] Secretary [of the Interior]." 30 U.S.C. § 187. The Federal Oil and Gas Royalty Management Act (FOGRMA) makes lessees liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence or the failure to comply with applicable rules or regulations. 30 U.S.C. § 1756. Both the MLA and FOGRMA authorize the Secretary of the Interior to prescribe rules and regulations necessary to carry out the purposes of those statutes. 30 U.S.C. § 189; 30 U.S.C. § 1751.

Before promulgation of the (b) (5) -Rule, the Bureau of Land Management (BLM) regulated the venting, flaring, and beneficial use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The (b) (5) -Rule included many regulatory changes, including emissions-focused requirements that did not appear in NTL-4A. Many states and industry groups have asserted that these requirements are actually within the jurisdiction of the Administrator of the Environmental Protection Agency and the states under the Clean Air Act (CAA).

DISCUSSION

(b) (5)

On May 10 the Senate voted against overturning the Rule using the Congressional Review Act. As such t~~T~~he Rule will continue in effect unless/until the BLM rescinds or replaces (b) (5) it through the rulemaking process outlined below or until it (b) (5) is overturned in pending litigation. Any new rule that the BLM promulgates would likely be challenged in court with an estimated litigation cost of $100 000. If the new rulemaking is overturned in litigation the (b) (5) existing Rule would come back into effect.

Although the (b) (5) -Rule went into effect in January 2017, many of (b) (5) its more onerous requirements are not yet operative. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare for compliance dates. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs), imposes restrictions on venting, and clarifies when lost gas is "avoidably lost" and therefore subject to royalties. Operators must comply with the Rule's flaring (or "gas capture") requirements, equipment upgrade/replacement requirements, and leak detection and repair (LDAR) requirements beginning on January 17, 2018 (see Attachment).

The BLM expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million, with first year compliance costs estimated to be $113 million, with $84 million of that cost being LDAR.

(b) (5)

NEXT STEPS

The BLM proposes a dual-faceted approach which would limit the compliance costs posed to Industry while the BLM revises the Rule:

1. **Suspend compliance deadlines for 1 year while the BLM revises the Rule.** The BLM is concerned that it will not be able to finalize a revised Rule before the Industry will assume burdensome compliance costs. Although the compliance deadline for most of the requirements is January 2018 operators will likely assume costs in advance of that deadline. The BLM may postpone the compliance dates ~~with a Federal Register Notice and~~ through the a ~~N~~notice ~~and~~ ~~C~~comment rule ~~m~~making process which would take about 5 months to publish (tentative estimate).
   - **Revise/Replace the current Rule.**
   - (b) (5)
   - ~~A while ceding some of the more duplicative regulatory provisions to states/EPA under the CAA.~~
2. The BLM would move forward with policy actions (see Attachment for detail) to curb waste (b) (5) -to address the following. The BLM estimates that it could publish a proposed rule by October 31, 2017 and a final rule by May 31, 2018 (see Attachment).

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Publishing an Advanced Notice of Proposed Rulemaking is optional and would add 3 months to this process. ~~.~~

- Encouraging beneficial use of oil or gas on lease;
- Regulating flaring of unmarketable gas from oil wells;
- Conserving unsold gas by reinjection;
- Improving ROW timelines and removing obstacles to timely approval for pipeline infrastructure; and
- Recognizing existing State/tribal policy/rules, such as those in North Dakota, Wyoming, Utah, New Mexico, Colorado, and Montana.

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ATTACHMENTS

Attachment 1: Rulemaking Schedules for Concurrent Efforts

(b) (5) [redacted]

[redacted]

Activity	Description	Timing (Tentative) – Rulemaking to Suspend Rule Implementation	Timing – Rulemaking to Revise/Replace Rule
Advanced Notice of Proposed Rulemaking (ANPR)	OPTIONAL. The BLM would solicit input from the public on whether, and how, NTL-4A should be revised.	N/A	1 month to publish 2 months for public comment
Notice of Proposed Rulemaking (NPR)	The BLM would develop a NPR based on previous rule experiences or comments received from ANPR process. The Office of Management and Budget (OMB) needs to review and clear the proposal.	1 month to draft NPR 1 month OMB review	3 months to draft NPR 3 months for OMB review
NPR comment period	The NPR is published in the Federal Register for notice-and-comment period.	1 month	2 months
Comment review/ Drafting final rule	The BLM reviews the comments and revises the rule in light of those comments. The BLM sends the revised/final rule to OMB for review.	1 month review/drafting 1 month OMB review	2 months review/drafting 3 months OMB review
Final rule is published	The BLM publishes the final rule in the Federal Register	After publishing, 1 month until effective	After publishing, 2 months until effective
Total time to publish		~5 months	13 months (for NPR) 16 months (including ANPR)
Total cost		~$0.5 million	$1.2 – 2.1 million

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Attachment 2: Compliance Dates of the Rule

The following table summarizes the compliance dates for the requirements of the Rule.

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3179.4 3179.5	Determines when the loss of oil or gas is "avoidable" and therefore royalty bearing	January 17 2017
3179.6	Requires operators to flare gas that is not captured rather than vent it except in certain circumstances	January 17 2017
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3179.9	Measurement requirements for flared gas	**January 17, 2018**
3179.101 – 3179.105	Limits on and requirements for disposal of gas lost during well drilling well completion and related operations initial production testing subsequent well tests, and emergencies	January 17 2017
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Attachment 3: Options for Revising the Waste Prevention Rule

Background

Executive Order 13783 "Promoting Energy Independence and Economic Growth" (March 28 2017) directs the Secretary of the Interior to review the Bureau of Land Management's (BLM) final rule entitled "Waste Prevention Production Subject to Royalties and Resource Conservation" (effective January 17, 2017) for consistency with the policy set forth in the order: "to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production constrain economic growth and prevent job creation." Secretarial Order No. 3349 (March 29 2017) directed the BLM Director to conduct the review required per Executive Order 13783 by April 19 2017.

The BLM assembled the team that developed the original Waste Prevention Rule. The team reviewed the BLM's Waste Prevention Rule-related requirements and identified potential policy alternatives that might achieve the goals of waste prevention while reducing the regulatory burdens imposed by the rule.

Summary of Policy Options

The BLM review team has identified overarching policies that would alleviate the regulatory burden posed by the Waste Prevention Rule. In addition we list specific policy alternatives to the rule's requirements in the table that follows.

Approaches to reduce general regulatory burden:

1. Rescind BLM requirements that create regulatory overlap with or duplicate EPA regulations and state regulations. Although the BLM carefully crafted the Waste Prevention Rule's requirements to avoid regulatory overlap and offer opportunities to sync regulations with states one approach would be to defer to the existing EPA and state regulations.
2. Replace direct regulation with market-oriented strategies. Many provisions in the Waste Prevention Rule require operators to make investments in order to reduce the loss of gas. An alternative approach would be to evaluate those gas losses and assess royalty when the losses are avoidable, but stop short of requiring further operator action, equipment replacement, or installations.
3. Reduce administrative and compliance burdens by:
    a. Identifying categories of operations to be exempt from requirements, thereby reducing the administrative burden of requesting and reviewing exemption applications for operations that are likely to receive approval (e.g. marginal wells).
    b. Removing and/or streamlining reporting requirements.

Table of Waste Prevention Rule Requirements and Alternatives

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Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
Royalty Provisions 3103.3-1	Allows BLM to specify a royalty rate higher than 12.5% for new competitive leases. Although the MLA sets 12.5% as a floor for competitive lease royalties the prior regulation had set 12.5% as the ceiling. (This provision allows the BLM to increase royalty rates and is not specific to leases that vent or flare gas).	No identified alternatives. This provision is important programmatically because it allows BLM to close 2 GAO recommendations. Ultimately the Administration s policy direction may dictate whether to retain or rescind.
Waste Management Plan 3162.3-1	BLM requires the operator to submit with its APD a Waste Management Plan containing information about expected completion dates production rates gas composition and decline curves. Requires a certification of contact with midstream company and information about the capacity of the pipeline to which it plans to connect or extensive detail about pipelines within a 20 mile radius if it has not identified a pipeline to connect.	(1) Retain the operator certification that it contacted a midstream company, but rescind the rest. The certification demonstrates the operator s due diligence in seeking a market for gas. (2) Potential to add a checklist of items that the operator should consider including commingling with other leases to avoid flaring.
Royalty Free Use 3178.1 to 3178.10	This section updated the beneficial purposes provisions of NTL-4A..	No identified alternatives. This section with the use of "royalty free" terminology clarifies issues that have arisen during litigation and implementation of NTL-4A.
Purpose Scope Definitions 3179.1 to 3179.3	Among other things defines the new concepts addressed by the rule.	Expect to make conforming changes.
Avoidable Loss Production Subject to Royalty 3179.4 to 3179.5	Defines "avoidably lost" and "unavoidably lost" gas (and oil) and circumstances under which royalty is due.	Expect to make conforming changes.
Venting Prohibition 3179.6	Prohibits the venting or flaring of gas-well gas except when unavoidably lost. Requires the operator to flare rather than vent any gas not captured except when flaring is technically infeasible under emergency conditions or when the gas comes from specified equipment or circumstances. Requires all flares or combustion devices to have auto-ignition systems.	No identified alternatives. This section is consistent with past policy and CDM implementation guidance. Expect to make conforming changes regarding the specified equipment or circumstances outlined in (b).
Gas Capture (Associated Gas) 3179.7 to 3179.8	The operator must capture specified percentage targets which increase over time. They are allowed to flare a certain volume of gas per well ("flaring allowable" decreasing over time) which they can average across wells in a lease county or state. Flaring in excess of the specified capture targets is considered avoidably lost and royalty bearing. Failing to meet capture target also comes with consequences greater than royalty assessment (outside of 3179.7, operators could be subject to assessments, penalties, shut-in or lease cancellation). The operator may apply for alternative capture targets if meeting the target would require cessation of production and abandonment of	Team expressed concern that the current regulations are overly complex while allowing operators to flare large amounts of associated gas royalty free. (1) Maintain current framework but lessen the increase in capture percentages over time and decrease the flaring allowable. Issues: difficult to justify with record and data legal concern that change would be arbitrary and capricious and does not address deficiencies above. (2) Change the conceptual framework. Reset [royalty-free] flaring limits to lower levels but limit the punishment to royalty only. Meaning gas flared above XX Mcfd per well would be considered avoidably

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	significant oil reserves under the lease (application quite extensive).	lost but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications and BLM setting the precedent that any holdup is royalty free.
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Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
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Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary needed functionally routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source and therefore may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	If potential VOC emissions exceed 6 tpy per vessel, then route to sales. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU s economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states. (3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare

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		unless it would force abandonment.
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INFORMATION/BRIEFING MEMORANDUM

DATE: May 11, 2017

FROM: Timothy R. Spisak Acting Assistant Director Energy Minerals and Realty Management

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

The purpose of this memo is to outline the next steps and timeline for revising the Venting & Flaring Rule before many of the burdensome requirements become operative in January 2018.

BACKGROUND

Summary of the Final Rule:

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The "Venting & Flaring Rule" (the Rule) is formally the *Waste Prevention, Production Subject to Royalties, and Resource Conservation* rulemaking that replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). Recently, 12 percent of operators have reported flared gas from oil well production. The Rule is codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History:

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The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. §§ 188–287) subjects federal oil and gas leases to the condition that lessees will "use all reasonable precautions to prevent waste of oil and gas developed in the land . . . ." 30 U.S.C. § 225. Further, the MLA requires lessees to exercise "reasonable diligence, skill, and care" in their operations and requires lessees to observe "such rules for the health and safety of the miners and for the prevention of undue waste as may be prescribed by [the] Secretary [of the Interior]." 30 U.S.C. § 187. The Federal Oil and Gas Royalty Management Act (FOGRMA) makes lessees liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence or the failure to comply with applicable rules or regulations. 30 U.S.C. § 1756. Both the MLA and FOGRMA authorize the Secretary of the Interior to prescribe rules and regulations necessary to carry out the purposes of those statutes. 30 U.S.C. § 189; 30 U.S.C. § 1751.

Before promulgation of the (b) (5) -Rule, the Bureau of Land Management (BLM) regulated the venting, flaring, and beneficial use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The (b) (5) -Rule included many regulatory changes, including emissions-focused requirements that did not appear in NTL-4A. Many states and industry groups have asserted that these requirements are actually within the jurisdiction of the Administrator of the Environmental Protection Agency and the states under the Clean Air Act (CAA).

DISCUSSION

(b) (5)

On May 10 the Senate voted against overturning the Rule using the Congressional Review Act. As such t~~T~~he Rule will continue in effect unless/until the BLM rescinds or replaces (b) (5) it through the rulemaking process outlined below or until it (b) (5) is overturned in pending litigation. Any new rule that the BLM promulgates would likely be challenged in court with an estimated litigation cost of $100 000. If the new rulemaking is overturned in litigation the (b) (5) existing Rule would come back into effect.

Although the (b) (5) -Rule went into effect in January 2017, many of (b) (5) ts more onerous requirements are not yet operative. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare for compliance dates. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs), imposes restrictions on venting, and clarifies when lost gas is "avoidably lost" and therefore subject to royalties. Operators must comply with the Rule's flaring (or "gas capture") requirements, equipment upgrade/replacement requirements, and leak detection and repair (LDAR) requirements beginning on January 17, 2018 (see Attachment).

The BLM expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million, with first year compliance costs estimated to be $113 million, with $84 million of that cost being LDAR.

(b) (5) [redacted]

NEXT STEPS

The BLM proposes a dual-faceted approach which would limit the compliance costs posed to Industry while the BLM revises the Rule:

1. **Suspend compliance deadlines for 1 year while the BLM revises the Rule.** The BLM is concerned that it will not be able to finalize a revised Rule before the Industry will assume burdensome compliance costs. Although the compliance deadline for most of the requirements is January 2018 operators will likely assume costs in advance of that deadline. The BLM may postpone the compliance dates ~~with a Federal Register Notice and~~ through the a Nnotice and Ccomment rule-making process which would take about 6 months to publish (tentative estimate).

   Revise/Replace the current Rule.

   (b) (5) [redacted]

2. The BLM would move forward with policy actions (see Attachment for detail) to curb waste (b) (5) [redacted] to address the following. The BLM estimates that it could publish a proposed rule by October 31, 2017 and a final rule by May 31, 2018 (see Attachment).

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Publishing an Advanced Notice of Proposed Rulemaking is optional and would add 3 months to this process. ~~.~~

- Encouraging beneficial use of oil or gas on lease;
- Regulating flaring of unmarketable gas from oil wells;
- Conserving unsold gas by reinjection;
- Improving ROW timelines and removing obstacles to timely approval for pipeline infrastructure; and
- Recognizing existing State/tribal policy/rules, such as those in North Dakota, Wyoming, Utah, New Mexico, Colorado, and Montana.

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ATTACHMENTS

Attachment 1: Rulemaking Schedules for Concurrent Efforts

(b) (5) [redacted]

[redacted]

Activity	Description	Timing (Tentative) – Rulemaking to Suspend Rule Implementation	Timing – Rulemaking to Revise/Replace Rule
Advanced Notice of Proposed Rulemaking (ANPR)	OPTIONAL. The BLM would solicit input from the public on whether, and how, NTL-4A should be revised.	N/A	1 month to publish 2 months for public comment
Notice of Proposed Rulemaking (NPR)	The BLM would develop a NPR based on previous rule experiences or comments received from ANPR process. The Office of Management and Budget (OMB) needs to review and clear the proposal.	2 month to draft NPR ~1 month OMB review	3 months to draft NPR 3 months for OMB review
NPR comment period	The NPR is published in the Federal Register for notice-and-comment period.	1 month	2 months
Comment review/ Drafting final rule	The BLM reviews the comments and revises the rule in light of those comments. The BLM sends the revised/final rule to OMB for review.	1 month review/drafting 1 month OMB review	2 months review/drafting 3 months OMB review
Final rule is published	The BLM publishes the final rule in the Federal Register	After publishing, 1 month until effective	After publishing, 2 months until effective
Total time to publish		~6 months	13 months (for NPR) 16 months (including ANPR)
Total cost		~$0.75 million	$1.2 – 2.1 million

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Attachment 2: Compliance Dates of the Rule

The following table summarizes the compliance dates for the requirements of the Rule.

Citation	Summary	Compliance Date
3162.3-1(j)	Operators must submit a waste minimization plan with their an Application for Permit to Drill	January 17 2017
Subpart 3178	Royalty-free use requirements	January 17, 2017
3179.4 3179.5	Determines when the loss of oil or gas is "avoidable" and therefore royalty bearing	January 17 2017
3179.6	Requires operators to flare gas that is not captured rather than vent it except in certain circumstances	January 17 2017
3179.7	Requires operators to capture a certain percentage of the gas they produce	**January 17, 2018**
3179.9	Measurement requirements for flared gas	**January 17, 2018**
3179.101 – 3179.105	Limits on and requirements for disposal of gas lost during well drilling well completion and related operations initial production testing subsequent well tests, and emergencies	January 17 2017
3179.201 3179.202	Operators must upgrade to lower-emission pneumatic equipment	**January 17, 2018**
3179.203	Operators must route tank vapors from covered storage vessels to sales line or to flare	**January 17, 2018**
3179.204	Requirements for minimizing gas losses from downhole well maintenance and liquids unloading	January 17, 2017
3179.301 – 3179.305	Leak detection and repair requirements	**January 17, 2018** for sites that have begun production prior to January 17, 2017 **60 days after beginning production** for sites that begin production after January 17, 2017 **60 days after** an out-of-service site is brought back into service and re-pressurized

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Attachment 3: Options for Revising the Waste Prevention Rule

Background

Executive Order 13783 "Promoting Energy Independence and Economic Growth" (March 28 2017) directs the Secretary of the Interior to review the Bureau of Land Management's (BLM) final rule entitled "Waste Prevention Production Subject to Royalties and Resource Conservation" (effective January 17, 2017) for consistency with the policy set forth in the order: "to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production constrain economic growth and prevent job creation." Secretarial Order No. 3349 (March 29 2017) directed the BLM Director to conduct the review required per Executive Order 13783 by April 19 2017.

The BLM assembled the team that developed the original Waste Prevention Rule. The team reviewed the BLM's Waste Prevention Rule-related requirements and identified potential policy alternatives that might achieve the goals of waste prevention while reducing the regulatory burdens imposed by the rule.

Summary of Policy Options

The BLM review team has identified overarching policies that would alleviate the regulatory burden posed by the Waste Prevention Rule. In addition we list specific policy alternatives to the rule's requirements in the table that follows.

Approaches to reduce general regulatory burden:

1. Rescind BLM requirements that create regulatory overlap with or duplicate EPA regulations and state regulations. Although the BLM carefully crafted the Waste Prevention Rule's requirements to avoid regulatory overlap and offer opportunities to sync regulations with states one approach would be to defer to the existing EPA and state regulations.
2. Replace direct regulation with market-oriented strategies. Many provisions in the Waste Prevention Rule require operators to make investments in order to reduce the loss of gas. An alternative approach would be to evaluate those gas losses and assess royalty when the losses are avoidable, but stop short of requiring further operator action, equipment replacement, or installations.
3. Reduce administrative and compliance burdens by:
    a. Identifying categories of operations to be exempt from requirements, thereby reducing the administrative burden of requesting and reviewing exemption applications for operations that are likely to receive approval (e.g. marginal wells).
    b. Removing and/or streamlining reporting requirements.

Table of Waste Prevention Rule Requirements and Alternatives

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Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
Royalty Provisions 3103.3-1	Allows BLM to specify a royalty rate higher than 12.5% for new competitive leases. Although the MLA sets 12.5% as a floor for competitive lease royalties the prior regulation had set 12.5% as the ceiling. (This provision allows the BLM to increase royalty rates and is not specific to leases that vent or flare gas).	No identified alternatives. This provision is important programmatically because it allows BLM to close 2 GAO recommendations. Ultimately the Administration s policy direction may dictate whether to retain or rescind.
Waste Management Plan 3162.3-1	BLM requires the operator to submit with its APD a Waste Management Plan containing information about expected completion dates production rates gas composition and decline curves. Requires a certification of contact with midstream company and information about the capacity of the pipeline to which it plans to connect or extensive detail about pipelines within a 20 mile radius if it has not identified a pipeline to connect.	(1) Retain the operator certification that it contacted a midstream company, but rescind the rest. The certification demonstrates the operator s due diligence in seeking a market for gas. (2) Potential to add a checklist of items that the operator should consider including commingling with other leases to avoid flaring.
Royalty Free Use 3178.1 to 3178.10	This section updated the beneficial purposes provisions of NTL-4A..	No identified alternatives. This section with the use of "royalty free" terminology clarifies issues that have arisen during litigation and implementation of NTL-4A.
Purpose Scope Definitions 3179.1 to 3179.3	Among other things defines the new concepts addressed by the rule.	Expect to make conforming changes.
Avoidable Loss Production Subject to Royalty 3179.4 to 3179.5	Defines "avoidably lost" and "unavoidably lost" gas (and oil) and circumstances under which royalty is due.	Expect to make conforming changes.
Venting Prohibition 3179.6	Prohibits the venting or flaring of gas-well gas except when unavoidably lost. Requires the operator to flare rather than vent any gas not captured except when flaring is technically infeasible under emergency conditions or when the gas comes from specified equipment or circumstances. Requires all flares or combustion devices to have auto-ignition systems.	No identified alternatives. This section is consistent with past policy and CDM implementation guidance. Expect to make conforming changes regarding the specified equipment or circumstances outlined in (b).
Gas Capture (Associated Gas) 3179.7 to 3179.8	The operator must capture specified percentage targets which increase over time. They are allowed to flare a certain volume of gas per well ("flaring allowable" decreasing over time) which they can average across wells in a lease county or state. Flaring in excess of the specified capture targets is considered avoidably lost and royalty bearing. Failing to meet capture target also comes with consequences greater than royalty assessment (outside of 3179.7, operators could be subject to assessments, penalties, shut-in or lease cancellation). The operator may apply for alternative capture targets if meeting the target would require cessation of production and abandonment of	Team expressed concern that the current regulations are overly complex while allowing operators to flare large amounts of associated gas royalty free. (1) Maintain current framework but lessen the increase in capture percentages over time and decrease the flaring allowable. Issues: difficult to justify with record and data legal concern that change would be arbitrary and capricious and does not address deficiencies above. (2) Change the conceptual framework. Reset [royalty-free] flaring limits to lower levels but limit the punishment to royalty only. Meaning gas flared above XX Mcfd per well would be considered avoidably

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
	significant oil reserves under the lease (application quite extensive).	lost but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Operators must estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	(1) Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement.
Regarding Existing Royalty Free Approvals 3179.10	Determinations made prior to Jan 17 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	The BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	The BLM will coordinate with State RA on a case-by-case basis if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1) it does not place any substantive requirement upon the BLM (2) coordination with states in the circumstances considered is generally a good practice and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Unless technically infeasible gas that reaches the surface must be captured and sold flared used in operations on lease or injected.	(1) Rescind if desired. It aides in the continuity of timeline but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related Operations	Unless technically infeasible gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Retain but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the exploratory well limit due to potential lack of infrastructure to deliver to market.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
3179.102		(2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
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INFORMATION/BRIEFING MEMORANDUM

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1. **Suspend compliance deadlines for 1 year while the BLM revises the Rule.** The BLM is concerned that it will not be able to finalize a revised Rule before the Industry will assume burdensome compliance costs. Although the compliance deadline for most of the requirements is January 2018, operators will likely assume costs in advance of that deadline. The BLM may postpone the compliance dates through the notice-and-comment rulemaking process which would take about 6 months to publish (tentative estimate).
2. **Revise/Replace the current Rule.** The BLM would move forward with policy actions (see Attachment for detail) to curb waste to address the following. The BLM estimates that it could publish a proposed rule by October 31, 2017 and a final rule by May 31, 2018 (see Attachment). Publishing an Advanced Notice of Proposed Rulemaking is optional and would add 3 months to this process.
    - Encouraging beneficial use of oil or gas on lease;
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ATTACHMENTS

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Activity	Description	Timing (Tentative) – Rulemaking to Suspend Rule Implementation	Timing – Rulemaking to Revise/Replace Rule
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Attachment 3: Options for Revising the Waste Prevention Rule

Background

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The BLM assembled the team that developed the original Waste Prevention Rule. The team reviewed the BLM's Waste Prevention Rule-related requirements and identified potential policy alternatives that might achieve the goals of waste prevention while reducing the regulatory burdens imposed by the rule.

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The BLM review team has identified overarching policies that would alleviate the regulatory burden posed by the Waste Prevention Rule. In addition, we list specific policy alternatives to the rule's requirements in the table that follows.

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2. Replace direct regulation with market-oriented strategies. Many provisions in the Waste Prevention Rule require operators to make investments in order to reduce the loss of gas. An alternative approach would be to evaluate those gas losses and assess royalty when the losses are avoidable, but stop short of requiring further operator action, equipment replacement, or installations.
3. Reduce administrative and compliance burdens by:
    a. Identifying categories of operations to be exempt from requirements, thereby reducing the administrative burden of requesting and reviewing exemption applications for operations that are likely to receive approval (e.g. marginal wells).
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Royalty Free Use 3178.1 to 3178.10	This section updated the beneficial purposes provisions of NTL-4A..	No identified alternatives. This section, with the use of "royalty free" terminology, clarifies issues that have arisen during litigation and implementation of NTL-4A.
Purpose, Scope, Definitions 3179.1 to 3179.3	Among other things, defines the new concepts addressed by the rule.	Expect to make conforming changes.
Avoidable Loss, Production Subject to Royalty 3179.4 to 3179.5	Defines "avoidably lost" and "unavoidably lost" gas (and oil) and circumstances under which royalty is due.	Expect to make conforming changes.
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Gas Capture (Associated Gas) 3179.7 to 3179.8	The operator must capture specified percentage targets which increase over time. They are allowed to flare a certain volume of gas per well ("flaring allowable" decreasing over time) which they can average across wells in a lease, county, or state. Flaring in excess of the specified capture targets is considered avoidably lost and royalty bearing. Failing to meet capture target also comes with consequences greater than royalty assessment (outside of 3179.7, operators could be subject to assessments, penalties, shut-in or lease cancellation). The operator may apply for alternative capture targets if meeting the target would require cessation of production and abandonment of	Team expressed concern that the current regulations are overly complex while allowing operators to flare large amounts of associated gas royalty free. (1) Maintain current framework, but lessen the increase in capture percentages over time and decrease the flaring allowable. Issues: difficult to justify with record and data; legal concern that change would be arbitrary and capricious; and does not address deficiencies above. (2) Change the conceptual framework. Reset [royalty-free] flaring limits to lower levels, but limit the punishment to royalty only. Meaning, gas flared above XX Mcfd per well would be considered avoidably

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	significant oil reserves under the lease (application quite extensive).	lost, but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months; make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells, which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options, but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications; and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Operators must estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	(1) Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement.
Regarding Existing Royalty Free Approvals 3179.10	Determinations made prior to Jan 17, 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	The BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	The BLM will coordinate with State RA, on a case-by-case basis, if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1) it does not place any substantive requirement upon the BLM, (2) coordination with states in the circumstances considered is generally a good practice, and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Rescind if desired. It aides in the continuity of timeline, but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related Operations	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Retain, but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the exploratory well limit due to potential lack of infrastructure to deliver to market.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
3179.102		(2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice; and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
Pneumatic Controllers 3179.201	Requires continuous bleed controllers to be low bleed, except when needed functionally, routed to combustion, or replacement would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present), some states, and general practice. We generally think this is self-correcting. And it is very difficult for PET to determine whether a device is high or low bleed. (2) Make distinction between operations that are selling gas, but objectives are conceptually covered under the beneficial use and general prohibition against venting sections. If the operator is selling the gas, we want it to use a device that minimizes the amount of gas used for beneficial use (maximizes efficiency). If the operator is not selling the gas, it would minimize the amount vented.
Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary, needed functionally, routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source, and therefore, may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions, i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	If potential VOC emissions exceed 6 tpy per vessel, then route to sales. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU's economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost, but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states. (3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare

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		unless it would force abandonment.
Downhole Well Maintenance and Liquids Unloading 3179.204	Operator must minimize venting for well maintenance and Liquids Unloading. Before first manual purging, operator must consider other methods and determine that they are technically infeasible or unduly costly. Operator must remain onsite during well purging. Reporting burdens. Estimate volumes.	No identified alternatives. Team views the requirements as being necessary to understand the problem of well purging.
Leak Detection and Repair (LDAR) 3179.301	Semi-annual inspections for well-sites and quarterly inspections for compressor stations; instrument specifications; alternative instrument approvals; repairing leaks and verification, and reporting. Specifies which components require inspection. Operator may apply for exemption if it would cause the operator to cease production and abandon significant recoverable oil or gas reserves.	(1) Rescind, due to overlap with EPA and some states. (2) More clearly exempt operations (without application) based on observable characteristics: operations not selling gas; marginal wells (or some other threshold); equipment after the FMP. (3) Broader allowable inspection standards, i.e. AVO-based. Lessen frequency. (4) Remove substantial reporting burdens. (5) Change the framework entirely. Return to a more conventional BLM/operator regulatory framework. BLM would check for leaks during I&E inspections and issue immediate assessments if/when leaks are found (exclude leaks where fixing would mean a net loss of gas). Raises potential issues: would this require BLM to conduct/verify with a sniffer or OGI; and is the immediate assessments concept viable, as opposed to INC process?
State or Tribal Variances 3179.401	State or Tribe may request variance if its requirements meet or exceed BLM's.	(1) Remove the "state and tribal variance" concept/terminology. Typically, an operator requests a variance to meet the requirements using an alternative method or technology, not a state to opt out of a BLM requirement. (2) Replace with concept of state/tribe requirements apply if equivalent or more stringent than Federal requirements. Coordination to determine cases where not as evident. (b) (5) [redacted]

INFORMATION/BRIEFING MEMORANDUM

DATE: May 11, 2017

FROM: Timothy R. Spisak, Acting Assistant Director, Energy, Minerals and Realty Management

SUBJECT: Venting & Flaring Rule – Suspending Compliance Dates and Revising the Requirements

The purpose of this memo is to outline the next steps and timeline for revising the Venting & Flaring Rule before many of the burdensome requirements become operative in January 2018.

BACKGROUND

Summary of the Final Rule: The "Venting & Flaring Rule" (the Rule) is formally the *Waste Prevention, Production Subject to Royalties, and Resource Conservation* rulemaking that replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). Recently, 12 percent of operators have reported flared gas from oil well production. The Rule is codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History: The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. §§ 188–287) subjects federal oil and gas leases to the condition that lessees will "use all reasonable precautions to prevent waste of oil and gas developed in the land . . . ." 30 U.S.C. § 225. Further, the MLA requires lessees to exercise "reasonable diligence, skill, and care" in their operations and requires lessees to observe "such rules for the health and safety of the miners and for the prevention of undue waste as may be prescribed by [the] Secretary [of the Interior]." 30 U.S.C. § 187. The Federal Oil and Gas Royalty Management Act (FOGRMA) makes lessees liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence or the failure to comply with applicable rules or regulations. 30 U.S.C. § 1756. Both the MLA and FOGRMA authorize the Secretary of the Interior to prescribe rules and regulations necessary to carry out the purposes of those statutes. 30 U.S.C. § 189; 30 U.S.C. § 1751.

Before promulgation of the Rule, the Bureau of Land Management (BLM) regulated the venting, flaring, and beneficial use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The Rule included many regulatory changes, including emissions-focused requirements that did not appear in NTL-4A. Many states and industry groups have asserted that these requirements are actually within the jurisdiction of the Administrator of the Environmental Protection Agency and the states under the Clean Air Act (CAA).

DISCUSSION

On May 10, the Senate voted against overturning the Rule using the Congressional Review Act. As such, the Rule will continue in effect unless/until the BLM rescinds or replaces it through the rulemaking process outlined below, or until it is overturned in pending litigation. Any new rule that the BLM promulgates would likely be challenged in court with an estimated litigation cost of $100,000. If the new rulemaking is overturned in litigation, the existing Rule would come back into effect.

Although the Rule went into effect in January 2017, many of its more onerous requirements are not yet operative. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare for compliance dates. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs), imposes restrictions on venting, and clarifies when lost gas is "avoidably lost" and therefore subject to royalties. Operators must comply with the Rule's flaring (or "gas capture") requirements, equipment upgrade/replacement requirements, and leak detection and repair (LDAR) requirements beginning on January 17, 2018 (see Attachment).

The BLM expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million, with first year compliance costs estimated to be $113 million, with $84 million of that cost being LDAR.

NEXT STEPS

The BLM proposes a dual-faceted approach, which would limit the compliance costs posed to Industry while the BLM revises the Rule:

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Gas Capture (Associated Gas) 3179.7 to 3179.8	The operator must capture specified percentage targets which increase over time. They are allowed to flare a certain volume of gas per well ("flaring allowable" decreasing over time) which they can average across wells in a lease, county, or state. Flaring in excess of the specified capture targets is considered avoidably lost and royalty bearing. Failing to meet capture target also comes with consequences greater than royalty assessment (outside of 3179.7, operators could be subject to assessments, penalties, shut-in or lease cancellation). The operator may apply for alternative capture targets if meeting the target would require cessation of production and abandonment of	Team expressed concern that the current regulations are overly complex while allowing operators to flare large amounts of associated gas royalty free. (1) Maintain current framework, but lessen the increase in capture percentages over time and decrease the flaring allowable. Issues: difficult to justify with record and data; legal concern that change would be arbitrary and capricious; and does not address deficiencies above. (2) Change the conceptual framework. Reset [royalty-free] flaring limits to lower levels, but limit the punishment to royalty only. Meaning, gas flared above XX Mcfd per well would be considered avoidably

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
	significant oil reserves under the lease (application quite extensive).	lost, but the operator would not be compelled to capture. Could tailor limits to state thresholds for royalty-free flaring considerations. Issues: setting appropriate thresholds - must be supported by record and data; and potential for non-enforcement by state regulatory authority (3) NTL-4A framework with revisions: change action plan duration to 6 months; make all flaring from wells connected to sales royalty bearing (not subject to royalty-free flaring requests). Would allow for local flexibility and case-by-case assessment. Addresses royalty assessment - in ND ~85% of well connected to sales. Relies on economic evaluation for unconnected wells, which we could clarify in the regulation or policy. (4) Gas flared is royalty free while the operator has a pending (and complete) application with the BLM for a ROW that is required in order to capture/transport gas from the well. Can be done in conjunction with the above options, but not a stand-alone. Considerations with this option: there are only a handful of outstanding ROW applications; and BLM setting the precedent that any holdup is royalty free.
Measurement of gas vented and flared 3179.9	Operators must estimate or measure all gas vented or flared from the well and report to ONRR. Must measure if gas flared from a high-pressure flare exceeds 50 Mcfd.	(1) Revise so that BLM *may* require measurement of vented and flared gas. Rescind the rest. There is value to having the ability in certain instances to require measurement.
Regarding Existing Royalty Free Approvals 3179.10	Determinations made prior to Jan 17, 2017 not affected. Existing approvals as of Jan 17, 2017 remain in effect until Jan 17, 2018.	Expect to make conforming changes based on other policy decisions.
Other Waste Prevention Measures 3179.11	The BLM may exercise authority to (1) limit production from a new well if it is expected to force other producing well off of a pipeline or (2) delay action on an APD or add conditions of approval if gas capture capacity is not available.	(1) Retain (2) Rescind The section is a restatement of existing authority, so retaining or rescinding would have no practical effect (except maybe reducing confusion).
Coordination with State Regulatory Authority 3179.12	The BLM will coordinate with State RA, on a case-by-case basis, if any requirement in 3179 would adversely impact production from non-Federal and non-Indian interests. (pertains to all 3179, but more directed towards gas flaring)	Retain because: (1) it does not place any substantive requirement upon the BLM, (2) coordination with states in the circumstances considered is generally a good practice, and (3) keeping this section shows BLM's good faith to be a "good neighbor."
Well Drilling 3179.101	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Rescind if desired. It aides in the continuity of timeline, but operators should be complying regardless. Any venting is expected to be very rare and is a well control issue.
Well Completion and Related Operations	Unless technically infeasible, gas that reaches the surface must be captured and sold, flared, used in operations on lease, or injected.	(1) Retain, but group with Initial Production Testing (below). Team thinks it is important for both HF and conventional completions and maintain the volumetric limit for royalty purposes. Potentially remove the exploratory well limit due to potential lack of infrastructure to deliver to market.

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
3179.102		(2) Rescind, but retain duration and volume limits (as relates to royalty on flared). Team does not favor but recognizes argument in support of that option: duplicates EPA (at present); some states; generally flaring is practice; and the sections of this rule (venting prohibition).
Initial Production Testing 3179.103	Royalty free flaring up to 20 MMcf (or 30 MMcf for exploratory wells). Includes volume during well completions.	See above.
Subsequent Well Tests 3179.104	Operator may flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period	No identified alternatives.
Emergencies 3179.105	Defines emergencies and when operator can flare royalty free.	(1) Remove reporting burden: "(c) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section."
Pneumatic Controllers 3179.201	Requires continuous bleed controllers to be low bleed, except when needed functionally, routed to combustion, or replacement would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present), some states, and general practice. We generally think this is self-correcting. And it is very difficult for PET to determine whether a device is high or low bleed. (2) Make distinction between operations that are selling gas, but objectives are conceptually covered under the beneficial use and general prohibition against venting sections. If the operator is selling the gas, we want it to use a device that minimizes the amount of gas used for beneficial use (maximizes efficiency). If the operator is not selling the gas, it would minimize the amount vented.
Pneumatic Chemical Injection Pumps and Diaphragm Pumps 3179.202	Requires zero emissions pump or routing emissions for capture and sale except when pump is temporary, needed functionally, routing is technically infeasible or unduly costly, or routes to combustor (not required if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease). Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states. Concern with requiring zero emissions pumps which are only as energy efficient as their power source, and therefore, may be no more efficient than the devices they would replace. Same situation as pneumatic controllers, may or may not be on connected sites. Some mitigation, i.e. routing to flare, are unproven. (2) Could refer to beneficial use provisions, i.e. operators should minimize the use of gas (maximize efficiency).
Storage Vessels 3179.203	If potential VOC emissions exceed 6 tpy per vessel, then route to sales. If technically infeasible or unduly costly, then route to continuous combustion. Exempt if this would cause the operator to cease production and abandon significant recoverable oil reserves under the lease. Lengthy exemption request materials.	(1) Rescind, due to overlap with EPA (at present) and some states (note ND has new requirements, Dec 2016). (2) Require an evaluation of VRU s economics and feasibility if throughput threshold is above XX amount. Determination would indicate if gas is avoidably lost, but BLM would not require operator to make investment. Need to be mindful of mitigation measures that they have already completed pursuant to EPA or states. (3) Retain, but remove mention of EPA. Route to sales (VRU) unless unduly costly, and then route to flare

Section	Summary of Current Requirements (Waste Prevention Rule, Jan 2017)	Alternative Policies/ Rationale
		unless it would force abandonment.
Downhole Well Maintenance and Liquids Unloading 3179.204	Operator must minimize venting for well maintenance and Liquids Unloading. Before first manual purging, operator must consider other methods and determine that they are technically infeasible or unduly costly. Operator must remain onsite during well purging. Reporting burdens. Estimate volumes.	No identified alternatives. Team views the requirements as being necessary to understand the problem of well purging.
Leak Detection and Repair (LDAR) 3179.301	Semi-annual inspections for well-sites and quarterly inspections for compressor stations; instrument specifications; alternative instrument approvals; repairing leaks and verification, and reporting. Specifies which components require inspection. Operator may apply for exemption if it would cause the operator to cease production and abandon significant recoverable oil or gas reserves.	(1) Rescind, due to overlap with EPA and some states. (2) More clearly exempt operations (without application) based on observable characteristics: operations not selling gas; marginal wells (or some other threshold); equipment after the FMP. (3) Broader allowable inspection standards, i.e. AVO-based. Lessen frequency. (4) Remove substantial reporting burdens. (5) Change the framework entirely. Return to a more conventional BLM/operator regulatory framework. BLM would check for leaks during I&E inspections and issue immediate assessments if/when leaks are found (exclude leaks where fixing would mean a net loss of gas). Raises potential issues: would this require BLM to conduct/verify with a sniffer or OGI; and is the immediate assessments concept viable, as opposed to INC process?
State or Tribal Variances 3179.401	State or Tribe may request variance if its requirements meet or exceed BLM s.	(1) Remove the "state and tribal variance" concept/terminology. Typically, an operator requests a variance to meet the requirements using an alternative method or technology, not a state to opt out of a BLM requirement. (2) Replace with concept of state/tribe requirements apply if equivalent or more stringent than Federal requirements. Coordination to determine cases where not as evident. (b) (5) [redacted]

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 06:57 AM

Conversation Contents

100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4

Attachments:

/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.1 BLM - Abandoned Mine Lands (AML) 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.2 BLM - Alaska Land Conveyance Program - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.3 BLM - Alaska Legacy Wells _ National Petroleum Reserve - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.4 BLM - Border Security & Resource Protection - 05.2.17 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.5 BLM - Electricity Transmission on Public Lands_ 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.6 BLM - Federal Coal Management Program - 5.2.2017 to ADs 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.7 BLM - Federal Land Transaction Facilitation Act (FLTFA) - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.8 BLM - Federal Lands Recreation Enhancement Act (FLREA) - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.9 BLM - Fire & Fuels - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.10 BLM - Grazing Permit Renewal - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.11 BLM - Hunting Fishing Recreational Shooting on Public Lands - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.12 BLM - Hydraulic Fracturing - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.13 BLM - Implementation of SO 3349, American Energy Independence - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.14 BLM - Lands Identified as Potentially Suitable for Disposal - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.15 BLM - Law Enforcement and Employee Safety - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.16 BLM - National Conservation Lands - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.17 BLM - National Petroleum Reserve – Alaska (NPR-A) - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.18 BLM - Natural Gas Venting & Flaring - 5.2.2017 to100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.19 BLM - Oil and Gas Development on Public Lands 5.2.2017 to 100.docx
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/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.21 BLM - Planning Rule - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.22 BLM - Renewable Energy Development on Public Lands - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.23 BLM - Sage-Grouse Plan Implementation - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.24 BLM - Western Oregon management and O&C receipts - 5.2.2017 to 100.docx
/15. 100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4/1.25 BLM - Wild Horse Burro Management - 5.2.2017 to 100.docx

"Gins, Meagan" <mgins@blm.gov>

From:	"Gins, Meagan" <mgins@blm.gov>
Sent:	Tue May 02 2017 19:10:54 GMT-0600 (MDT)
To:	BLM_WO_100 <blm_wo_100@blm.gov>
CC:	"Patrick J. Wilkinson" <p2wilkin@blm.gov>, Matthew Allen <mrallen@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Christopher McAlear <cmcalear@blm.gov>, Sally Butts <sbutts@blm.gov>, Kristin Bail <kbail@blm.gov>, Steve Tryon <stryon@blm.gov>, "Kelleher, Karen" <kkelleh@blm.gov>, Salvatore Lauro <slauro@blm.gov>, Ronald Dunton <rdunton@blm.gov>, Jill Ralston <jralston@blm.gov>
Subject:	100 Review -- Secretary Budget Briefing Papers, Due 12pm, 5/4
Attachments:	BLM - Abandoned Mine Lands (AML) 5.2.2017 to 100.docx BLM - Alaska Land Conveyance Program - 5.2.2017 to 100.docx BLM - Alaska Legacy Wells _ National Petroleum Reserve - 5.2.2017 to 100.docx BLM - Border Security & Resource Protection - 05.2.17 to 100.docx BLM - Electricity Transmission on Public Lands_ 5.2.2017 to 100.docx BLM - Federal Coal Management Program - 5.2.2017 to ADs 100.docx BLM - Federal Land Transaction Facilitation Act (FLTFA) - 5.2.2017 to 100.docx BLM - Federal Lands Recreation Enhancement Act (FLREA) - 5.2.2017 to 100.docx BLM - Fire & Fuels - 5.2.2017 to 100.docx BLM - Grazing Permit Renewal - 5.2.2017 to 100.docx BLM - Hunting Fishing Recreational Shooting on Public Lands - 5.2.2017 to 100.docx BLM - Hydraulic Fracturing - 5.2.2017 to 100.docx BLM - Implementation of SO 3349, American Energy Independence - 5.2.2017 to 100.docx BLM - Lands Identified as Potentially Suitable for Disposal - 5.2.2017 to 100.docx BLM - Law Enforcement and Employee Safety - 5.2.2017 to 100.docx BLM - National Conservation Lands - 5.2.2017 to 100.docx BLM - National Petroleum Reserve – Alaska (NPR-A) - 5.2.2017 to 100.docx BLM - Natural Gas Venting & Flaring - 5.2.2017 to100.docx BLM - Oil and Gas Development on Public Lands 5.2.2017 to 100.docx BLM - Onshore Orders - General interest 5.2.2017 to 100.docx BLM - Planning Rule - 5.2.2017 to 100.docx BLM - Renewable Energy Development on Public Lands - 5.2.2017 to 100.docx BLM - Sage-Grouse Plan Implementation - 5.2.2017 to 100.docx BLM - Western Oregon management and O&C receipts - 5.2.2017 to 100.docx BLM - Wild Horse Burro Management - 5.2.2017 to 100.docx

For 100 Review:

As you may know, the Department has asks the bureaus to identify topics and prepare briefing papers for the Secretary's budget hearings. Attached below are 25 high level program overview briefing papers we have prepared for OCL. 620 has cleared the papers through the following ADs/programs:

- AD-800
- AD-600
- AD-400
- AD-200
- FA-WO-120

Can you please review the papers and let us know if you have edits by **noon, Thursday (5/4)**? We are happy to answer any questions.

Thanks!
Meagan

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2. Alaska Land Conveyance Program
3. Alaska Legacy Wells
4. Border Security & Resource Protection
5. Federal Coal Program
6. Electricity Transmission on Public Lands
7. Federal Land Transaction Facilitation Act (FLTFA)
8. Federal Lands Recreation Enhancement Act (FLREA)
9. Fire & Hazardous Fuels
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20. Onshore Oil & Gas Orders 3, 4, & 5
21. Planning
22. Renewable Energy Development on Public Lands
23. Sage-Grouse Plan Implementation
24. Western Oregon Forestry & Secure Rural Schools Payments

25. Wild Horse & Burro Management

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BUREAU: **Bureau of Land Management (BLM)**
MEMBER: **General Interest**
ISSUE: **Implementation of S.O. 3349, American Energy Independence**

Key Points

- On March 29, 2017, Secretary Zinke issued Secretarial Order (S.O.) 3349, which implements the review directed by President Trump's Executive Order (E.O.) 13783, focusing on decreasing the regulatory burden associated with energy production.
- In addition, S.O. 3349 revokes Secretary Jewell's October 31, 2013, S.O. 3330, which aimed to improve mitigation policies and practices at the Department of the Interior (DOI), and directs DOI bureaus to identify all actions taken related to S.O. 3330 and the 2015 Presidential Memorandum, *Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment*.
- E.O. 13783 also rescinded several climate change related directives, and S.O. 3349 directs DOI bureaus to identify all action taken related to the rescinded climate change directives.
- Finally, S.O. 3349 specifically directs the BLM to review a number of other agency actions that may place an unnecessary burden on domestic energy development.

Background

- S.O. 3330 established a DOI-wide mitigation strategy through a landscape-scale approach, early integration of mitigation considerations in project planning and design, and considering the durability, transparency and consistency of mitigation measures.
    - Consistent with S.O. 3330, the BLM finalized its interim (June 2013) mitigation policy, incorporating the S.O. 3330 strategy and issuing a Mitigation Manual (MS-1794) and Mitigation Handbook (H-1794-1) in December 2016.
- The Report of the Executive Office of the President of June 2013, *The President's Climate Action Plan* contained three broad goals related to climate change mitigation, adaptation, and international leadership.
    - As directed by the Council on Environmental Quality Guidance that derived from this report and other executive actions, the BLM integrated a more quantitative approach to the consideration of greenhouse gases and climate change into its decision-making and planning processes. The BLM also manages public land to address wildfire, drought, and other issues that relate to adaptation.

Current Status

- The BLM provided to the Secretary a list of all actions adopted or in the process of being developed on mitigation and climate change.
- The BLM identified all existing agency actions that potentially affect the development or utilization of domestic oil, natural gas, coal, and nuclear energy resources.
- The BLM is following the proper process for rescinding the final rule titled *Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands* and is considering whether to replace it with a new proposed rule.
- The BLM is reviewing the final rule titled *Waste Prevention, Production Subject to Royalties, and Resource Conservation* to ensure its consistency with E.O. 13783.

Prepared by: Jamie Pool, BLM Legislative Affairs, 202-912-7138
Date: May 2, 2017

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

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/16. ADs Review -- Secretary Budget Briefing Papers, Due 12pm (5/2)/1.25 BLM - Wild

Horse Burro Management - 4.28.2017 to ADs.docx

"Gins, Meagan" <mgins@blm.gov>

From:	"Gins, Meagan" <mgins@blm.gov>
Sent:	Fri Apr 28 2017 16:22:02 GMT-0600 (MDT)
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CC:	"Patrick J. Wilkinson" <p2wilkin@blm.gov>, Sally Butts <sbutts@blm.gov>, Peter Mali <pmali@blm.gov>, Nikki Moore <nmoore@blm.gov>, Lonny Bagley <lbagley@blm.gov>, "Kelleher, Karen" <kkelleh@blm.gov>, Steve Tryon <stryon@blm.gov>, Janine Velasco <jvelasco@blm.gov>, Linda Smith <lhsmith@blm.gov>, Ann DeBlasi <amdeblas@blm.gov>, Jill Ralston <jralston@blm.gov>, Jamie Pool <jpool@blm.gov>
Subject:	ADs Review -- Secretary Budget Briefing Papers, Due 12pm (5/2)
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Matthew, Chris, Tim, Kristin, & Sal,

As you may know, the Department has asks the bureaus to identify topics and prepare briefing

papers for the Secretary's budget hearings. Attached below are 25 high level program overview briefing papers we have prepared for OCL. 620 has cleared the papers through the programs and AD800.

Can you please review the papers that have been identified under your directorate and let us know if you have edits by **noon, Tuesday (5/2)**? Please feel free to review other papers that are not identified for your directorate but are of interest. Happy to answer any questions.

Thanks!
Meagan

FY 2018 Budget Hearings

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3. Alaska Legacy Wells - AD300
4. Border Security & Resource Protection - WO120
5. Federal Coal Program - AD300
6. Electricity Transmission on Public Lands - AD300
7. Federal Land Transaction Facilitation Act (FLTFA) - AD300
8. Federal Lands Recreation Enhancement Act (FLREA) - AD200
9. Fire & Hazardous Fuels - AD200
10. Grazing Permit Renewal - AD200
11. Hunting, Fishing, & Recreational Shooting on Public Lands - AD200
12. Hydraulic Fracturing - AD300
13. Implementation of S.O. 3349 - AD200/AD300
14. Lands Potentially Suitable for Disposal - AD200/AD300
15. Law Enforcement & Employee Safety FA - WO-120
16. National Conservation Lands - AD400
17. National Petroleum Reserve – Alaska (NPR-A) - AD300
18. Natural Gas Venting & Flaring - AD300
19. Oil & Gas Development on Public Lands -AD300
20. Onshore Oil & Gas Orders 3, 4, & 5- AD300
21. Planning - AD200

22. Renewable Energy Development on Public Lands - AD300

23. Sage-Grouse Plan Implementation - AD200

24. Western Oregon Forestry & Secure Rural Schools Payments - AD200

25. Wild Horse & Burro Management - AD200

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Meagan Gins
U.S. Department of the Interior
Bureau of Land Management
Legislative Affairs Division (WO-620)
(202) 912-7399 (desk)
(202) 779-0354 (cell)

BUREAU: Bureau of Land Management (BLM)
MEMBER: General Interest
ISSUE: Implementation of S.O. 3349, American Energy Independence

Key Points

- Secretarial Order (S.O.) 3349, *American Energy Independence* implements the review directed by Executive Order (E.O.) 13783, *Promoting Energy Independence and Economic Growth*, focusing on decreasing the regulatory burden associated with energy production.
- In addition, S.O. 3349 revokes S.O. 3330, *Improving Mitigation Policies and Practices of the Department of the Interior*, and directs DOI bureaus to identify all actions taken related to S.O. 3330 and the 2015 Presidential Memorandum, *Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment*.
- In addition, E.O. 13783 rescinded several climate change related directives, and S.O. 3349 directs DOI bureaus to identify all action taken related to the rescinded climate change directives.
- Finally, S.O. 3349 specifically directs the BLM to review a number of other agency actions that may place an unnecessary burden on domestic energy development.

Background

- S.O. 3330 established a DOI-wide mitigation strategy through a landscape-scale approach, early integration of mitigation considerations in project planning and design, and considering the durability, transparency and consistency of mitigation measures.
    - Consistent with S.O. 3330, the BLM finalized its interim (June 2013) mitigation policy, incorporating the S.O. 3330 strategy and issuing a Mitigation Manual (MS-1794) and Mitigation Handbook (H-1794-1) in December 2016.
- The Report of the Executive Office of the President of June 2013, *The President's Climate Action Plan* contained three broad goals related to climate change mitigation, adaptation, and international leadership.
    - As directed by the Council on Environmental Quality Guidance that derived from this report and other executive actions, the BLM integrated a more quantitative approach to the consideration of greenhouse gases and climate change into its decision-making and planning processes. The BLM also manages public land to address wildfire, drought, and other issues that relate to adaptation.

Current Status

- The BLM is providing a list of all actions to the Secretary adopted or in the process of being developed on mitigation and climate change since the policies specified in the S.O. 3349 were issued.
- The BLM is identifying all existing agency actions that potentially affect the development or utilization of domestic oil, natural gas, coal, and nuclear energy resources.
- The BLM is following the proper process for rescinding *Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands and considering if* and replacing it with a new proposed rule.
- The BLM is reviewed final rule titled *Waste Prevention, Production Subject to Royalties, and Resource Conservation* to ensure its consistency with E.O. 13783.

Prepared by: Jamie Pool, BLM Legislative Affairs, 202-912-7138
Date: April 27, 2017

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 07:00 AM

Conversation Contents

Fwd: Word and Scanned Docs - BLM Response to 3349

Attachments:

/17. Fwd: Word and Scanned Docs - BLM Response to 3349/1.1 BLM_RESPONSE_SO_3349 5c.pdf
/17. Fwd: Word and Scanned Docs - BLM Response to 3349/1.2 BLM Memo to ASLM on SO 3349 SectionC_final 4-19-17 (1) RTC clean (2).docx
/17. Fwd: Word and Scanned Docs - BLM Response to 3349/2.1 BLM_RESPONSE_SO_3349 5c.pdf

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Apr 26 2017 14:06:02 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Fwd: Word and Scanned Docs - BLM Response to 3349
Attachments:	BLM_RESPONSE_SO_3349 5c.pdf BLM Memo to ASLM on SO 3349 SectionC_final 4-19-17 (1) RTC clean (2).docx

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> U.S. Department of the Interior
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Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Fri Apr 28 2017 11:28:07 GMT-0600 (MDT)
To:	Meagan Gins <mgins@blm.gov>
CC:	"Bagley, Lonny R" <lbagley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Catherine Cook <ccook@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Jill Ralston <jralston@blm.gov>
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Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
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"Gins, Meagan" <mgins@blm.gov>

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Subject:	Re: FW: Word and Scanned Docs - BLM Response to 3349

Will do. This is for my information if asked about internally.

On Fri, Apr 28, 2017 at 1:28 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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> **********
> Timothy 'Tim' R. Spisak
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United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

Memorandum

APR 19 2017

To: Acting Deputy Secretary

Through: Katharine MacGregor, Acting Assistant Secretary Land and Minerals Management

From: Michael D. Nedd, Acting Director – Bureau of Land Management

Subject: Bureau of Land Management response to Secretary's Order 3349, Sections 5(c)(i), (ii), and (v)

BACKGROUND

Secretary's Order (SO) 3349, which was signed on March 29, 2017, implements the review of agency actions directed by Executive Order 13783 signed by the President on March 28, 2017, entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 EO). SO 3349 also directs a reexamination of the mitigation policies and practices across the Department of the Interior (DOI) in order to better balance conservation strategies and policies with the need for creating jobs.

DISCUSSION

This memorandum responds to sections 5(c)(i), 5(c)(ii), and 5(c)(v) of S.O. 3349. Section 5(c)(i) states that the Bureau of Land Management (BLM) shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015). The BLM is proceeding with proposing to rescind the final rule in coordination with the DOI Solicitor's Office and anticipates having a package ready for internal review by May 3, 2017.

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Effects: Combined, the new regulations improve the ability of the BLM to ensure accurate measurement, accountability, and proper reporting of oil and gas produced from Federal and Indian land in order to ensure that taxpayers and Indian tribes receive their fair share of royalty due. The new regulations also provide a process for approving new technology that meets defined performance goals. However, the regulations impose new cost burdens on operators. The cost estimates for each individual rule are as follows:

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Effects: Initially, BLM coal specialists will need to devote time to gathering existing coal leasing data for compilation and posting to the web; however, the BLM does not anticipate that the time involved will have a long-term measurable impact on the specialists' regular job functions related to maintenance and processing of coal leases and applications.

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Date: 1/20/2017
Description: Establishes national policies and processes for voluntary activities by operators to capture waste mine methane from underground coal or other solid mineral mines. These policies will allow waste mine methane to be put to productive use, including offering it for sale, instead of venting it to the atmosphere.
Effects: All of the activities outlined in the policy are voluntary and will only be implemented if both the BLM and the mine operator agree. If the BLM and operator agree to implement the activities, additional costs could be incurred by the operator. However, it is assumed that the operator would only choose to implement the activities if the benefits outweigh the costs.

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Description: The Land Use Planning Handbook describes the BLM's overall planning process. Appendix C of the Planning Handbook provides a brief summary of each program's decisions, including consideration of restrictions. As such, it provides summary information on what restrictions each program may propose in a planning process.
Effects: Based on the information in Appendix C of the Land Use Planning Handbook, the regulations, manuals, handbooks, and IMs for each program that may put restrictions on uses can be individually assessed. Whether the individual program's restrictions constitute a potential burden, however, is based at least in part on the actual decisions made in each individual Resource Management Plan.

NEXT STEPS
In some cases, the aforementioned Instruction Memoranda and regulatory actions include only certain components that may be unnecessarily burdensome. Based on feedback from the Acting Deputy Secretary on how to proceed, the BLM will coordinate with the DOI Solicitor's Office to determine how best to proceed with appropriate modifications of these Department Actions.

Memorandum

To: Acting Deputy Secretary

Through: Katharine MacGregor, Acting Assistant Secretary
Land and Minerals Management

From: Michael D. Nedd, Acting Director – Bureau of Land Management

Subject: Bureau of Land Management response to Secretary's Order 3349, Sections 5(c)(i), (ii), and (v)

BACKGROUND

Secretary's Order (SO) 3349, which was signed on March 29, 2017, implements the review of agency actions directed by Executive Order 13783 signed by the President on March 28, 2017, entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 EO). SO 3349 also directs a reexamination of the mitigation policies and practices across the Department of the Interior (DOI) in order to better balance conservation strategies and policies with the need for creating jobs.

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United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

Memorandum

APR 19 2017

To: Acting Deputy Secretary

Through: Katharine MacGregor, Acting Assistant Secretary Land and Minerals Management

From: Michael D. Nedd, Acting Director – Bureau of Land Management

Subject: Bureau of Land Management response to Secretary's Order 3349, Sections 5(c)(i), (ii), and (v)

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Date: 1/19/2017
Description: This IM responds to stakeholder suggestions for improved access to information on the Federal coal program, and replaces the policy and guidance previously provided in WO-IM-2014-159, *Publicly-Accessible Bureau of Land Management Websites for Coal Leasing Information*. This IM directs BLM offices to post and update specified Federal coal program information on BLM publicly-accessible websites, including: (1) information about Federal coal lease applications and leases, lease modification applications, and lease modifications; (2) information about exploration licensing applications and exploration licenses; (3) information about royalty rate reduction applications; and (4) summary information on the Federal coal program.
Effects: Initially, BLM coal specialists will need to devote time to gathering existing coal leasing data for compilation and posting to the web; however, the BLM does not anticipate that the time involved will have a long-term measurable impact on the specialists' regular job functions related to maintenance and processing of coal leases and applications.

Title: IM 2017-037, Waste Mine Methane Policy
Date: 1/20/2017
Description: Establishes national policies and processes for voluntary activities by operators to capture waste mine methane from underground coal or other solid mineral mines. These policies will allow waste mine methane to be put to productive use, including offering it for sale, instead of venting it to the atmosphere.
Effects: All of the activities outlined in the policy are voluntary and will only be implemented if both the BLM and the mine operator agree. If the BLM and operator agree to implement the activities, additional costs could be incurred by the operator. However, it is assumed that the operator would only choose to implement the activities if the benefits outweigh the costs.

Other
Title: IM 2016-140, Process for Assessing, Coordinating, and Implementing Greater sage-grouse Land Use Plan Adaptive Management Hard and Soft Triggers
Date: 9/1/2016

Description: This IM directs the implementation of the land use plan adaptive management process to evaluate and apply hard and soft triggers and responses, as detailed in the Greater sage-grouse Approved Resource Management Plans and Amendments, Great Basin and Rocky Mountain Greater sage-grouse Regional Records of Decision (September 21, 2015).
Effects: This IM requires consistent timelines, state/local coordination, and public outreach for evaluating the triggers and responses required by the plans. Implementation of an adaptive management process may also slow the rate of energy development.

Title: BLM Land Use Planning Handbook, H-1601-1, Appendix C
Date: 3/11/2017
Description: The Land Use Planning Handbook describes the BLM's overall planning process. Appendix C of the Planning Handbook provides a brief summary of each program's decisions, including consideration of restrictions. As such, it provides summary information on what restrictions each program may propose in a planning process.
Effects: Based on the information in Appendix C of the Land Use Planning Handbook, the regulations, manuals, handbooks, and IMs for each program that may put restrictions on uses can be individually assessed. Whether the individual program's restrictions constitute a potential burden, however, is based at least in part on the actual decisions made in each individual Resource Management Plan.

NEXT STEPS
In some cases, the aforementioned Instruction Memoranda and regulatory actions include only certain components that may be unnecessarily burdensome. Based on feedback from the Acting Deputy Secretary on how to proceed, the BLM will coordinate with the DOI Solicitor's Office to determine how best to proceed with appropriate modifications of these Department Actions.

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 07:00 AM

Conversation Contents

V&F Paper

Attachments:

/18. V&F Paper/1.1 2017 03 31 VF CRA Briefing Memo_KM comments MDN 4-4-17.docx
/18. V&F Paper/6.1 2017 03 31 VF CRA Briefing Memo_KM comments MDN 4-4-17.jt.docx
/18. V&F Paper/9.1 2017 03 31 VF CRA Briefing Memo_KM comments MDN 4-4-17.jt.cmr.docx
/18. V&F Paper/14.1 2017 04 05 VF CRA Briefing Memo.docx

Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Tue Apr 04 2017 10:35:53 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
CC:	tshannon@blm.gov, Shannon Stewart <scstewar@blm.gov>
Subject:	V&F Paper
Attachments:	2017 03 31 VF CRA Briefing Memo_KM comments MDN 4-4-17.docx

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Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Tue Apr 04 2017 11:18:24 GMT-0600 (MDT)
To:	Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
CC:	"Tichenor, James C" <jtichenor@blm.gov>
Subject:	RE: V&F Paper

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Sent:	Tue Apr 04 2017 11:46:08 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, "Tichenor, James C" <jtichenor@blm.gov>
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"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>

From:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
Sent:	Tue Apr 04 2017 12:28:24 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, "Tichenor, James C" <jtichenor@blm.gov>
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From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Tue Apr 04 2017 12:30:54 GMT-0600 (MDT)
To:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, James Tichenor <jtichenor@blm.gov>
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Sent:	Tue Apr 04 2017 12:51:52 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Tue Apr 04 2017 13:06:47 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
CC:	Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Lonny Bagley <lbagley@blm.gov>
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Sent from my iPhone

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"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>

From:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>
Sent:	Tue Apr 04 2017 13:13:14 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	"Tichenor, James" <jtichenor@blm.gov>, Lonny Bagley <lbagley@blm.gov>
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CC:	"Tichenor, James" <jtichenor@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: V&F Paper
Attachments:	2017 03 31 VF CRA Briefing Memo_KM comments MDN 4-4-17.jt.cmr.docx

Tim,

Here are my edits. I put the repetitive bullet list back in, but left James' table at the end in case you find it preferable. (b) (5) [redacted]. Unfortunately, the memo is now slightly longer than 2 pages.

Once this is cleaned up and passed on, please send me a copy so that I can share with Karen.

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> > > > DOI-Bureau of Land Management
> > > > tspisak@blm.gov
> > > > (202) 208-4201 office
> > > > (202) 251-3079 cell
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From: Rhymes, Christopher [mailto:christopher.rhymes@sol.doi.gov]
Sent: Tuesday, April 04, 2017 2:28 PM
To: Timothy Spisak
Cc: Lonny Bagley; Tichenor, James C
Subject: Re: V&F Paper

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On Tue, Apr 4, 2017 at 1:46 PM, Rhymes, Christopher <christopher.rhymes@sol.doi.gov> wrote:
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From: Michael Nedd [mailto:mnedd@blm.gov]
Sent: Tuesday, April 04, 2017 12:36 PM
To: Timothy Spisak; Lonny Bagley; Christopher Rhymes
Cc: tshannon@blm.gov; Shannon Stewart
Subject: V&F Paper

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Take care and have a wonderful day! :)

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Phone: (202) 208-4307 | Email: christopher.rhymes@sol.doi.gov

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James Tichenor
Economist
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jtichenor@blm.gov
202-573-0536

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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Tue Apr 04 2017 13:53:05 GMT-0600 (MDT)
To:	"Rhymes, Christopher" <christopher.rhymes@sol.doi.gov>

CC: "Tichenor, James" <jtichenor@blm.gov>, Lonny Bagley <lbagley@blm.gov>

Subject: Re: V&F Paper

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Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Tue Apr 04 2017 15:39:26 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
CC:	tshannon@blm.gov, Shannon Stewart <scstewar@blm.gov>
Subject:	RE: V&F Paper

Team,

I'm getting pinged from upstairs on the ? and comments in the paper… Do you have an ETA for when we'll get a response?

Take care and have a wonderful day! :)

Michael D. Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov

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Sent: Tuesday, April 04, 2017 12:36 PM
To: Timothy Spisak; Lonny Bagley; Christopher Rhymes
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>

Sent:	Tue Apr 04 2017 15:40:07 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, "tshannon@blm.gov" <tshannon@blm.gov>, Shannon Stewart <scstewar@blm.gov>
Subject:	Re: V&F Paper

First thing tomorrow morning.

Sent from my iPhone

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Sent:	Tue Apr 04 2017 15:40:34 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Timothy Shannon <tshannon@blm.gov>, Shannon Stewart <scstewar@blm.gov>

Subject: RE: V&F Paper

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Sent: Tuesday, April 04, 2017 5:40 PM
To: Michael Nedd
Cc: Lonny Bagley; Christopher Rhymes; tshannon@blm.gov; Shannon Stewart
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed Apr 05 2017 06:11:57 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Timothy Shannon <tshannon@blm.gov>, Shannon Stewart <scstewar@blm.gov>, "Tichenor, James C" <jtichenor@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
Subject:	RE: V&F Paper
Attachments:	2017 04 05 VF CRA Briefing Memo.docx

Mike, as requested, attached is the updated subject paper.

Thanks
Tim

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Sent: Tuesday, April 04, 2017 5:41 PM
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A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

Summary of the Final Rule

The "Venting & Flaring Rule" is formally the *Waste Prevention, Production Subject to Royalties, and Resource Conservation* rulemaking that replaced the requirements related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). These regulations are codified at new 43 CFR subparts 3178 and 3179 and became effective on January 17, 2017.

Statutory Authority and Regulatory History

The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. §§ 188–287) subjects federal oil and gas leases to the condition that lessees will "use all reasonable precautions to prevent waste of oil and gas developed in the land . . . ." 30 U.S.C. § 225. Further, the MLA requires lessees to exercise "reasonable diligence, skill, and care" in their operations and requires lessees to observe "such rules for the health and safety of the miners and for the prevention of undue waste as may be prescribed by [the] Secretary [of the Interior]." 30 U.S.C. § 187. The Federal Oil and Gas Royalty Management Act (FOGRMA) makes lessees liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence or the failure to comply with applicable rules or regulations. 30 U.S.C. § 1756. Both the MLA and FOGRMA authorize the Secretary of the Interior to prescribe rules and regulations necessary to carry out the purposes of those statutes. 30 U.S.C. § 189; 30 U.S.C. § 1751.

From 1979 until this January, the Department regulated the venting, flaring, and royalty-free use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The BLM's Venting & Flaring Rule updated NTL-4A's royalty-free use provisions as well as its restrictions on venting and flaring. The Venting & Flaring Rule also imposed leak detection and repair (LDAR) requirements and requirements for pneumatic equipment and storage tanks that were designed to reduce methane emissions. Such emissions-focused requirements did not appear in NTL-4A and some states and industry groups have asserted that these requirements are actually within the jurisdiction of the Environmental Protection Agency and the states under the Clean Air Act.

Compliance Timeline

(b) (5) [redacted]

Although the Venting & Flaring Rule went into effect in January 2017, many of the Rule's more onerous requirements are not yet operative. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs) and imposes restrictions on venting. Operators do not have to comply with the Rule's gas capture requirements, equipment upgrade/replacement requirements, or LDAR requirements until January 17, 2018. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare to comply at the appropriate time.

Estimated Costs of Compliance

(b) (5) [redacted]

The Bureau of Land Management (BLM) expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million. Average per-entity compliance costs are expected to range from about $44,600 to $65,800 per entity, per year. First year compliance costs are estimated to be $113 million, with $84 million of that cost being for LDAR.

The Rule's waste minimization plans are expected to require about 16,000 hours of paperwork effort in the first year, resulting in about $1 million in costs to approximately 1,800 operators. The Rule's venting, flaring, and leaks requirements are expected to require about 7,200 hours of paperwork effort in the first year, resulting in about $500,000 in operator costs (these paperwork burdens eventually triple as annual LDAR components commence).

The expected benefits of the Rule are $3 to $13 million per year (or $65 million over 10 years) in increased royalty revenues. Relative to 2014 levels, the venting of methane is expected to be reduced by 35% and the flaring of associated gas is expected to be reduced by 49% when the capture requirements are fully phased-in.

(b) (5) [redacted]

(b) (5) [redacted]

(b) (5) [redacted]

If the Rule is *not* overturned under the Congressional Review Act . . .

- The Rule will continue in effect, unless overturned in pending litigation. Industry would continue to incur compliance costs.
- Within three months, the BLM could develop a proposed revision of the Rule, based on its recent rulemaking experience. The OMB would then need up to three months to review and clear the proposal.
- Once cleared by the Department of the Interior, the proposed rule would be published in the Federal Register and undergo a 60-day notice-and-comment period.
- After about two months of reviewing the comments and revising the proposed rule in light of those comments, the BLM would send the revised rule to OMB for up to three months of review.
- Finally, the BLM would publish the final rule in the Federal Register to become effective in 60 days.
- The total estimated time for this rulemaking is 13 months and the estimated cost to the BLM is $1.2 to $2 million. This new rulemaking is not expected to be complete before January 17, 2018, when the more onerous requirements of the Rule go into effect

(b) (5) [redacted]

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Summary of the Final Rule

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Estimated Costs of Compliance

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(b) (5) [redacted]

(b) (5) [redacted]

The Rule's waste minimization plans are expected to require about 16,000 hours of paperwork effort in the first year, resulting in about $1 million in costs to approximately 1,800 operators. The Rule's venting, flaring, and leaks requirements are expected to require about 7,200 hours of paperwork effort in the first year, resulting in about $500,000 in operator costs (these paperwork burdens eventually triple as annual LDAR components commence).

The expected benefits of the Rule are $3 to $13 million per year (or $65 million over 10 years) in increased royalty revenues. Relative to 2014 levels, the venting of methane is expected to be reduced by 35% and the flaring of associated gas is expected to be reduced by 49% when the capture requirements are fully phased-in.

(b) (5) [redacted]

[redacted]

If the Rule is *not* overturned under the Congressional Review Act . . .

- The Rule will continue in effect unless overturned in pending litigation. Industry would continue to incur compliance costs.
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- The litigation risk is . The potential cost of litigation is $100 000.

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- ~~The total estimated time for this rulemaking is 15 months and the estimated cost to the BLM is $1.2 to $2 million.~~

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(b) (5) [redacted]

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(b) (5) [redacted]

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Compliance Timeline

Although the Venting & Flaring Rule went into effect in January 2017, many of the Rule's more onerous requirements are not yet operative. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs), ~~and~~ imposes restrictions on venting, and clarifies when lost gas is "avoidably lost" and therefore subject to royalties. Operators do not have to comply with the Rule's flaring (or "gas capture") requirements, equipment upgrade/replacement requirements, or LDAR requirements until January 17, 2018. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare to comply at the appropriate time.

Estimated Costs of Compliance

The Bureau of Land Management (BLM) expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million (or about $50 and $176 million when we factor in estimated product recovery). Average per-entity compliance costs are expected to range from about $44,600 to

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- Once cleared by the Department of the Interior, the proposed rule would be published in the Federal Register and undergo a 60-day notice-and-comment period.
- After about two months of reviewing the comments and revising the proposed rule in light of those comments, BLM would send the revised rule to OMB for up to three months of review.
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-
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- ~~The total estimated time for this rulemaking is 15 months and the estimated cost to the BLM is $1.2 to $2 million.~~

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[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 07:00 AM

Conversation Contents

Final VF CRA letter

Attachments:

/20. Final VF CRA letter/1.1 2017.03.31 VF CRA Briefing Memo.docx
/20. Final VF CRA letter/2.1 2017.03.31 VF CRA Briefing Memo.docx

"Shannon, Timothy" <tshannon@blm.gov>

From:	"Shannon, Timothy" <tshannon@blm.gov>
Sent:	Fri Mar 31 2017 15:54:45 GMT-0600 (MDT)
To:	"Stewart, Shannon" <scstewar@blm.gov>
CC:	Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Final VF CRA letter
Attachments:	2017.03.31 VF CRA Briefing Memo.docx

Here is the final, TR

--
Timothy R. Shannon
Senior Policy Advisor
Office of the Director

1849 C. St NW Rm.5639
Washington DC, 20240
Office: 202-208-0469
cell: 520.289.1573

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Apr 03 2017 09:23:43 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, "Wells, Steven" <s1wells@blm.gov>
Subject:	Fwd: Final VF CRA letter
Attachments:	2017.03.31 VF CRA Briefing Memo.docx

All,

Please see attached version of the memo that was sent to ASLM. Tim Shannon sent me the wrong document earlier. Attached is the correct version. Thanks, Shelley

---------- Forwarded message ----------
From: **Shannon, Timothy** <tshannon@blm.gov>
Date: Mon, Apr 3, 2017 at 11:18 AM
Subject: Fwd: Final VF CRA letter
To: Shelley McGinnis <smcginnis@blm.gov>

Correct version, TR

---------- Forwarded message ----------
From: **Shannon, Timothy** <tshannon@blm.gov>
Date: Fri, Mar 31, 2017 at 5:54 PM
Subject: Final VF CRA letter
To: "Stewart, Shannon" <scstewar@blm.gov>
Cc: Michael Nedd <mnedd@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>

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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

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Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 07:01 AM

Conversation Contents

Venting & Flaring Memo

Attachments:

/21. Venting & Flaring Memo/1.1 2017.03.31 VF CRA Briefing Memo.docx

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Fri Mar 31 2017 15:19:26 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Shannon Stewart <scstewar@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Karen Hawbecker <karen.hawbecker@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>
Subject:	Venting & Flaring Memo
Attachments:	2017.03.31 VF CRA Briefing Memo.docx

Mike, Tim, and Shannon,

Tim Spisak asked me to send the attached.

Thanks,

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Shelley McGinnis, Ph.D.
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Email: smcginnis@blm.gov

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Subject:	Re: Venting & Flaring Memo

Good morning Shannon,

Could we get the final version of the memo that was sent forward?

Thanks, Shelley

On Fri, Mar 31, 2017 at 5:19 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Mike, Tim, and Shannon,
>
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>
> Thanks,
>
> --
> Shelley McGinnis, Ph.D.
> Resource Advisor
> Bureau of Land Management
> Energy, Minerals, and Realty Management
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Statutory Authority and Regulatory History

The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. §§ 188–287) subjects federal oil and gas leases to the condition that lessees will "use all reasonable precautions to prevent waste of oil and gas developed in the land . . . ." 30 U.S.C. § 225. Further, the MLA requires lessees to exercise "reasonable diligence, skill, and care" in their operations and requires lessees to observe "such rules for the health and safety of the miners and for the prevention of undue waste as may be prescribed by [the] Secretary [of the Interior]." 30 U.S.C. § 187. The Federal Oil and Gas Royalty Management Act (FOGRMA) makes lessees liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence or the failure to comply with applicable rules or regulations. 30 U.S.C. § 1756. Both the MLA and FOGRMA authorize the Secretary of the Interior to prescribe rules and regulations necessary to carry out the purposes of those statutes. 30 U.S.C. § 189; 30 U.S.C. § 1751.

From 1979 until this January, the Department regulated the venting, flaring, and royalty-free use of gas pursuant to NTL-4A, which placed limits on the venting and flaring of gas and defined when gas was "unavoidably lost" and therefore not subject to royalties. The BLM's Venting & Flaring Rule updated NTL-4A's royalty-free use provisions as well as its restrictions on venting and flaring. The Venting & Flaring Rule also imposed leak detection and repair (LDAR) requirements and requirements for pneumatic equipment and storage tanks that were designed to reduce methane emissions. Such emissions-focused requirements did not appear in NTL-4A and some states and industry groups have asserted that these requirements are actually within the jurisdiction of the Environmental Protection Agency and the states under the Clean Air Act.

Compliance Timeline

Although the Venting & Flaring Rule went into effect in January 2017, many of the Rule's more onerous requirements are not yet operative. Presently, the Rule requires operators to submit a waste minimization plan with their applications for permits to drill (APDs) and imposes restrictions on venting. Operators do not have to comply with the Rule's gas capture requirements, equipment upgrade/replacement requirements, or LDAR requirements until January 17, 2018. Although operators are not yet obligated to comply with these requirements, they will need to expend time and resources to prepare to comply at the appropriate time.

Estimated Costs of Compliance

The Bureau of Land Management (BLM) expects industry's annual compliance costs from 2017 to 2026 to be between $114 and $279 million. Average per-entity compliance costs are expected to range from about $44,600 to $65,800 per entity, per year. First year compliance costs are estimated to be $113 million, with $84 million of that cost being for LDAR.

The Rule's waste minimization plans are expected to require about 16,000 hours of paperwork effort in the first year, resulting in about $1 million in costs to operators. The Rule's venting, flaring, and leaks requirements are expected to require about 7,200 hours of paperwork effort in the first year, resulting in about $500,000 in operator costs (these paperwork burdens eventually triple as annual LDAR components commence).

The expected benefits of the Rule are $3 to $13 million per year (or $65 million over 10 years) in increased royalty revenues. Relative to 2014 levels, the venting of methane is expected to be reduced by 35% and the flaring of associated gas is expected to be reduced by 49% when the capture requirements are fully phased-in.

(b) (5) [redacted]



If the Rule is *not* overturned under the Congressional Review Act . . .

- The Rule will continue in effect, unless overturned in pending litigation. Industry would continue to incur compliance costs.
- Within three months, the BLM could develop a proposed revision of the Rule, based on its recent rulemaking experience. The OMB would then need up to three months to review and clear the proposal.
- Once cleared by the Department of the Interior, the proposed rule would be published in the Federal Register and undergo a 60-day notice-and-comment period.
- After about two months of reviewing the comments and revising the proposed rule in light of those comments, the BLM would send the revised rule to OMB for up to three months of review.
- Finally, the BLM would publish the final rule in the Federal Register to become effective in 60 days.
- The total estimated time for this rulemaking is 13 months and the estimated cost to the BLM is $1.2 to $2 million. This new rulemaking is not expected to be complete before January 17, 2018, when the more onerous requirements of the Rule go into effect.

Label: "FOIA 2017-0883"

Created by:lbagley@blm.gov

Total Messages in label:113 (24 conversations)

Created: 10-20-2017 at 07:01 AM

Conversation Contents

Fwd: EO signed today

Attachments:

/24. Fwd: EO signed today/1.1 EO_promoting energy independence.pdf

Steven Wells <s1wells@blm.gov>

From:	Steven Wells <s1wells@blm.gov>
Sent:	Tue Mar 28 2017 15:47:51 GMT-0600 (MDT)
To:	Catherine Cook <ccook@blm.gov>, Lonny R Bagley <lbagley@blm.gov>
Subject:	Fwd: EO signed today
Attachments:	EO_promoting energy independence.pdf

Live mas
Sent by MyPhone

Begin forwarded message:

From: "McNeer, Richard" <richard.mcneer@sol.doi.gov>
Date: March 28, 2017 at 5:17:30 PM EDT
To: "Hawbecker, Karen" <KAREN.HAWBECKER@sol.doi.gov>, Jack Haugrud <jack.haugrud@sol.doi.gov>
Cc: Wendy Dorman <wendy.dorman@sol.doi.gov>, Wyndy Rausenberger <wyndy.rausenberger@sol.doi.gov>, "Collier, Briana" <briana.collier@sol.doi.gov>, Christopher Rhymes <christopher.rhymes@sol.doi.gov>, Kendra Nitta <kendra.nitta@sol.doi.gov>, "Leslie, Phyillis" <phyllis.leslie@sol.doi.gov>, "roy.fuller" <roy.fuller@sol.doi.gov>, "Dutta, Subijoy" <sdutta@blm.gov>, James Tichenor <jtichenor@blm.gov>, Jeffrey Prude <jprude@blm.gov>, Justin Abernathy <jabernathy@blm.gov>, Adrienne Brumley <abrumley@blm.gov>, "Klein, Ross" <rklein@blm.gov>, James Annable <jannable@blm.gov>, Charles Yudson <cyudson@blm.gov>, Steven Wells <s1wells@blm.gov>, "Leverette, Mitchell" <Mitchell_Leverette@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Catherine Cook <ccook@blm.gov>, Elizabeth Carls <elizabeth.carls@sol.doi.gov>
Subject: Fwd: EO signed today

Karen and Jack:

Here is today's Executive Order addressing energy independence. In addition to policy announcements and orders to review regulations, highlights include instructing the Secretary to withdraw or amend the coal pause (Sec. 6), and to revise or rescind the hydraulic fracturing rule (under way) and the waste prevention rule (aka, venting and flaring) (Sec. 7(b)).

Thanks to Lauren and Christina for sending this to us.

Richard
---------- Forwarded message ----------
From: **Bachtel, Lauren** <lauren.bachtel@sol.doi.gov>
Date: Tue, Mar 28, 2017 at 4:49 PM
Subject: Fwd: EO signed today
To: Richard McNeer <richard.mcneer@sol.doi.gov>

Richard

Attached please find the EO signed today.

Best,

Lauren
---------- Forwarded message ----------
From: **Reed, Christina** <creed@blm.gov>
Date: Tue, Mar 28, 2017 at 4:44 PM
Subject: EO signed today
To: Philip Lowe <philip.lowe@sol.doi.gov>, Kristen Guerriero <Kristen.Guerriero@sol.doi.gov>, "Bachtel, Lauren" <lauren.bachtel@sol.doi.gov>
Cc: Alfred Elser <aelser@blm.gov>, Mitchell Leverette <mleveret@blm.gov>

See attached.

Christina M. Reed
Project Manager
Division of Solid Minerals
Bureau of Land Management
(O) 303-239-3677
(C) 303-720-5581

--
Lauren Bachtel
Attorney-Advisor, Division of Mineral Resources
U.S. Department of the Interior, Office of the Solicitor
1849 C Street NW, Washington, D.C. 20240
Office: (202) 208-6420

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THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

- - - - - - -

PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

Label: "FOIA/[SO 3349]"

Created by:mmford@blm.gov

Total Messages in label:29 (5 conversations)

Created: 09-25-2017 at 14:13 PM

Conversation Contents

Interior to rewrite BLM venting & flaring rule

"Winthrop, Robert" <rwinthro@blm.gov>

From:	"Winthrop, Robert" <rwinthro@blm.gov>
Sent:	Wed Jun 21 2017 06:32:14 GMT-0600 (MDT)
To:	Bill Stevens <bpsteven@blm.gov>, "Dr. Robert Winthrop" <RWinthro@blm.gov>, Hilary Zarin <hzarin@blm.gov>, James C Tichenor <jtichenor@blm.gov>, Jennifer Schein Dobb <jscheindobb@blm.gov>, Jessica Montag <jmontag@blm.gov>, Joshua B Sidon <jsidon@blm.gov>, Keith Brown <kmbrown@blm.gov>, Marquis Matthews <mdmatthews@blm.gov>, Martin Hensley <mhensley@blm.gov>, Michael D Johnson <mdjohnso@blm.gov>, Mike Ford <mmford@blm.gov>, Rebecca Moore <rmoore@blm.gov>, Scott Rickard <srickard@blm.gov>, Stacey Fritz <SFritz@blm.gov>, Stewart Allen <sdallen@blm.gov>, "Suhr Pierce, Julie A" <jsuhrpierce@blm.gov>, Tessa Teems <tteems@blm.gov>, Tyson J Sackett <tsackett@blm.gov>
Subject:	Interior to rewrite BLM venting & flaring rule

Interior to rewrite BLM rule

Pamela King, E&E News reporter

Published: Wednesday, June 21, 2017



In response to questioning from Sen. Maria Cantwell (D-Wash.), Interior Secretary Ryan Zinke said his agency plans to rewrite the Bureau of Land Management's Methane and Waste Prevention Rule. C-SPAN

Interior Secretary Ryan Zinke yesterday gave his most definitive indication to date that his agency would rework an

Obama-era regulation to curb methane emissions from oil and gas operations on public lands.

"My intention, so you know, is we're going to rewrite the rule," the former Montana congressman said in response to a line of questioning from the top Democrat on the Senate Energy and Natural Resources Committee.

Washington Sen. Maria Cantwell had been asking Zinke whether he would enforce BLM's Methane and Waste Prevention Rule after delaying its forthcoming compliance dates (*Greenwire*, June 14).

The suspension followed a failed effort to scrap the rule under the Congressional Review Act — a move that would have barred Interior from reintroducing a "substantially similar" regulation (*Greenwire*, May 10).

"Congress has said this is the law, and we want to know how you're enforcing it," Cantwell said to Zinke during a committee hearing on Interior's proposed fiscal 2018 budget.

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Interior postponed elements of the rule in light of pending litigation, according to a *Federal Register* notice last week. The notice did not say whether Interior would propose a new rule to replace the existing regulation, although a prior secretarial order noted that a revision was possible.

The order also suggested suspending or rescinding the rule, depending on the results of an agency review.

In a Monday letter to Zinke, Cantwell and Sen. Tom Udall (D-N.M.) questioned Interior's authority to halt provisions of a rule that has already taken effect (*Greenwire*, June 20).

"The effect of this claim is to allow the Department, according to its whim, to suspend properly promulgated regulations with no public notice and comment nor any legal reasoning beyond an unsubstantiated claim that 'justice requires' suspension of a rule that has already gone into effect," the senators wrote. "This could lead to all manner of improper giveaways and special relief for regulated industries."

Zinke said the new rulemaking would be subject to public notice and comment.

"I follow the law," he said.

New rule

After the hearing, Zinke offered a few details about Interior's plans for the rule over the next two months.

The existing rule dictates that operators submit waste minimization plans with applications for permits to drill. They must also meet new requirements for royalty-free use of production, downhole well maintenance and liquids unloading.

Postponed requirements include incremental methane capture percentages through 2025 and optimization of leaky pneumatic equipment and storage tanks.

"We're going to go forward and redo it. It can't be arbitrary," Zinke said. "Personally, I think unrestricted methane is a waste, and as the steward of our public lands, I think we've got to be cognizant of decentivized waste. That means incentivized capture systems."

Zinke did not offer specifics on how Interior would encourage companies to contain escaped methane but outlined some potential destinations for the gas. The flare stack — where excess gas is burned into the atmosphere — would not be one of them, he said.

"This is an asset that we're flaring, and we need to find a different way to make sure the gas is used, whether it's reinjected, whether it's stored, whether it's transferred to some other location," Zinke said.

"But certainly flaring it is wasteful."

Label: "FOIA/[SO 3349]"

Created by:mmford@blm.gov

Total Messages in label:29 (5 conversations)

Created: 09-25-2017 at 14:13 PM

Conversation Contents

SCC

Attachments:

/2. SCC/1.1 SCC Methodology summary 9 18 14.docx
/2. SCC/2.1 Kotchen NBER.pdf
/2. SCC/2.2 Marten et al. 2015.pdf
/2. SCC/2.3 NAS 1st report.pdf
/2. SCC/2.4 PNAS-2017-Nordhaus-1518-23.pdf
/2. SCC/2.5 social_cost_of_greenhouse_gases_factsheet.pdf
/2. SCC/2.6 IWG TSD 2010.pdf
/2. SCC/2.7 IWG TSD 2016.pdf

Rebecca Moore <rmoore@blm.gov>

From:	Rebecca Moore <rmoore@blm.gov>
Sent:	Thu Jun 15 2017 11:30:15 GMT-0600 (MDT)
To:	James Tichenor <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>
CC:	Robert Winthrop <rwinthro@blm.gov>
Subject:	SCC
Attachments:	SCC Methodology summary 9 18 14.docx

James and Mike,

As we consider questions regarding SCC in light of the recent E.O., I unearthed the attached draft briefing paper from about 3 years ago outlining options. (b) (5) [redacted] At least some of these report region-specific damages (e.g., US). Or, the Marten and Newbold paper looks like a viable source for CO2, methane, and nitrous oxide estimates.

I plan to conduct an updated lit review over the next two weeks. If you have suggested references, or sources, or other ideas, I'm all ears.

-Rebecca

Rebecca Moore, PhD
Senior Economist
Bureau of Land Management (Decision Support, Planning, and NEPA, WO-210)

Phone: 970-226-9246; Cell: 202-641-5851; Email: RMoore@blm.gov
Mail: Fort Collins Science Center, 2150 Centre Ave., Bldg C., Fort Collins, CO 80526-8118

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Thu Jun 15 2017 12:21:28 GMT-0600 (MDT)

To:	Rebecca Moore <rmoore@blm.gov>
CC:	Michael Ford <mmford@blm.gov>, Robert Winthrop <rwinthro@blm.gov>
Subject:	Re: SCC
Attachments:	Kotchen NBER.pdf Marten et al. 2015.pdf NAS 1st report.pdf PNAS-2017-Nordhaus-1518-23.pdf social_cost_of_greenhouse_gases_factsheet.pdf IWG TSD 2010.pdf IWG TSD 2016.pdf

Thanks Rebecca,

I look forward to seeing that. Here is what I pulled when revisiting it a couple weeks back. That might help. I also wonder to what extent you would still want to discuss the IWG papers. The way that I discussed them in the recent RIA was as more of a practical manner. e.g., The RIA for the previous or 2016 final rule considered the SC values found in the 2016 IWG report... The EO...disbanded the IWG and rescinded its reports...

In that context, it might be an opportunity to discuss what the previous reports may or may not have said, informing your opinions about how we should look at SC now.

Also, noting the article today: https://www.eenews.net/greenwire/2017/06/15/stories/1060056112

For various reasons, (b) (5) [redacted] I'd be more than happy to discuss why and what we currently have in the new RIA.

On Thu, Jun 15, 2017 at 10:30 AM, Rebecca Moore <rmoore@blm.gov> wrote:

> James and Mike,
>
> As we consider questions regarding SCC in light of the recent E.O., I unearthed the attached draft briefing paper from about 3 years ago outlining options. (b) (5) [redacted]. At least some of these report region-specific damages (e.g., US). Or, the Marten and Newbold paper looks like a viable source for CO2, methane, and nitrous oxide estimates.
>
> I plan to conduct an updated lit review over the next two weeks. If you have suggested references, or sources, or other ideas, I'm all ears.
>
> -Rebecca
>
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> Rebecca Moore, PhD
> Senior Economist
> Bureau of Land Management (Decision Support, Planning, and NEPA, WO-210)
>
> Phone: 970-226-9246; Cell: 202-641-5851; Email: RMoore@blm.gov
> Mail: Fort Collins Science Center, 2150 Centre Ave., Bldg C., Fort Collins, CO 80526-8118

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

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WHICH SOCIAL COST OF CARBON? A THEORETICAL PERSPECTIVE

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Which Social Cost of Carbon? A Theoretical Perspective
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ABSTRACT

This paper develops a theoretical foundation for the social cost of carbon (SCC). The model highlights the source of debate over whether countries should use the *global* or *domestic* SCC for regulatory impact analysis. I identify conditions under which a country's decision to internalize the global SCC, as currently practiced in the United States, is individually rational. Nevertheless, I show how obtaining international consensus on a particular value will be more challenging than often appreciated. I introduce the notion of "strategic SCC" to reflect each country's preference for a globally internalized shadow value on emissions conditional on a true value of the global SCC and a distribution of the domestic SCCs among countries. While all countries have a strategic SCC greater than their domestic SCC, a country's strategic SCC can be greater than or less than the global SCC. How these preferences translate into agreement depends on institutional arrangements for collective decision-making, for which I provide empirical evidence based on various decision rules. A central contribution of the paper is demonstration of the need for more research on the theoretical underpinnings of the SCC for policy analysis, because establishing and using the SCC among sovereign countries is not simply an application of estimating and internalizing an externality.

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1 Introduction

Individual agents across the planet have little or no incentive to internalize the global costs of their own climate-changing emissions. From this perspective, the problem of climate change is the problem of a global externality. The "social cost of carbon" (SCC) is a concept that reflects the marginal external costs of emissions: it represents the monetized damage caused by each additional unit of carbon dioxide, or the carbon equivalent of another greenhouse gas, emitted into the atmosphere. Many countries—the United States, Canada, Finland, France, Germany, Italy, Mexico, Netherlands, Norway, and the United Kingdom—have begun accounting for the SCC in regulatory impact analyses of domestic policy. In doing so, these countries take into account the *global* benefits of reducing CO_2 emissions (i.e., avoided damages worldwide) when conducting benefit-cost analyses of *domestic* regulations.[1]

There is, however, growing debate about whether the global SCC is appropriate for benefit-cost analysis of domestic policy. The practice is justified on the basis that climate change is a unique problem because of its scale as a global externality; that application of the global SCC among all countries would lead to globally efficient emissions; and that climate policy takes place in the context of international relations where one country's actions are used to leverage those of others, and no one country can solve the problem of climate change alone (Interagency Working Group 2010; Greenstone *et al.*, 2013; Pizer *et al.* 2014). The other side of the debate emphasizes that using global benefits is a departure from the conventional practice of regulatory impact analysis, especially in the United States, where benefit-cost analysis has focused traditionally on comparing domestic benefits and costs (Dudley and Mannix 2014; Gayer and Viscusi 2015; Darmstadter 2016; Fraas *et al.* 2016). The critics argue that unilateral policy for any one country should account for only the domestic share of the SCC, and that broadening the scope to include global benefits has potentially far reaching implications for the (mis)allocation of societal resources.[2] Questions

[1] Currently, the United States uses a central estimate of $40 per metric ton of CO_2 emitted in 2015 (in 2014$s), with increasing numbers for each year thereafter (Interagency Working Group 2013). In an important application of the SCC, the U.S. Environmental Protection Agency (EPA) estimates global benefits of $20 billion per year by 2030 from the Clean Power Plan to regulate emissions from existing power plants (U.S. EPA 2014).

[2] Aldy (2015) provides a useful discussion about the importance of the SCC for both implementing and evaluating climate policy.

also arise about consistency with individual rationality (i.e., self interest) from any one country's perspective.

Despite the widespread use of the SCC for evaluating climate policy, and the emerging debate about its appropriate scope, there is surprisingly little research on the theoretical basis of the SCC and how it should be used for policy analysis. The existing literature focuses almost exclusively on producing empirical estimates and refining the underlying methods employed in integrated assessment models (IAMs). This paper, in contrast, develops a theoretical foundation for the SCC to highlight points of disagreement in the debate over whether countries should use the global or domestic SCC. Moreover, I identify conditions under which a country's decision to internalize the global SCC is individually rational, yet also show how obtaining international consensus on a particular value of the global SCC will be more challenging than often appreciated.

The next section begins with the basic setup of a static model where each country chooses its emissions policy, recognizing that aggregate emissions generate a global public "bad." The setup makes immediately clear the distinction between global and domestic definitions of the SCC. A useful feature of the model is the way it clarifies how emissions produce a global externality from the perspective of individual agents, but a global public bad from the perspective of countries. Analysis in Section 3 shows how internalizing the global SCC is consistent with Pareto optimality of global emissions, and internalizing the domestic SCC is consistent with a Nash equilibrium among countries on their choice of emissions. I then use the model in Section 4 to show potential distributional effects of moving from equilibrium to efficient emissions, along with suggestive empirical evidence based on the regional calibration in the C-DICE model (Nordhaus 2015).

Section 5 moves directly to questions about individual rationality and a country's choice of internalizing the global or domestic SCC. I extend the basic model in two ways to account for the real-world institutional context where climate policy and international negotiations take place. First, building on the international relations argument for leadership and leverage, I replace the assumption of Nash behavior among countries with conjectures about how other countries will respond to one's own choice of emissions. Second, taking account of the dynamic way that countries will make emission decisions over time, I extend the static setup of the model to a repeated game and consider basic Folk theorem results. Both modeling approaches show that a country's choice to internalize the global

SCC can be individually rational. The results provide what is to the best of my knowledge the first formally derived microeconomic justification for countries to internalize the global SCC, and the necessary conditions are informative for policy design.

But on what value of the global SCC should we expect countries to agree? From an economics perspective, the SCC is generally perceived as an objective parameter, the estimates of which are limited primarily by empirical methods and data availability.[3] For political purposes, however, seeking the one right estimate of the global SCC fails to recognize strategic incentives on the part of countries. In Section 6, I introduce the notion of "strategic SCC" to reflect each country's preference for a globally internalized shadow value on emissions conditional on a true value of the global SCC and on a distribution of the domestic SCCs among countries. While all countries have a strategic SCC greater than their domestic SCC, a country's strategic SCC can be greater than or less than the global SCC. How these preferences translate into agreement therefore depends on institutional arrangements for collective decision-making, for which I provide some empirical evidence based again on the C-DICE model and various decision rules. I also discuss immediate implications of the results for debates currently underway in multilateral institutions, such as the World Bank, about how to account for climate-change impacts in program evaluation.

In the final section, I conclude the paper with a summary of the main results and policy implications. A central finding is that internalizing the global SCC when setting domestic policy or conducting regulatory impact analysis can be in a country's own self interest. This builds support for current practice in the United States and other countries. There is, however, a need for more research on the theoretical basis of the SCC and its use for policy analysis. The analysis here demonstrates how establishing and using the global SCC among sovereign nations is not simply an application of estimating and internalizing an externality.

2 The Model Setup

I construct the simplest model possible to illustrate the key ideas. Countries are indexed $i = 1, ..., n$ with $n \geq 2$. Each country has emissions x_i, and the initial

[3] With the exception of necessary (and important) assumptions about the discount rate, we might consider estimates of the SCC to be the result of positive rather than normative analysis.

version of the model is static.[4] The aggregate level of emissions, $X = \sum_{i=1}^{n} x_i = x_i + X_{-i}$, is a global public "bad." This means that emissions anywhere on the planet affect all countries, and I assume the impact on each country is negative. The damages of emissions in country i are $D_i(X) = \alpha_i X$, where $\alpha_i > 0$, and the linearity assumption is made for simplicity. The benefits of emissions in country i are $B_i(x_i)$, where $B_i'(x_i) > 0$ and $B_i''(x_i) < 0$.

A few observations are useful about the country-level specification of damage and benefit functions. The damage function for each country can be written as consisting of two terms, $D_i(X) = \alpha_i X_{-i} + \alpha_i x_i$. The first term reflects the damage in country i from emissions in all other countries. The second term reflects the damage in country i from its own emissions. While the damages with a domestic origin are internal to the country, they are external to individual agents within the country. Internalizing domestic damages from domestic emissions therefore requires some form of government intervention. The interventions can be either quantity- or price-based. A quantity-based policy would set x_i in ways consistent with, for example, direct regulation or a cap-and-trade program. A price-based policy would set a per-unit price p_i on emissions (e.g., a carbon tax) that would determine a country's emissions according to $x_i(p_i) = \{x_i : B_i'(x_i) = p_i\}$, which represents each country's demand for emissions.

The simple setup of this model makes immediately clear the differences between two notions of the social cost of carbon:

Definition 1 (DSCC) *The* Domestic Social Cost of Carbon *is* α_i *for all* i.

Definition 2 (GSCC) *The* Global Social Cost of Carbon *is* $A = \sum_{i=1}^{n} \alpha_i$.

Both the DSCC and the GSCC provide a measure of monetized, marginal damages from emissions, but differ in their political and therefore geographic scope. The DSCC measures the marginal damages to each country individually, whereas the GSCC measures the global marginal damages, which are the sum of the DSCCs across all countries.

Most of the empirical evidence on the GSCC comes from IAMs. Although IAMs are not without critics (Pindyck 2013, 2015), they provide the leading approach among researchers and policymakers for estimating the GSCC (Metcalf

[4]The one-period version of the model can be interpreted as a single long period or extended to reflect a repeated game with a constant payoff structure, as in Section 5.2.

and Stock, 2015). Indeed, the U.S. estimates of the GSCC used in regulatory impact assessment are based on a synthesis analysis of three different IAMs (Interagency Working Group 2013).[5] The central estimate of the GSCC, based on a 3-percent discount rate, is \$40 (in 2014\$s) per metric ton of CO_2 emitted in 2015, with the number increasing in future years.

As the IAMs have become more detailed over time, greater efforts have been made to increase the spatial resolution of costs and benefits. Specifically, several models calculate estimates of the DSCC for different countries, or in most cases regions. Nordhaus (2014) summarizes the regional SCC estimates for different models and observes that while there is little consensus on the distribution of the GSCC by region, no one region or country appears to dominate the total. Subsequently, Nordhaus (2015) merges the results to derive a regional decomposition of the GSCC based on an average of three models.[6] I report the distribution in Figure 1 to provide a sense of the empirical heterogeneity in the DSCC, recognizing that some estimates are for regions rather than countries. The estimates range from nearly 14 percent of the GSCC for the European Union to less than 1 percent for South Africa. The figure also illustrates how the percentage distribution partitions the GSCC of \$40 among different countries or regions.[7] For example, the United States share is about \$4.24. Across the distribution, Nordhaus (2015) observes that the estimates are roughly proportional to discounted Gross Domestic Products (GDPs), with deviations based on geographic differences in climate sensitivity.

3 Efficiency *vs.* Equilibrium

I now consider how the different measures of the social cost of carbon—the GSCC and the DSCCs—relate to globally efficient and equilibrium levels of emissions policy. I begin with globally efficiency and the GSCC, before turning to equilibrium policies and the DSCCs. To simultaneously account for quantity- or price-based policies, I consider the shadow value on emissions, denoted s_i, that

[5]The three different models are DICE, FUND, and PAGE. Detailed reference information is available in the Interagency Working Group report.

[6]See Table B-2 in the Online Appendix in Nordhaus (2015)

[7]The estimated percentage decomposition of the GSCC into countries and regions is based on a GSCC of around \$20 (Nordhaus 2015). The percentages reported in Figure 1 assume the same percentages hold for a GSCC of \$40.

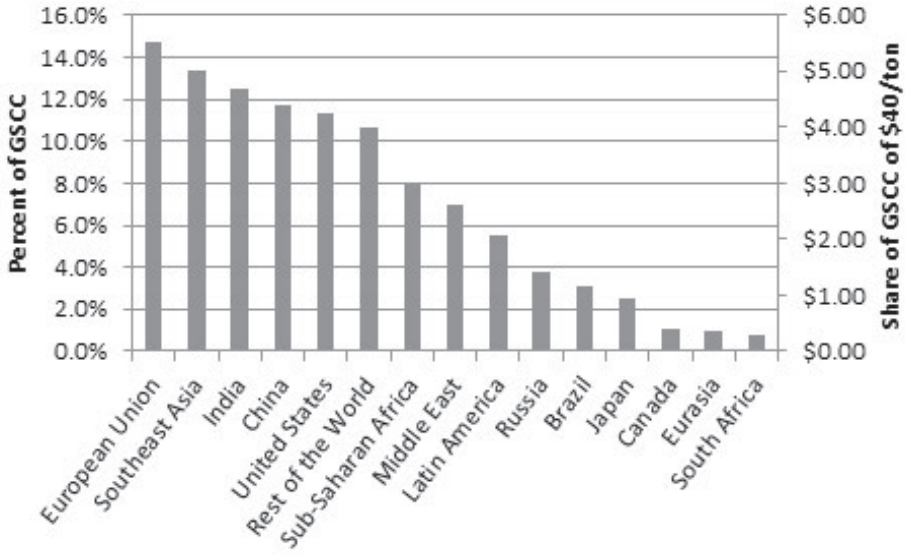

Figure 1: Heterogeneity in the distribution of the GSCC across countries or regions based on averaging across three IAMs

each country internalizes. The choice of s_i maps into a quantity-based instrument according to the demand function for emissions $x_i(s_i)$ and directly into a price-based instrument with $s_i = p_i$.

3.1 Pareto Optimality

Pareto optimality in global emissions must maximize aggregate surplus. The efficiency objective is to coordinate the internalized, shadow value of emissions among all countries to solve

$$\max_{s_1,...,s_n} \sum_{i=1}^{n} B_i(x_i(s_i)) - A \sum_{i=1}^{n} x_i(s_i). \tag{1}$$

Assuming an interior solution (here and throughout), the conditions that define the solution $(s_1^*, ..., s_n^*)$ can be combined as follows:

$$B_1'(x_1(s_1^*)) = ... = B_n'(x_i(s_i^*)) = A. \tag{2}$$

The result is intuitive: the marginal benefit of emissions is equated across all countries and equal to the sum of the marginal damages of emissions. Using each country's demand function for emissions, it is straightforward to see the further implication that satisfying (2) requires $s_i^* = A$ for all i. That is, all countries must internalize the GSCC, which then defines a unique level of Pareto optimal emissions for each country $x_i^* = x_i(s_i^*)$ and thus aggregate emissions, $X^* = \sum_{i=1}^{n} x_i^*$. This, of course, is the efficiency argument in support of all countries internalizing the GSCC for domestic policy.

Although a bit of an aside, it is worth pointing out that the efficiency conditions in (2) are related to, and yet distinct from, the standard condition for optimal provision of a public good (bad). The classic Samuelson condition would equate the sum of the marginal benefits of reducing the public bad to the marginal costs of doing so. In this case, the sum of the marginal benefits corresponds to A, but, in contrast to the Samuelson condition, these marginal benefits equal the marginal costs of reducing emissions (foregone benefits) in all countries, which themselves must all be equal. The difference arises here because the marginal costs of abatement come from sources within each country separately rather than from a uniform price or market supply curve. This is why there are n conditions in (2) rather than the single Samuelson condition.

3.2 Nash Equilibrium

I now turn to the problem that each country faces based on its own self interest. While Pareto optimal emissions maximize aggregate surplus, individual countries are focused on maximizing their own net benefits. I begin with the Nash assumption whereby each country takes the emissions (policy) of others as given. Each country's problem can be written as

$$\max_{s_i} B_i(x_i(s_i)) - \alpha_i \left[x_i(s_i) + X_{-i}\right]. \tag{3}$$

The important feature of this objective function is that each country accounts for its DSCC from global emissions rather than the GSCC. The unique solution $\hat{s}_i$ will solve

$$B_i'(x_i(\hat{s}_i)) = \alpha_i \text{ for all } i. \tag{4}$$

		Country A	
		$DSCC_A$	GSCC
Country B	$DSCC_B$	2 , 2	4 , 1
	GSCC	1 , 4	3 , 3

Figure 2: Example where the choice of the DSCC over the GSCC is consistent with a classic prisoners' dilemma

In this case, each country's demand for emissions implies that $\hat{s}_i = \alpha_i$ for all i.[8] That is, each country chooses to internalize its DSCC, implying domestic emissions levels $\hat{x}_i = x_i(\hat{s}_i)$ for all i and global emissions $\hat{X} = \sum_{i=1}^{n} \hat{x}_i$.

It is straightforward to see that equilibrium emissions are inefficiently high in all countries. This follows immediately from the facts that $s_i^* = A > \alpha_i = \hat{s}_i$ and $x_i'(s_i) < 0$ for all i. The result also follows intuitively because emissions provide a global public bad, the marginal damages of which no one country has the incentive to fully internalize with the setup in (3). In other words, every country has an incentive to free ride rather than internalize more than its own costs.

It is worth noting that the characterization of a global public bad differs somewhat from a global externality, and this is due the level of analysis taking place among countries rather than individuals. The standard definition of an externality means that agents take no account of any external damages of their actions. But here each country experiences some of the marginal damages from its *own* emissions, in addition to damages from the emissions of other countries. This explains why countries will, to some extent, constrain their own equilibrium emissions with a choice of $s_i > 0$, rather than $s_i = 0$, which would have emissions increase until $B_i'(x_i) = 0$. Nevertheless, individual agents within each country do not have such an incentive because they experience an infinitesimally small fraction of damages from their own emissions.

Figure 2 illustrates the idea of free riding on abatement in the form of a

[8]Notice that each country's choice of $\hat{s}_i$ and therefore $\hat{x}_i$ depends on α_i but not X_{-i}. This is an important implication of the assumed linearity of damage functions. While the assumption simplifies the analysis greatly, it should be recognized that, more generally, each country's choice would be a best-response function that depends on the emissions of other countries.

		Country A	
		$DSCC_A$	GSCC
Country B	$DSCC_B$	3 , 1	5 , 0
	GSCC	0 , 5	2 , 4

Figure 3: Example where Pareto optimality of internalizing the GSCC is not a Pareto improvement

classic prisoners' dilemma. There are $n = 2$ identical countries, and each faces the choice of internalizing its DSCC or the GSCC. In this example, both countries are better off if they both choose the GSCC (the Pareto optimal solution), but doing so is not a Nash equilibrium. The payoffs are such that both countries have a dominant strategy to choose the DSCC, resulting in a Nash equilibrium where both countries obtain a lower payoff.

4 Distributional Considerations

It is well recognized that the globally efficient level of emissions is not an equilibrium. Generally less well known is that all countries would *not* necessarily prefer the efficient level of emissions, even if it could be sustained. Figure 3 modifies the payoffs to the prisoners' dilemma to illustrate a simple example. Pareto optimality occurs if both countries choose the GSCC, were the combined payoffs are maximized, but the Nash equilibrium still occurs when both countries choose their respective DSCC. The difference arises now because Country B is actually worse off at the Pareto optimal outcome compared to the Nash equilibrium. Without a transfer from Country A to Country B (of at least one unit of payoff), the problem is one of distribution in addition to free riding.

I now consider more generally the potential distributional effects upon moving from equilibrium to efficient emissions. Let us define the respective net benefits for each country as $\hat{v}_i = B_i(\hat{x}_i) - \alpha_i \hat{X}$ and $v_i^* = B_i(x_i^*) - \alpha_i X^*$. Hence the task is to consider different circumstances under which it is possible for $v_i^* - \hat{v}_i \gtreqless 0$.

The simplest and most intuitive case is that of all identical countries because the efficient level of emissions will always Pareto dominate the equilibrium. By

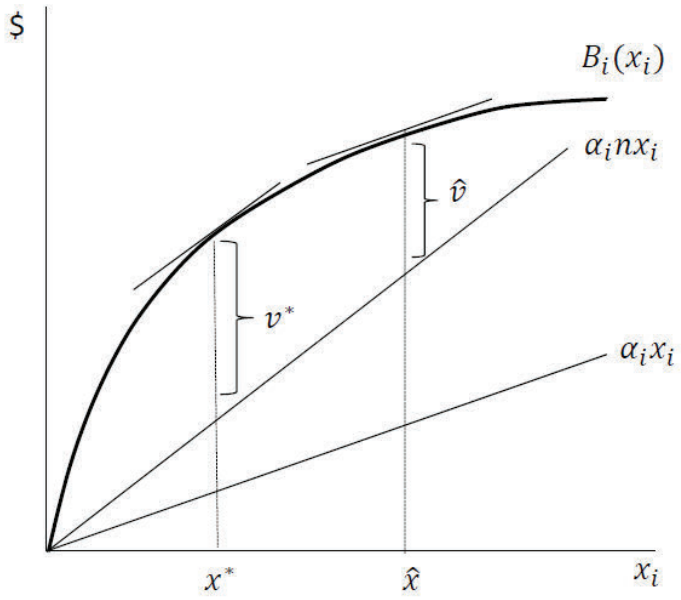

Figure 4: A country's net benefits at Pareto optimal and Nash equilibrium emissions with n identical countries

symmetry, each country will have same level of equilibrium emissions and the same level of Pareto optimal emissions. We can therefore dispense with subscripts for the time being to show that

$$v^* - \hat{v} = [B(x^*) - \alpha n x^*] - [B(\hat{x}) - \alpha n \hat{x}] \quad (5)$$

$$= \alpha n(\hat{x} - x^*) - \int_{x^*}^{\hat{x}} B'(z)dz > 0, \quad (6)$$

where the inequality follows because $\hat{x} > x^*$, $\alpha n = B'(x^*)$ by (2), and $B''(x) < 0$. In other words, for each country, the avoided damages of lower global emissions (the first term) more than offset the foregone benefits of further reducing its own emissions (the second term). Figure 4 illustrates the result graphically. The result is also quite intuitive upon recognizing that maximizing the sum of net benefits among identical countries is equivalent to maximizing the net benefit for each individual country.

There is, however, no such general result with heterogenous countries. The

more general formulation of (5) and (6) for all i is

$$v_i^* - \hat{v}_i = \alpha_i(\hat{X} - X^*) - \int_{x_i^*}^{\hat{x}_i} B_i'(z)dz \tag{7}$$

$$= \underbrace{\alpha_i(\hat{X}_{-i} - X_{-i}^*)}_{>0} + \underbrace{\alpha_i(\hat{x}_i - x_i^*) - \int_{x_i^*}^{\hat{x}_i} B_i'(z)dz}_{<0}, \tag{8}$$

where the signs of the different parts of the expression follow because $\hat{x}_i > x_i^*$ for all countries, $B_i'(\hat{x}_i) = \alpha_i$ by (4), and $B_i''(x_i) < 0$. The important observation is that the overall sign of (8) can be either positive or negative.

Notwithstanding the indeterminate sign, the terms in (8) are useful for building intuition about when a country could be made worse- or better-off upon moving to the globally efficient level of emissions, without transfers. The first part of (8), which is positive, represents the "spillin" benefits that a country receives from the emission reductions in other countries. The term is bigger when country i experiences greater marginal damages from emissions and other countries reduce their emissions more. The second braced part of (8) is the net private cost to country i. The first term is the benefit of reducing its own emissions, and the second term is the foregone benefit from reducing emissions. The net effect is always negative, and the magnitude is increasing in the size of the externality being internalized, A_{-i},which follows because $x_i^* \to \hat{x}_i$ as $A_{-i} \to 0$.

The more general concept underlying these different possibilities is that moving to a Pareto optimal allocation need not imply a Pareto improvement. It does, however, imply that a Pareto improvement is possible with transfers. We know that $\sum_{i=1}^n v_i^* > \sum_{i=1}^n \hat{v}_i$ even if it does not hold that $v_i^* > \hat{v}_i$ for all i. It is therefore possible for redistribution of the surplus such that all countries are at least as well off as they were in the initial equilibrium. Indeed, the differences $v_i^* - \hat{v}_i$ for all i can provide a foundation for thinking about climate finance as transfers in an internal setting. In particular, we know there exists a set of transfers $(\tau_1, ..., \tau_n)$ such that $\sum_{i=1}^n \tau_i = 0$ and $v_i^* - \hat{v}_i + \tau_i \geq 0$ for all i, holding strictly for at least some i.

Let us for the moment consider some simulation-based empirical evidence. I employ the basic set up in Nordhaus (2015) for the C-DICE model, although I exclude the model's club feature. The model includes the 15 countries (or regions) listed in Figure 1 and the respective DSCCs corresponding with a GSCC

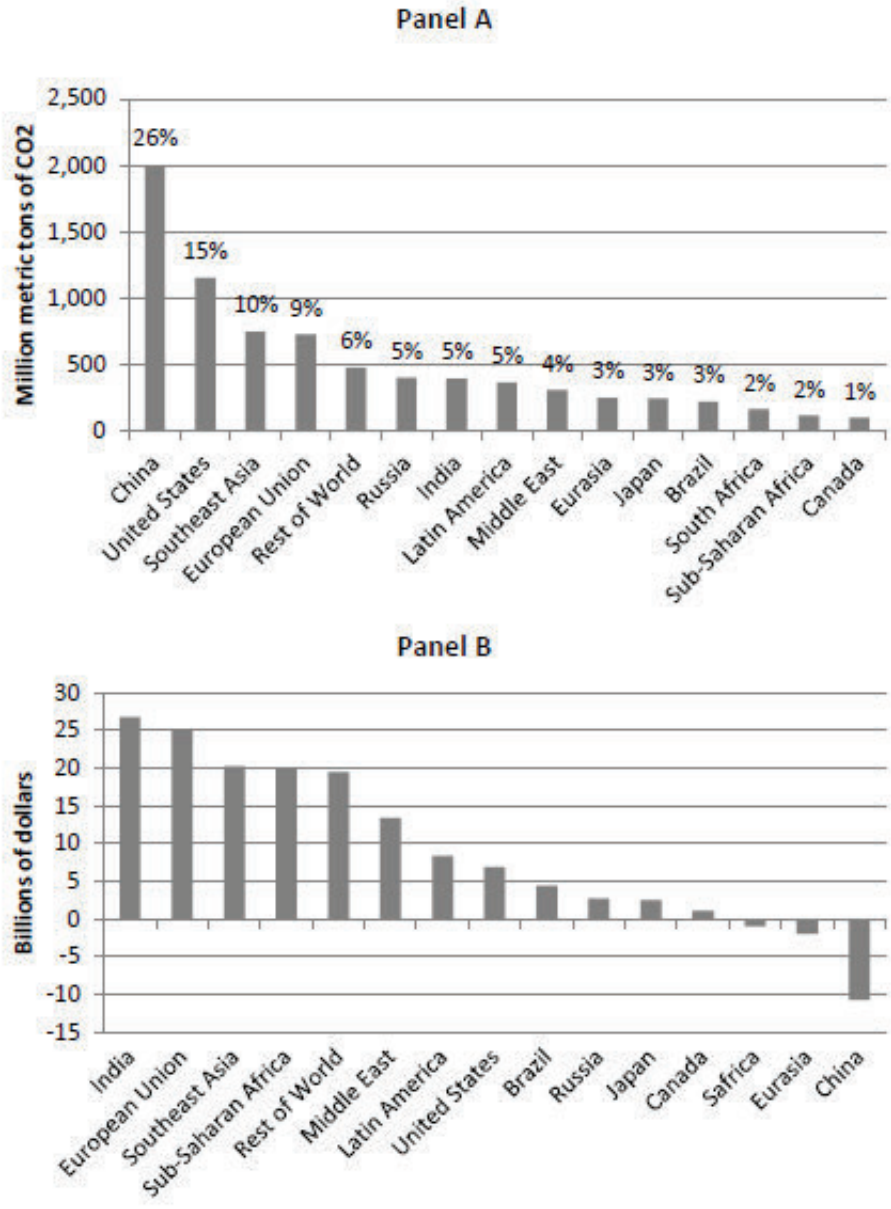

Figure 5: Simulated abatement of countries or regions (Panel A) and change in welfare (Panel B) of moving from equilibrium to Pareto optimal emissions without transfers

of $40. The country benefits of emissions are based on the functional form and parameterization in Nordhaus (2015, Table B-4).[9] With this setup, I solve for equilibrium and Pareto optimal emissions for each country and report the results of interest in Figure 5. Panel A shows each country's abatement of moving from equilibrium to Pareto optimal emissions, i.e., $\hat{x}_i - x_i^*$. Overall emissions decline by 22 percent, and the figure shows the percentage of the total reduction attributable to each country. For example, 26 percent of the reduction comes from China and 9 percent from the European Union. Panel B shows the change in welfare $v_i^* - \hat{v}_i$ measured in billions of dollars. While India gains the most, South Africa, Eurasia, and China are all made worse off without transfers. Clearly, the net benefits exceed costs across all countries.

5 Rationalizing the GSCC

Can it ever be individually rational for a country to internalize more than its DSCC, perhaps even the GSCC? With the model considered thus far, the question is equivalent to asking whether cooperation in a prisoner's dilemma can be individually rational. The answer, of course, is "no," without modification to the model's setup. In this section, I show how basic changes to the model that reflect the real-world institutional context where climate policy and international negotiations take place can produce a different result. I do not claim that the models in the following two subsections are necessarily the right ones; rather, my aim is to illustrate simple possibilities that are consistent with observed policies and that can spur further theoretical research on this increasingly important, policy-relevant question.

5.1 Conjectural Variations

We have heretofore assumed Nash behavior among countries—that is, each country assumes that its choice of s_i and therefore x_i will have no affect on the emissions of other countries. But this assumption ignores the potential importance of

[9] The benefits of emissions are given by $B_i(x_i) = q_i - \lambda_i \mu_i^2 q_i$, where q_i is GDP in 2011 and $\mu_i = (\bar{x}_i - x_i)/\bar{x}_i$ is the emissions intensity relative to 2011 levels denoted by $\bar{x}_i$. The parameter λ_i is the abatement cost parameter that comes from McKinsey (2009) and averaged for the 2020 and 2030 estimates. It is straightforward to verify that the benefits function satisfies the required properties for all $x_i \leq \bar{x}_i$.

international relations where some countries may reduce their emissions to leverage reductions from other countries. One way to account for this relationship is to employ a conjectural variations approach.

Assume that country i has a conjecture about how other countries will change their level of emissions given a change in its own emissions. Here I consider the choices of x_i directly (rather than s_i) in order to simplify notation. The simplest way to characterize the conjecture is with a linear relationship between country i's chosen level of emissions and its expectation about the emissions of others, denoted $\tilde{X}_{-i}$. Specifically, we can write $d\tilde{X}_{-i}/dx_i = \gamma_i > 0$ to capture the way that a country believes a decrease (increase) in its own emissions will decrease (increase) the emissions of other countries.[10] Note that Nash behavior is consistent with $\gamma_i = 0$ for all i. It follows that $\tilde{X}_{-i} = \gamma_i x_i + \kappa_i$, where κ_i is some constant of integration.

Each country i then solves

$$\max_{x_i} B_i(x_i) - \alpha_i x_i - \alpha_i(\gamma_i x_i + \kappa_i),$$

and the solution will satisfy

$$B_i'(x_i) = \alpha_i(1 + \gamma_i). \tag{9}$$

Comparing this first-order condition with (4) shows how the positive relationship between x_i and $\tilde{X}_{-i}$ means that a country will internalize more than the DSCC when setting its own emissions policy. The presence of $\alpha_i\gamma_i$ on the right-hand side reflects the additional, marginal disincentive to increase emissions: the expectation that other countries will increase their emissions too—by γ_i at a cost of α_i. There is also an important knife-edge result where a country will take account of exactly the GSCC. If $\gamma_i = A_{-i}/\alpha_i$, then expression (9) is equivalent to (2) for country i. In other words, if a country expects a decrease in its own emissions to decrease that of all others in proportion to the ratio of its external cost of emissions to its internal costs, then it is individually rational for the country to internalize the GSCC. Moreover, if the expectation were to hold for all i, then all countries would internalize the GSCC, and global emissions would be Pareto optimal.

[10] The approach here is based on that in Cornes and Sandler (1984, 1985) for public goods more generally.

It is worth briefly mentioning how the conjectural variations solution relates to other solutions for solving public goods problems. The most noteworthy is a Lindahl equilibrium. Although often discussed as pertaining to individualized prices for providing a public good, Lindahl's thought experiment can be motivated using quantities rather than prices (see, for example, Cornes and Sandler 1996). Assume that each country is permitted a share of global emissions, $\theta_i = x_i/X$, that is determined exogenously and $\sum_{i=1}^{n} \theta_i = 1$. A Lindahl equilibrium, which by definition implements Pareto optimal emissions, then arises if $\theta_i = \alpha_i/A$ for all i.[11] Differentiating the share equation, it holds that $dX_i/dx_i = (1 - \theta_i)/\theta_i = \gamma_i$, so the difference between Lindahl shares (which also define an optimal burden-sharing agreement) and the conjectural variation parameter is therefore a matter of interpretation.

There are, however, some well-known shortcomings of the conjectural variations approach. The most obvious is that a country's conjecture is arbitrary and possibly incorrect. But this criticism should be considered in light of the fact that the assumption of Nash behavior is also quite arbitrary and perhaps more questionable in the context of international climate policy, where some degree reciprocity among countries is clearly at work. There are also concerns about whether conjectures are consistent with optimal responses at an equilibrium (Sugden 1985; Scafuri 1988), but these concerns reflect a more general criticism. Because conjectural variations are based on the idea that agents (i.e., countries) respond to one another in some particular way, arguments are often made that capturing the underlying idea is more appropriate through explicit modeling of a repeated game.[12]

5.2 A Repeated Game

International negotiations to mitigate climate change clearly have a repeated game aspect whereby countries set emission targets period after period.[13] As mentioned previously, the one-period game can be interpreted as a single long

[11] To see this, solve $\max_{x_i}\{B_i(x_i) - \alpha_i X\}$, where $X = x_i/\theta_i$ and $\theta_i = \alpha_i/A$, to verify the solution is x_i^* for all i.

[12] Itaya and Okamura (2003) show specific cases in which the conjectural variations equilibrium is observationally equivalent to the strategies played in the subgame perfect equilibrium of the underlying repeated game for voluntary provision of a public good.

[13] See Barrett (1994, 2003) for some of the early treatments and discussion of international environmental agreements as a repeated game.

period, but in this subsection, I extend the model to a repeated game. To keep things as simple as possible, I consider only pure and stationary strategies, denoted as either $(x_1, ..., x_n)$ or $(x_i, \mathbf{x}_{-i})$ in more compact notation. All countries are assumed to have the discount factor $\delta \in (0, 1)$, complete information, and perfect recall of the history of play.

Assuming either an infinitely repeated game or one with an uncertain duration,[14] the discounted payoff to country i can be written as

$$\begin{aligned} V_i(x_i, \mathbf{x}_{-i}) &= \sum_{t=1}^{\infty} \delta^{t-1} \left[B_i(x_i) - \alpha_i(x_i + X_{-i}) \right] \\ &\approx \frac{1}{(1-\delta)} \left[B_i(x_i) - \alpha_i(x_i + X_{-i}) \right] \\ &= \frac{v_i(x_i, \mathbf{x}_{-i})}{1-\delta}. \end{aligned} \tag{10}$$

A standard and immediate result is that the Nash equilibrium level of emissions in the stage game for all countries, $(\hat{x}_1, ..., \hat{x}_n)$, constitutes a subgame perfect equilibrium in the repeated game, and this result holds for any δ and prior history of emissions. This is consistent with all countries choosing to internalize the DSCC in the repeated game.

I now consider whether the choice of something greater than the DSCC—in particular, the GSCC—can be sustained as a subgame perfect equilibrium. A natural place to begin is with Nash reversion strategies. All countries choose a level of emissions $(x_1, ..., x_n)$ in each period until one country deviates, at which point all countries revert to $(\hat{x}_1, ..., \hat{x}_n)$ for all periods thereafter. Whether continually choosing $(x_1, ..., x_n)$—and therefore an implied SCC for each country—constitutes a subgame perfect equilibrium depends on whether any country has an incentive to deviate in any period. The necessary and sufficient condition to avoid deviation can be written as

$$v_i(\hat{x}_i, \mathbf{x}_{-i}) - v_i(x_i, \mathbf{x}_{-i}) \leq \delta \left[V_i(x_i, \mathbf{x}_{-i}) - V_i(\hat{x}_i, \hat{\mathbf{x}}_{-i}) \right] \text{ for all } i. \tag{11}$$

The left-hand side is the maximum gain from deviating in one period, and the right-hand side is the discounted future loses from reversion beginning in the next

[14] In a game of uncertain duration, δ represents the product of the discount factor and the continuation probability. I will, however, refer to δ simply as the discount factor in the main text.

period. Substituting (10) into (11) and rearranging yields a useful variant of the same relationship:

$$\frac{1-\delta}{\delta}\left[v_i(\hat{x}_i, \mathbf{x}_{-i}) - v_i(x_i, \mathbf{x}_{-i})\right] \leq v_i(x_i, \mathbf{x}_{-i}) - v_i(\hat{x}_i, \hat{\mathbf{x}}_{-i}). \tag{12}$$

The left-hand side is always non-negative and converges to zero as $\delta \to 1$. Hence whether the condition can be satisfied depends on whether the right-hand side is positive. This simple observation produces several results.

The first is that choosing to internalize more than the DSCC can be individually rational for all countries if δ is sufficiently large. To prove this, let $x_i = \hat{x}_i + dx$ for all i. It follows that $d\hat{v}_i/dx = \alpha_i(1-n) < 0$, and the right-hand side of (12) is positive for all i if $dx < 0$. This means that continually choosing $(x_1, ..., x_n) < (\hat{x}_1, ..., \hat{x}_n)$ is a subgame perfect equilibrium if δ is sufficiently close to 1. In other words, if countries care enough about the future, then in the repeated game, it is individually rational to emit less than the Nash equilibrium in the stage game, and this is equivalent to internalizing more than the DSCC.[15] While this may not be the first-best solution, the point is that countries are no longer stuck with only their DSCCs in the repeated game.

The second set of results relate specifically to the GSCC. If, as discussed in Section 4, it holds that $v_i^* \geq \hat{v}_i$ for all i, and δ is sufficiently large, then $(x_1^*, ..., x_n^*)$ constitutes a subgame perfect equilibrium. Hence choosing to internalize the GSCC can be individually rational. Moreover, even if $v_i^* < \hat{v}_i$ for some i, transfers of the form defined previously, where $v_i^* - \hat{v}_i + \tau_i > 0$ for all i, can also support internalizing the GSCC in a repeated game. The overall intuition for these results is that if countries are concerned about the future and interact repeatedly, they will choose long-term cooperation over short-term gain.

There are many results applicable here from the literature on repeated games and the Folk Theorem. It is worth mentioning that a common critique about the usefulness of the Folk Theorem is that "anything goes" because of the large set of potential subgame perfect equilibria in repeated games. In this setting, however, that is precisely the contribution, because it shows how countries choosing to internalize something more than their DSCC can be individual rational. I have used what is perhaps the simplest setup to potentially rationalize a country's internalization of the GSCC, or at least something greater than the DSCC.

[15] This result is essentially an application of the Nash Reversion Folk Theorem (see Mas-Colell *et al.* 1995).

The results highlight the importance of repeated interaction, complete information, and the potential use of transfers. It may be no coincidence therefore that each of these conditions featured prominently in the most recent United Nations Framework Convention on Climate Change (UNFCCC) agreement in Paris. The agreement has detailed provisions about the schedule for renewed commitments, mechanisms to improve information acquisition and dissemination, and commitments for climate finance to developing countries.

A promising line of future research is to consider alternative punishment schemes to Nash reversion and thereby allowing the study of more general insights of Folk Theorem type results.[16] Further research would also be useful that considers the effect of imperfect monitoring. Mailath and Samuelson (2006) provide a good starting point with their treatment of public and private monitoring, which in this case would capture realistic challenges for monitoring and reporting of emissions data through multilateral entities or countries themselves.

6 Strategic SCC

With the exception of the choice of a discount rate in IAMs, empirical estimates of the GSCC are generally understood to be the result of positive rather than normative analysis. The existing research focuses on improving empirical methods and expanding data availability to provide better estimation (Pizer *et al.* 2014; Burke *et al.* 2016). Within a political context, however, seeking the one right estimate of the GSCC fails to recognize the strategic incentives on the part of sovereign countries. Even with a true GSCC, countries will in general have different preferences for a globally internalized shadow value on emissions. In this section, I introduce the notion of a strategic SCC (SSCC) to define the concept. I then relate the SSCC to the other SCC measures and consider empirical evidence and policy implications.

One way to think about the task at hand is to consider each country's preference for the level of a uniform and globally implemented carbon tax, where each country retains its own tax revenue. The problem is similar that in Weitzman (2014, 2015), but differs because the focus here is not on a carbon tax *per se.*

[16] Although Nordhaus (2015) considers a static game, his formulation of a climate club that imposes trade sanctions on non-members provides and example of such a punishment scheme. See Böhringer, Carbone, and Rutherford (2016) for an analysis with similar elements.

Instead, I focus on the level of global ambition each country would like to see through a uniformly applied marginal cost on emissions, which can be implemented in countries through any choice of policy instruments.[17]

Let s denote a minimum marginal cost on emissions that all countries internalize. We can then write each country's associated level of emissions as

$$x_i(s) = \left\{ x_i : \begin{array}{ll} B_i'(x_i) = s & \text{if } s \geq \alpha_i \\ B_i'(x_i) = \alpha_i & \text{otherwise} \end{array} \right\}.$$

This expression is equivalent to each country's demand for emissions with a price floor at its DSCC, reflecting how a country would choose to internalize α_i rather than some $s < \alpha_i$.

It follows that each country's preference for a uniformly implemented marginal cost of emissions comes from solving

$$\max_{s_i} B_i(x_i(s_i)) - \alpha_i \sum_{j=1}^{n} x_j(s_i). \tag{13}$$

Note that α_i is the only marginal damage that matters from country i's perspective. The solution to (13), denoted $\tilde{s}_i$, will satisfy

$$B_i'(x_i(\tilde{s}_i))x_i'(\tilde{s}_i) = \alpha_i \sum_{j=1}^{n} x_j'(\tilde{s}_i). \tag{14}$$

The important feature about this condition is that the right-hand side includes the avoided marginal damages to country i of lower emissions in country i and all other countries.[18] We can thus define the following:

Definition 3 (SSCC) *The* Strategic Social Cost of Carbon *is* $\tilde{s}_i$ *for all* i*.*

I now consider how a country's SSCC compares with its DSCC and the GSCC,

[17] See Aldy and Pizer (2016) for a discussion on comparing ambition based on explicit and implicit carbon prices.

[18] I have implicitly assumed that the second-order condition for a global maximum is satisfied. A sufficient (though not necessary) condition that I will use to illustrate some results is for all countries to have linear demand for emissions. This means that $x_i''(s) = -B_i'''(x_i(s))x_i'(s)/B_i''(x_i(s))^2 = 0$, which implies $B_i'''(x_i(s)) = 0$. It also implies that (13) is globally concave, as the second derivative of the objective function simplifies to $x_i'(s_i) < 0$.

before turning to some empirical evidence and various decision rules for aggregating preferences.

6.1 Comparison with DSCC and GSCC

Let us first consider the DSCC. Rearranging (14) and using (4), we have

$$\begin{aligned} B_i'(x_i(\tilde{s}_i)) &= \alpha_i + \frac{\alpha_i}{x_i'(\tilde{s}_i)} \sum_{j \neq i} x_j'(\tilde{s}_i) \\ &> \alpha_i = B_i'(\hat{x}_i) = B_i'(x_i(\alpha_i)). \end{aligned}$$

Because $B_i''(x_i) < 0$, it follows that $x_i(\tilde{s}_i) < x_i(\alpha_i)$ and therefore $\tilde{s}_i > \alpha_i$. This implies that a country would choose a uniformly internalized marginal cost on emissions higher than α_i; that is, its SSCC is greater than it DSCC. The reason follows immediately from the comparison between (4) and (14): when choosing $\tilde{s}_i$, a country enjoys the additional benefit of "forcing" other countries to lower their emissions, and this provides an incentive to increase the domestically internalized cost beyond α_i.[19]

Turning now to a comparison with A, it is useful to begin with all identical countries. Recognizing the symmetry of solutions and suppressing subscripts, equation (14) simplifies to

$$B'(x(\tilde{s})) = \alpha n = A.$$

The immediate implication is that $\tilde{s} = A$. In other words, with all identical countries, each country would choose a SSCC equal to the GSCC, and as we have seen, this is consistent with Pareto optimal emissions.

But the same result does not hold in general with heterogeneity among countries. To see the different mechanisms at work, let us make the further simplifying assumption of linear demand for emissions in each country. Letting $x_i'(s) = b_i$ for

[19] Weitzman (2014) discusses an externality internalizing incentive in the context of a uniformly applied carbon tax, but the idea has a much earlier provenance in public economics (Bowen 1943), where, for example, there is concern about tax rates that citizens in a municipality would like to see for the provision public goods such as education. Individuals are willing to pay higher taxes themselves in order to get the benefit of others having to do the same.

all i, we can rewrite and simplify (14) as

$$B_i'(x_i(\tilde{s}_i)) = \alpha_i + \frac{\alpha_i}{b_i}\sum_{j\neq i} b_j. \tag{15}$$

The general result is that each country's choice of $\tilde{s}_i$ can be greater than or less than A. This follows immediately from (15) because the right-hand side does not depend on α_j for all $j \neq i$, which gives wide latitude for the second term to be greater than or less than A_{-i}.

To build intuition for the different possibilities, it is useful to consider the simple case where $n = 2$. If we simplify even further by assuming $b_i = b_j$, it is easy to see from (15) that $\tilde{s}_i \gtreqless A(= \alpha_i + \alpha_j)$ if and only if $\alpha_i \gtreqless \alpha_j$. This implies not only that a country with greater marginal damages chooses a greater SSCC; a country's SSCC will be greater than the GSCC when it has relatively higher marginal damages. In this case, there is an incentive to force the other country to lower emissions, with overall reductions more than are Pareto optimal. It is also useful to consider the case of $\alpha_i = \alpha_j$ and heterogenous demand, whereby $\tilde{s}_i \gtreqless A$ if and only if $b_j/b_i \gtreqless 1$, and recall that $b_i, b_j < 0$. This means that country i will choose a SSCC greater (lower) than the GSCC if and only if country j has a more (less) responsive demand for emissions. The reason is that country i does not experience the greater (less) marginal cost of foregone emissions in country j when determining its preference for a uniform marginal cost on emissions.[20]

In summary, all countries will have a SSCC greater than their own DSCC, but possibly greater than or less than the GSCC. The fact that some countries may prefer a uniform marginal cost of emissions greater than the GSCC is at first somewhat counter-intuitive, but becomes clear when considering how these are countries with relatively flat demand for emissions, large marginal damages, or both. These are in effect the countries that would like to see a very stringent global emissions policy, a view certainly consistent with those of the small island nations.

[20] A further result worth noting with linear demand is the possibility for $\tilde{s}_i = A$ for all i even with heterogenous countries. Although it is a knife-edged result, the condition will hold if all countries have the same ratio of marginal costs to benefits of emissions; that is, the ratio α_i/b_i is the same for all i. To see this, note that the identical ratio condition requires $b_j = b_i(\alpha_j/\alpha_i)$ for all j and i, and substitution into (15) yields a right-hand side equal to A.

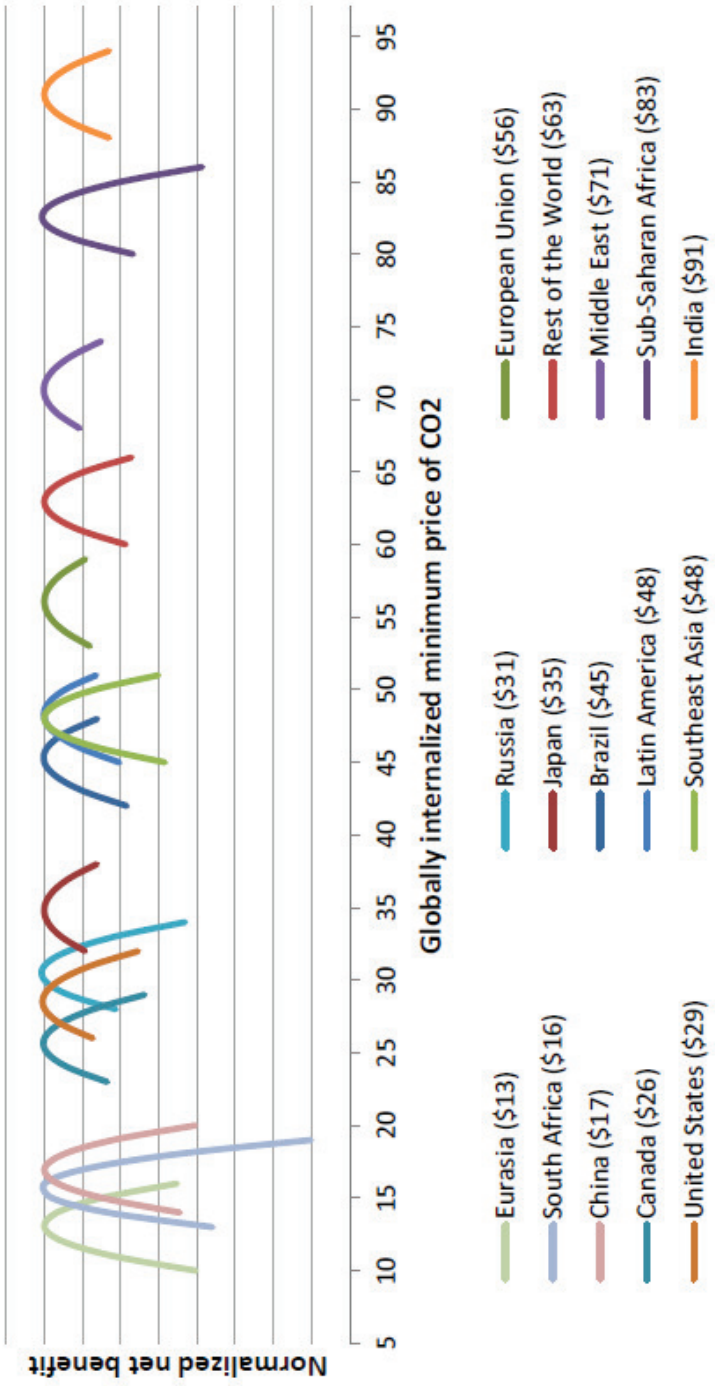

Figure 6: Single-peaked preferences for the SSCC for countries or regions, given a GSCC of $40

6.2 Empirical Evidence and Decision Rules

I provide some empirical evidence on the SSCC for different countries and regions using the C-DICE model (Nordhaus 2015). Consistent with the parameterization discussed in Section 4, I assume a GSCC of $40, the distribution of DSCCs shown in Figure 1, and benefit functions described in footnote 9. Figure 6 lists the SSCC for each country or region. They range from a low of $13 for Eurasia to a high of $91 for India. The countries and regions are almost evenly split between those with a SSCC below and above the GSCC of $40. Figure 6 also illustrates preferences for the SSCC graphically. Each country or region's net benefit (normalized to its maximum at the SSCC) is shown on a curve for different levels of a globally internalized shadow value on emissions. These curves show how preferences for the SSCC are single-peaked; that is, a country or region's net benefit declines as the shadow price moves away from its preferred SSCC.

The set of preferences illustrated in Figure 6 provide a basis for studying how countries might agree on a uniformly implemented shadow value on emissions. Weitzman (2014, 2015) considers a thought experiment involving a fictitious World Climate Assembly that votes on a uniform carbon tax. But the need for such preference aggregation can apply more generally to a globally internalized shadow price, regardless of the policy instrument. This might arise as part of an international agreement, where, for example, Aldy and Pizer (2016) discuss benchmarking levels of ambition based on implicit prices of carbon. More immediately, multilateral development agencies, such as the World Bank, emphasize the need to account for a SCC in program evaluation that voting member countries must approve.[21]

In what follows, I assume countries must agree on a single, minimum SCC that all countries internalize. Let $\mathcal{D} : \mathcal{R}^n \rightarrow \mathcal{R}^1$ denote a decision rule that maps n country preferences for the SSCC into a single number, denoted DCC for "decision cost of carbon." I consider several voting rules to study how they affect the DCC.[22]

Table 1 lists the different rules and corresponding estimates of the DCC. The natural starting point is majority voting, for which the standard result is that the

[21] The World Bank currently uses a value of $30 per ton in 2015, raising to $80 per ton by 2050 (World Bank 2015).

[22] In all cases, I apply the decision rule under the assumption of no transfers from one country to another.

Table 1: Decision rules and corresponding outcomes for the DCC

Decision rule	Outcome DCC	Mean SSCC
Majority voting	\$45	\$44.8
Population weighted	\$51	\$54.6
GDP weighted	\$46	\$45.3
Unanimity (Nash reference)	\$21	
World Bank voting shares		
Intl Bank for Reconstruction and Devt (IBRD)	\$48	\$46.5
Intl Finance Corporation (IFC)	\$46	\$45.7
Intl Development Association (IDA)	\$54	\$50.2

outcome will reflect preferences of the median voter. In this case, the median voter is Brazil, and the DCC is \$45. As a point of comparison, the table also reports the mean SSCC corresponding to each voting scheme, and in all cases, the mean is close to the median. Other voting schemes are a population weighted majority at \$51 and a GDP weighted majority at \$46. Given the way that UNFCCC decision making is based on consensus, I also consider the largest shadow value that would achieve unanimous support in the sense that no country would prefer the Nash equilibrium. The result is \$21, and the pivotal region is Eurasia. Finally, I consider voting outcomes weighted by actual voting shares of different units within the World Bank Group.[23] This results in \$48 for the International Bank for Reconstruction and Development (IBRD), \$46 for the International Finance Corporation (IFC), and \$54 for the International Development Association (IDA). In all cases, the number is higher than the \$30 currently used at the World Bank.

7 Conclusion

This paper contributes a theoretical foundation for the SCC to a literature that focuses almost exclusively on producing empirical estimates. The basic framework highlights this distinction between the DSCC and the GSCC, and relates them to the conditions of Pareto optimality and Nash equilibrium for a global public bad. The model helps frame the growing debate about whether countries should take

[23] I use the voting power of each country as of March 2016. These data, along with the methods for deriving voting power, are available for all World Bank Units at http://www.worldbank.org/en/about/leadership/VotingPowers.

account of the *global* benefits of reducing greenhouse-gas emissions when setting and evaluating *domestic* policy. Analysis also shows how choices between the DSCC and the GSCC are subject to distributional effects in addition well-known free riding incentives.

Extensions of the model identify conditions under which a country's decision to internalize the GSCC, or at least something greater than the DSCC, can be individually rational. To capture international relations where a country reduces its own emissions to leverage reductions from other countries, I consider non-Nash behavior with a conjectural variations approach. As another alternative, I extend the model to a repeated game that accounts for the way international negotiations to mitigate climate change take place repeatedly over time. Folk Theorem type results prove useful in this context. In both cases, it can be in a country's self interest to internalize the GSCC, as currently practiced in regulatory impact analysis by a growing number of countries.

But countries may not agree on the same value of the GSCC, and understanding why is consistent with the notion of a strategic SCC that I develop here. Seeking one estimate of the GSCC upon which all sovereign countries can agree abstracts from each country's strategic incentives. I show how all countries prefer a SSCC that is greater than their DSCC, but can be less than or greater than the GSCC. Empirical evidence based on the C-DICE model shows how countries or regions would prefer a globally internalized shadow value on emissions that ranges from \$13 (Eurasia) to \$91 (India) when the actual GSCC is \$40. Different voting schemes for preference aggregation, however, result in shadow values relatively close to the GSCC.

In conclusion, a central contribution of this paper is demonstration of the need to more research on the theoretical underpinnings of the SCC. I have sought to show how establishing and using the GSCC among sovereign countries is not simply a case of estimating and internalizing an externality. While the theoretical treatments and empirical demonstrations are intentionally simple, they open the door to future research with potentially important insights to guide the estimation and use of the SCC and inform the design of future climate policy.

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Incremental CH_4 and N_2O mitigation benefits consistent with the US Government's SC-CO_2 estimates

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Benefit cost analysis can serve as an informative input into the policy making process, but only to the degree it characterizes the major impacts of the regulation under consideration. Recently, the US, amongst other nations, has begun to use estimates of the social cost of CO_2 (SC CO_2) to develop analyses that more fully capture the climate change impacts of GHG abatement. The SC CO_2 represents the aggregate willingness to pay to avoid the damages associated with an additional tonne of CO_2 emissions. In comparison, the social costs of non CO_2 GHGs have received little attention from researchers and policy analysts, despite their non negligible climate impact. This article addresses this issue by developing a set of social cost estimates for two highly prevalent non CO_2 GHGs, methane and nitrous oxide. By extending existing integrated assessment models, it is possible to develop a set of social cost estimates for these gases that are consistent with the SC CO_2 estimates currently in use by the US federal government.

Policy relevance

Within the benefit cost analyses that inform the design of major regulations, all Federal agencies within the US Government (USG) use a set of agreed upon SC CO_2 estimates to value the impact of CO_2 emissions changes. However, the value of changes in non CO_2 GHG emissions has not been included in USG policy analysis to date. This article addresses that omission by developing a set of social cost estimates for two highly prevalent non CO_2 GHGs, methane and nitrous oxide. These new esti mates are designed to be compatible with the USG SC CO_2 estimates currently in use and may therefore be directly applied to value emissions changes for these non CO_2 gases within the benefit cost analyses used to evaluate future policies.

Keywords: integrated assessment; non CO_2 GHGs; social cost of carbon

1. Introduction

The social cost of CO_2 (SC-CO_2) is a measure of the monetary value of the damages occurring both within and outside economic markets as the result of an additional unit of CO_2 emissions. Specifically, it represents society's aggregate willingness to pay to prevent future impacts that occur when one additional unit of CO_2 is emitted into the atmosphere in a particular year. Estimates of SC-CO_2

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therefore provide a way to value changes in CO_2 emissions in benefit–cost analyses (BCAs) of policy alternatives. Without an estimate of the SC-CO_2, the benefits of mitigating the climate change impacts from CO_2 emissions would implicitly be valued at zero in BCAs, thereby significantly weakening the information provided by such analyses. Since 2009, the US Federal Government (USG) has used a set of agreed-upon SC-CO_2 estimates in the BCAs used to evaluate major regulations that impact CO_2 emissions (USG, 2010), including over 30 regulatory actions to date. The USG SC-CO_2 estimates are also increasingly being used in analysis and discussions outside the USG (e.g. by states, regional organizations, other nations, international organizations, NGOs, and academic researchers)[1] and have even figured in several recent public hearings and court cases (e.g. Keohane, 2010a, 2010b).

Although CO_2 is the primary anthropogenic GHG, other GHGs such as methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are also important contributors to climate change. The combined effect of all GHGs accumulated in the atmosphere is to increase the Earth's radiative forcing, which is the amount of energy from the Sun that is trapped in the Earth's atmosphere and therefore acts to warm the planet and change the climate. In 2011, the atmospheric CO_2 concentration contributed 64% of overall radiative forcing, while CH_4 and N_2O accounted for approximately 23% (Myhre et al., 2013). Non-CO_2 GHGs, notably CH_4 and N_2O, therefore contribute significantly to the negative impacts on human well-being from climate change. Furthermore, several recent studies have shown that consideration of non-CO_2 GHGs, particularly CH_4 and N_2O, is important for the design of cost-effective climate policy (Reilly et al., 1999; Tol, Heintz, & Lammers, 2003; Weyant, De La Chesnaye, & Blenford, 2006).

The monetary value of changes in emissions of non-CO_2 GHGs has not been included in USG policy analysis to date. This shortcoming prevents the development of accurate and comprehensive assessments of potential regulatory alternatives by the USG and others that rely on the USG SC-CO_2 estimates (Kopp & Mignone 2012; Marten & Newbold, 2012). For example, fossil fuels (e.g. coal and natural gas) have different compositions of GHG emissions across gases when considering the entire process of extraction, production, transmission, and combustion. Thus, if a regulation is anticipated to cause an industry to substitute between fuels, analysts may be providing inadequate information to decision makers and the public about its benefits if only the welfare implications of direct CO_2 emissions are considered while ignoring changes in CH_4 and other GHG emissions (Alvarez, Pacala, Winebrake, Chameides, & Hamburg, 2011).

A key reason for the value of non-CO_2 GHG emissions impacts not being included in USG analyses so far is that existing estimates of the social cost of non-CO_2 GHGs presented in the literature are inconsistent with USG SC-CO_2 modelling assumptions. For example, the recent US Environmental Protection Agency BCA of new pollution standards for the oil and natural gas industry concluded that, because they are not consistent with the USG SC-CO_2, 'the methane climate benefit estimates available in the current literature are not acceptable to use to value the methane reductions finalized in this rulemaking' (US EPA, 2012). This article seeks to address that gap by developing a new set of social cost estimates for CH_4 and N_2O (SC-CH_4 and SC-N_2O, respectively) that are fully consistent with the modelling assumptions underlying the current USG SC-CO_2 estimates. This article also develops an approach to extending the models used by the USG to generate estimates of the social cost of additional GHGs that are consistent with the latest USG estimates of the SC-CO_2.

It is important to note at the outset that by restricting attention to the derivation of social cost estimates consistent with the USG SC-CO_2 estimates, any limitations that apply to inputs and modelling

assumptions underlying the USG SC-CO_2 estimates (e.g. Arrow et al., 2013; Kopp & Mignone 2012; Marten, 2011; O'Neil, 2010; Warren, Mastrandrea, Hope, & Hof, 2010) also apply to the SC-CH_4 and SC-N_2O estimates derived here. Thus, while it is anticipated that the USG will continue to improve the models and data it uses to estimate the SC-CO_2, this article focuses on the more immediate task of developing a set of consistent estimates for the social cost of other GHG emissions so that they need not be implicitly assigned a value of zero in USG policy analyses.

The remainder of the article is organized as follows. Section 2 presents an overview of the USG SC-CO_2 estimation approach and how it compares to the existing literature on the social cost of non-CO_2 GHGs, including a discussion of some of the critiques of the approach. Section 3 presents the approach for estimating the SC-CH_4 and SC-N_2O in a manner consistent with the USG SC-CO_2 estimates. Section 4 presents the results and a comparison of the relative social costs to the previous literature and the global warming potential (GWP)-based metric that is often used as an approximation in the absence of direct estimates, and Section 5 provides concluding remarks.

2. Background

In 2009–2010 the USG formed an interagency working group to develop a set of SC-CO_2 estimates for use by all Executive Branch agencies to value marginal changes in CO_2 emissions in regulatory impact analyses (USG, 2010). The goal of this exercise was to improve the accuracy and consistency with which agencies value marginal changes in CO_2 emissions. Before the release of these estimates, CO_2 emissions changes were valued in some but not all regulatory analyses, and the SC-CO_2 estimates used by different agencies varied substantially. The USG recently updated their estimates for the SC-CO_2 by employing new versions of the three underlying integrated assessment models (IAMs), but leaving the original estimation approach and underlying assumptions unchanged (USG, 2013). This section provides a brief overview of the estimation approach and assumptions used by the USG for estimating SC-CO_2, describes some critiques of the approach by other researchers, and discusses the existing literature on the social cost of non-CO_2 GHGs.

2.1. USG SC-CO_2 estimation approach

To estimate the SC-CO_2 the USG used three IAMs that couple simplified models of atmospheric gas cycles and climate systems with highly aggregate models of the global economy and human behaviour to capture the effects that GHG emissions, through their effect on the climate, have on human welfare. Within IAMs, the modelling that guides the transition from emissions into climate impacts is based on scientific assessments, while the mapping of climate impacts into changes in human welfare is based on economic research that has studied the effect of climate on various market and non-market sectors. Nordhaus and Boyer (2000) provide a very informative and detailed description of how such models are developed.[2]

The three models used by the USG are those that feature most prominently in the published social cost of carbon literature: the Dynamic Integrated Climate and Economy (DICE) (Nordhaus, 2008; Nordhaus & Boyer, 2000), the Policy Analysis of the Greenhouse Effect (PAGE) (Hope, 2006b, 2008), and the Climate Framework for Uncertainty, Negotiation, and Distribution (FUND) (Anthoff, Hepburn, & Tol, 2009; Tol, 2002a, 2002b, 2009) models. The USG chose to use the IAMs'

climate system submodels and the functions that map climate change into economic damages as implemented by the model developers, but adopted a common set of input assumptions for equilibrium climate sensitivity, discount rates, global population, economic output, and GHG emissions projections. The remainder of this section provides a brief description of these common assumptions and the steps used to calculate the SC-CO_2 estimates. Interested readers can find more details in the USG's 2010 technical support document (USG, 2010).

2.1.1. Reference socio-economic-emissions scenarios

The USG selected five scenarios of economic output, population, and GHG emissions projections using results from the 2009 Stanford Energy Modeling Forum exercise number 22 (EMF-22). Four of the scenarios are based on baseline runs from global economic models (MERGE, MESSAGE, MiniCAM, and IMAGE) and span a range of emissions projections and plausible outcomes for future population and economic output absent significant global action to address climate change. These scenarios allowed for internally consistent forecasts of economic output, population, and emissions for the years 2000–2100. The fifth scenario used by the USG is based on the average of the 550 ppm CO_2e stabilization runs for each of the four models from which baseline scenarios were selected to represent potential action by the rest of the world absent US action. Across the five scenarios, atmospheric CO_2 concentrations in 2100 ranged from approximately 450 to 890 ppm (550–1130 ppm in CO_2e). Over the time horizon, the forecasts of the average growth rate for global per capita economic output ranged from 1.5% to 2.0% per year, and the average global population growth rate ranged from 0.4% to 0.5% per year. To run the IAMs through the year 2300, the USG extrapolated the selected EMF scenarios using the following assumptions: starting in 2100 the population growth rate declines linearly to zero in 2200; starting in 2100 the growth rate of economic output per capita declines linearly to zero in 2300; for all years after 2100 the growth rate of the carbon intensity of the global economy (CO_2 emissions/economic output) remains constant at its 2090–2100 average; starting in 2100 net land-use CO_2 emissions decline linearly to zero in 2200; and for all years beyond 2100 non-CO_2 radiative forcing anomalies remain constant at their 2100 levels.

Several limitations of the simplifying assumptions underlying the USG approach to scenario development have been discussed by other researchers. O'Neil (2010) pointed out that the selected EMF scenarios do not reflect the full range of outcomes that appear in other studies in the literature, and Kopp and Mignone (2012) suggested that the selected scenarios may effectively over-sample the peaks of the distributions. As for the extrapolations, while running the models out for multi-century time horizons is not necessary for relatively short-lived GHGs like CH_4, it is important for understanding the impacts of long lived GHGs such as CO_2 and N_2O that will affect human welfare well beyond 2100. As emphasized by O'Neil (2010) and Kopp and Mignone (2012), the state of the world beyond 2100 is highly uncertain and the scenario extrapolation approach taken by the USG represents only one of many possibilities. Furthermore, the extrapolations for each component of the scenarios (economic output, population, emissions) are separate and nothing ensures internal consistency within the scenarios past 2100. As shown by Marten and Newbold (2012), the temporal decomposition of damages for a perturbation of CO_2 and N_2O are relatively similar in shape and therefore the general findings of studies that explore the sensitivity of the SC-CO_2 to these assumptions should also be applicable to the SC-N_2O.

2.1.2. Equilibrium climate sensitivity

In reduced-form IAMs, the speed and magnitude of temperature change for a given emissions projection are influenced largely by the 'equilibrium climate sensitivity' (ECS) parameter. The ECS represents the long-term global average temperature response to a level of radiative forcing associated with a sustained doubling of atmospheric CO_2 concentration (around 550 ppm). To represent the uncertainty in the responsiveness of the climate system to changing atmospheric conditions, the USG used a probability distribution for the ECS parameter of the form suggested by Roe and Baker (2007). The USG calibrated the parameters of the probability distribution to have a median equal to 3 °C, two-thirds probability that the ECS lies between 2 and 4.5 °C, which was intended to be consistent with the UN Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) consensus statement about the ECS (Meehl et al., 2007). The distribution was truncated from above at 10 °C. This specification of the ECS distribution is retained to maintain consistency with the USG estimates of the SC-CO_2, but it is noted that the recently released AR5 by the IPCC has revisited the equilibrium climate sensitivity and revised the range downwards to 1.5–4.5 °C and no longer provides a most likely value (Collins et al., 2013). The ultimate effect of updating the ECS distribution to be consistent with the IPCC AR5 findings will depend heavily on the central tendency selected for the distribution.

2.1.3. Discount rates

Because the damages from an additional tonne of CO_2 emissions occur over many decades, the discount rate, which reflects the tradeoff between present and future consumption, plays a critical role in estimating the SC-CO_2. In light of disagreement in the literature regarding the appropriate discount rate to use in this context and uncertainty about future conditions that impact the discount rate, the USG used three constant discount rates intended to span a plausible range: 2.5%, 3%, and 5% per year. It is worth noting that the debate regarding not only the appropriate discount rate but also its time path is ongoing (Arrow et al., 2013; Dasgupta, 2008). While the appropriate value for the discount rate will presumably remain an area of active debate for some time to come, there appears to be agreement that the use of a constant discount rate over long time horizons with uncertain changes in the consumption per capita growth is not theoretically consistent. This article uses the same three constant discount rates as the USG estimation process, but in Appendix C results are reported from a series of sensitivity analyses using a Ramsey discounting approach. Similar to Marten and Newbold (2012), it is found that applying Ramsey discounting using plausible values for the components of the consumption discount rate gives a range of social cost estimates that is broadly consistent with the range of results obtained using the constant discount rates.

2.1.4. Calculating the SC-CO_2

The process to estimate the SC-CO_2 for emissions in year t has four steps. First, each model is used to forecast monetized impacts associated with the baseline path of emissions, economic output, and population. Second, each model is re-run with an additional unit of CO_2 emissions in year t to forecast monetized impacts for all years beyond t along this perturbed path of emissions. Third, the marginal damages in each year are calculated as the difference between the monetized impacts forecast in steps 1 and 2. Finally, the resulting path of marginal damages is discounted and summed to calculate

the present value of the marginal damages in the year when the additional unit of emissions used to perturb the model is emitted.

The USG repeated this process with each model, discount rate, and socio-economic-emissions scenario for each decade between 2010 and 2050. Because the ECS parameter is modelled probabilistically, and because PAGE and FUND incorporate uncertainty in other model parameters, the final output from each model run represents a distribution over the SC-CO_2 in each year. These distributions were estimated using 10,000 simulations in each model run. Therefore, the exercise produced 45 separate distributions of the SC-CO_2 for a given emissions year, based on the three models, three discount rates, and five socio-economic-emissions scenarios considered. To provide a range of estimates that reflects this uncertainty but still emphasizes the central tendency, the distributions from each of the models and scenarios were equally weighted and combined to produce three separate probability distributions for the SC-CO_2 in a given year, one for each assumed discount rate. Four SC-CO_2 estimates were selected from these three probability distributions to reflect the global damages caused by one tonne of CO_2 emissions. Three estimates are based on the average SC-CO_2 across the three models and five socio-economic-emissions scenarios for the 5%, 3%, and 2.5% discount rates, respectively. The fourth value is the 95th percentile of the SC-CO_2 distribution at the 3% discount rate, and was chosen to represent potential higher-than-expected impacts from anthropogenic GHG emissions.

2.2. Existing estimates of the social cost of non-CO_2 GHG emissions

A significant limitation of the aforementioned USG interagency process is that the social costs of non-CO_2 GHG emissions were not estimated. Therefore, as an alternative to applying direct estimates for the social costs of non-CO_2 GHG emissions in the primary BCA, several recent USG regulatory analyses have approximated the benefits of non-CO_2 GHG emissions reductions in sensitivity analyses by transforming the non-CO_2 GHG emissions to 'CO_2-equivalents' using estimates of the GWP for the GHG in question and then using the USG SC-CO_2 for valuation (e.g. US EPA, 2012, 2013).

Gas comparison metrics, such as the GWP, have been designed to measure the impact of different GHGs relative to CO_2, where the point of comparison along the pathway from emissions to monetized damages (depicted in Figure 1) may differ across measures. The GWP, in particular, is designed to measure the additional radiative forcing (i.e. the amount of energy absorbed by atmospheric concentrations of GHGs) from a perturbation of a given GHG relative to a perturbation of CO_2 over a specific time horizon (e.g. 100 years). The GWP and other gas-comparison metrics are problematic as an SC-CO_2 scalar in BCA, as the remaining linkages in the pathway depicted in Figure 1 are complex and non-linear. Marten and Newbold (2012) demonstrate that using the GWP to adjust SC-CO_2 estimates to capture the impact of non-CO_2 gases provides a significant improvement over the implicit assumption that they are zero when such benefits are left unquantified, but may still underestimate mitigation benefits. Alternative gas comparison metrics that compare GHGs at different points in the chain of



Figure 1 Path from GHG emissions to monetized damages

causation (e.g. global temperature change potential (Shine, Fuglestvedt, Hailemariam, & Stuber, 2005), peak commitment temperature (Smith et al., 2012), temperature proxy index (Tanaka, O'Neill, Rokityanskiy, Obersteiner, & Tol, 2009)) have also been shown to be imperfect substitutes for direct estimates.

Several researchers have directly estimated the social cost of non-CO_2 GHG emissions using IAMs, although the number of such estimates is small compared to the large number of SC-CO_2 estimates available in the literature. Among these previous direct estimates there is considerable variation in the model versions and input assumptions used. See Table 1 for a summary of the 11 non-CO_2 studies published to date.

As shown in Table 1, the estimates cover emissions years from 1990 to 2050, although the specific perturbation year is not stated in all studies. The studies also cover a wide range of constant and variable discount rate specifications and consider a range of baseline socio-economic and emissions scenarios that have been developed over the last 20 years. Finally, some studies in the literature have chosen not to report the social cost estimates directly. Instead, they opt to report only the 'global damage potential', which is a ratio of the social cost of gas X to the SC-CO_2. Normalizing the SC-CH_4 or

TABLE 1 Previous estimates of the social cost of CH_4 and N_2O emissions

Study	Model	Time horizon	Discount rate	Emissions year	Scenario[a]	Climate sensitivity
Reilly and Richards (1993)	N/A	140 years	2, 5, 8%	1990	N/A	N/A
Fankhauser (1994)	N/A	230 years	Ramsey	1991 2030	IS92[b]	N/A
Kandlikar (1995)	N/A	100 years	0, 2, 6%	N/A	IS90a,d	3 °C
Kandlikar (1996)	N/A	100 years	0, 2, 6%	N/A	IS90a,d	3 °C
Hammitt et al. (1996)	N/A	2200	1, 3, 5%	1995 2015	IS92a,c,e	1.5, 2,5, 4.5 °C
Tol (1999)	FUND 1.6	2100	0, 1, 3, 5, 10%	1995 2014	IS92a	2.5 °C
Tol et al. (2003)	FUND 1.7	2200	0, 1, 3, 5, 10%	1995 2014	IS92a	2.5 °C
Hope (2005)	PAGE95	2200	Ramsey	2000	SRES A2	Probabilistic, mode of 3 °C
Hope (2006a)	PAGE2002	2200	Ramsey	2001	SRES A2	Probabilistic, mean of 3 °C
Waldhoff et al. (2011)	FUND 3.5	3000	Ramsey	2010 2019	FUND, SRES A1B, A2, B1, B2	2, 3, 4.5 °C
Marten and Newbold (2012)	DICE2007 w/ MAGICC	2300	Ramsey, 2.5, 3, 5%	2010 2050	EMF 22 MiniCAM Base	Probabilistic, median of 3 °C

[a]IS90 scenarios are based on the IPCC First Assessment Report (IPCC, 1990); IS92 scenarios are based on the IPCC Supplementary Report (IPCC, 1992); SRES scenarios are based on the IPCC Special Report on Emissions (IPCC, 2000); the FUND scenario is the default scenario in the FUND model; EMF 22 scenarios are based on results from Stanford's Energy Modeling Forum's 22nd exercise (Clarke et al., 2009).[b]The particular IS92 scenario used was not specified.

SC-N_2O estimate using the SC-CO_2, in part, controls for differences in the modelling to allow for a better comparison with other estimates in the literature.

Fankhauser (1994) was one of the first to develop estimates of the average SC-CH_4 and SC-N_2O for emissions in the 2010 and 2020 decades given a 100-year time horizon for climate change damages. Kandlikar (1995) and Hammitt, Jain, Adams, and Wuebbles (1996) also developed estimates of SC-CH_4 and SC-N_2O for a single socio-economic-emissions scenario and using constant discount rates. Tol et al. (2003) and Hope (2005, 2006a) developed estimates for the SC-CH_4 in 2000 using the FUND and PAGE models, respectively. Waldhoff, Anthoff, Rose, and Tol (2011) used a newer version of the FUND model to develop estimates of the social cost of marginal CO_2, CH_4, N_2O, and SF_6 emissions for the average year in the 2010 decade. While they considered only a single emissions period, they conducted a wide range of sensitivity analyses including four socio-economic-emissions scenarios from the IPCC special report on emissions (IPCC, 2000) in addition to the default FUND scenario. In Section 4, the specific results of these previous studies are discussed with a comparison to the estimates obtained in the present study.

The above-mentioned previous studies provide a basic understanding of the relative social costs of different GHGs but do not provide sufficient information about how this relationship changes over time. Marten and Newbold (2012) used an IAM that couples the climate model MAGICC (Model for the Assessment of Greenhouse-gas Induced Climate Change) with economic components of the 2007 version of William Nordhaus' DICE model to directly estimate the social cost of marginal CO_2, CH_4, and N_2O emissions. They estimated the annual social costs for the years 2010–2050 along a single socio-economic-emissions pathway given uncertainty about the equilibrium climate sensitivity parameter. An advantage of their approach is that through the use of a more detailed, yet still relatively simple, climate model their results are not affected by over-simplification of temperature response or atmospheric chemistry, which have been shown to have non-negligible effects on the estimates of social costs (Marten, 2011; Warren et al., 2010).

The work of Marten and Newbold (2012) uses many of the assumptions used by the USG in its estimation of SC-CO_2, including discount rates, the equilibrium climate sensitivity distribution, and post-2100 socio-economic and emissions extrapolations. However, they focus on only one of the three models and one of the five socio-economic-emissions scenarios used by the USG. Furthermore, they use a different climate sub-model, which leads their estimate of the SC-CO_2 to be different from the USG estimate, even for the same IAM and scenario combination. Therefore, although these studies, including Marten and Newbold (2012), have increased our understanding about the relative social costs of GHG emissions, they have not provided a set of estimates that are entirely consistent with the USG SC-CO_2 estimates. In Section 4, the estimates derived in this article are compared with those of Marten and Newbold (2012) to more clearly demonstrate the similarities and differences in the two sets of estimates for SC-CH_4 and SC-N_2O.

3. Estimating the social cost of non-CO_2 GHGs consistent with USG SC-CO_2

The primary obstacle in estimating the social cost of non-CO_2 GHG emissions in a manner consistent with the USG SC-CO_2 estimates is that not all of the IAMs used include explicit representations of the non-CO_2 gases of interest. This section describes the degree to which non-CO_2 GHGs are currently

represented in the default versions of DICE, PAGE, and FUND, and then discusses how they are amended to estimate the social cost of these gases.

3.1. Representation of non-CO_2 GHGs in DICE, PAGE, and FUND

The FUND model explicitly considers CH_4, N_2O, and SF_6 in addition to CO_2. The model uses one-box atmospheric gas cycle models for these gases, with geometric decay towards pre-industrial levels. For CH_4 and N_2O, FUND estimates the additional radiative forcing imposed by the atmospheric buildup of these gases using the simplified expressions presented in Chapter 6 of the IPCC's Third Assessment Report (TAR) (Ramaswamy et al., 2001). FUND also augments the TAR expression for the additional radiative forcing from CH_4 to account for the influences of stratospheric water vapour and tropospheric ozone changes. Because FUND uses CH_4 and N_2O emissions as inputs and internally computes their impact on the climate system, it is possible to directly estimate the social cost of those gases without modifying the model.

In the DICE model, the only GHG that is explicitly represented is CO_2; an exogenous radiative forcing projection is used to account for the impact of all other gases on the climate. To develop an exogenous radiative forcing pathway consistent with the emissions scenarios used to estimate the SC-CO_2, the USG decomposed the default DICE exogenous radiative forcing vector into CH_4, N_2O, F-gases, aerosols, and other residual forcing components. The USG then replaced the radiative forcing attributed to CH_4, N_2O, and F-gases with estimates associated with the EMF-22 scenarios. As non-CO_2 emissions are not a direct input into DICE, it is not possible to simply perturb the emissions projection and re-run the model to obtain a forecast of additional damages.

The 2002 version of the PAGE model, which was used by the USG in developing its first set of estimates (USG, 2010), includes an atmospheric model for CH_4 and SF_6, but represents the effects of other non-CO_2 GHGs in an exogenous radiative forcing projection. Presumably to simplify the process and maintain consistency with DICE, the USG did not use PAGE's internal CH_4 component. Instead, the same exogenous radiative forcing projection was used for the effect of CH_4, N_2O, and F-gas emissions as was used for DICE. Since then, a N_2O component has been added to the PAGE model, although in the recent 2013 SC-CO_2 update the USG maintained the approach of using the same single exogenous forcing projection as was applied to DICE (USG, 2013). Therefore PAGE, as implemented by the USG, faces the same limitations as DICE with respect to estimating the social costs of marginal non-CO_2 emissions that are consistent with the USG SC-CO_2 estimates. For these reasons, computing estimates for the social cost of non-CO_2 gases in DICE and PAGE requires either replacing the climate component of these models with a more complete representation, as was done with DICE by Marten and Newbold (2012), or deriving an estimate of the path of additional radiative forcing that would result from a perturbation of the gas in question. This article uses the latter approach for DICE and PAGE, as the former would represent a substantial change to the underlying IAMs and would have implications for the SC-CO_2 estimates, making this work inconsistent with the USG SC-CO_2 estimates currently used in regulatory analysis.

3.2. Estimating the social cost of non-CO_2 GHGs in DICE and PAGE

The process used in this article to estimate the social cost of non-CO_2 GHGs in DICE and PAGE as implemented by the USG requires first generating a forecast of the additional radiative forcing

associated with a perturbation of a non-CO_2 gas's emissions in a single year, and then adding this radiative forcing perturbation to each model's exogenous radiative forcing projection. To determine the additional radiative forcing associated with the emission perturbation, there is a need to model the change in atmospheric concentration and the radiative forcing associated with the additional concentration. For both CH_4 and N_2O, a simple one-box atmospheric gas cycle model with a constant decay rate is used to estimate the atmospheric concentration of each gas based on its assumed emissions. The use of a one-box gas cycle for CH_4 and N_2O with constant decay follows the approach used by the IPCC to compute GWPs (Forster et al., 2007) and the FUND model (Anthoff & Tol, 2013). In both the baseline and the perturbed case, the contribution of the gas to the global radiative forcing anomaly is determined by the forcing relationships presented in the IPCC TAR (Ramaswamy et al., 2001), which were not updated by the IPCC in AR4. The incremental radiative forcing is defined by the difference between the baseline forcing path and the emissions path that includes a one tonne perturbation in a given year. Next, the path of additional radiative forcing is added to the stream of exogenous radiative forcing in each IAM to estimate the climate damages in the perturbed scenario. These damages are then compared to the baseline damages to determine the social cost of gas X (SC-X). Specifically, the process is as follows:

1. Run the IAM as described in the SC-CO_2 technical support document (USG, 2010) to estimate baseline damages.
2. Estimate the baseline atmospheric concentration for gas X.
3. Estimate the baseline radiative forcing contribution of gas X.
4. Perturb the stream of gas X emissions by one tonne in year *t*.
5. Estimate atmospheric concentration for gas X in the perturbed scenario.
6. Estimate the radiative forcing contribution of gas X in the perturbed scenario.
7. Compute the incremental radiative forcing as the difference between the results of steps 3 and 6.
8. Add the additional radiative forcing from step 7 to the exogenous radiative forcing path used in the IAM in step 1.
9. Re-run the IAM to compute the damages along the perturbed emissions path.
10. Compute the social cost of gas X for emission year *t* as the present value of the difference in damages estimated in steps 1 and 9.

Two practical issues associated with implementation are worth noting. First, while the SC-X estimates are associated with a one tonne perturbation, to avoid computational rounding error a 1 Mt perturbation is used and then the resulting change in damages is scaled to get the average effect per tonne. Experiments conducted by Griffiths et al. (2012) to assess the applicability of the SC-CO_2 to non-marginal emission changes show that the average per tonne SC-CO_2 estimate is relatively constant over large differences in perturbation size. Additional experiments in the context of this article found that alternative perturbation sizes do not significantly change the average one tonne social cost estimate. Second, the additional radiative forcing due to the emissions perturbation is computed based on an annual time step, but because DICE and PAGE use longer time steps the average radiative forcing over the time step is added to the model's exogenous radiative forcing vectors.

The remainder of this section describes the procedure for modelling the incremental radiative forcing of a perturbation for CH_4 and N_2O, and explores the sensitivity of these projections to

two issues. First, it evaluates whether the simple one-box gas cycle model with a constant decay rate produces a close approximation to the forecasts of future atmospheric CH_4 and N_2O concentrations based on a more sophisticated climate model. Second, it explores the sensitivity of the results to the method used for extrapolating non-CO_2 emissions from 2100 to 2300. This is important, because the USG did not specify a particular set of emissions pathways for each constituent gas, instead assuming only that non-CO_2 radiative forcing remains constant past 2100. Such a situation could arise from a myriad of possible individual gas projections and the USG did not specify which it was assuming.

3.3. Methane

A simple one-box atmospheric gas cycle model for methane specifies the concentration in year t, $C_t^{CH_4}$ [ppb], such that

$$C_t^{CH_4} \quad C_{t-1}^{CH_4} + \delta_{CH_4}(C_{pre}^{CH_4} - C_{t-1}^{CH_4}) + \gamma_{CH_4} E_{t-1}^{CH_4}, \tag{1}$$

where δ_{CH_4} defines the rate of decay, $C_{pre}^{CH_4}$ [ppb] is the pre-industrial atmospheric concentration, and γ_{CH_4} [ppb/Mt] converts emissions, $E_{t-1}^{CH_4}$ [Mt], from mass to atmospheric volume. The mass to volume conversion factor is $\gamma_{CH_4} = 0.3597$ ppb/Mt and $C_{pre}^{CH_4} = 700$ ppb, following the IPCC TAR. The rate of decay is set to $\delta_{CH_4} = 1/12$ following the IPCC AR4 stated CH_4 lifetime of 12 years. The iteration begins in the year 2006 using the emissions from the EMF-22 scenario (linearly interpolated between the decadal values reported), therefore requiring an assumption about the atmospheric concentration in 2005. The value from the Advanced Global Atmospheric Gases Experiment network as reported in the IPCC AR4 is used so that $C_{2005}^{CH_4} = 1774$ ppb.

The contribution of atmospheric methane to global radiative forcing, denoted $Q_t^{CH_4}$, is defined using the relationship in Table 6.2 of the IPCC TAR:

$$Q_t^{CH_4} \quad \phi\left\{0.036\left(\sqrt{C_t^{CH_4}} - \sqrt{C_{pre}^{CH_4}}\right) - [f(C_t^{CH_4}, C_{pre}^{N_2O}) - (C_{pre}^{CH_4}, C_{pre}^{N_2O})]\right\}, \tag{2}$$

where $C_{pre}^{N_2O}$ [ppb] is the pre-industrial atmospheric concentration of nitrous oxide and

$$f(C^{CH_4}, C^{N_2O}) \quad 0.47 \ln\left[1 + 2.01 \times 10^{-5}(C^{CH_4}C^{N_2O})]^{0.75} + 5.31 \times 10^{-15} C^{CH_4}(C^{CH_4}C^{N_2O})^{1.52}\right]. \tag{3}$$

The function in expression (3) accounts for the overlapping absorption bands of CH_4 and N_2O, thereby reducing their effective absorption. Parameter ϕ is used to proxy for indirect effects of CH_4 that include the enhancement of stratospheric water vapour and tropospheric ozone changes. Following the IPCC AR4, an enhancement effect of 40% (25% from tropospheric ozone change and 15% for stratospheric water vapour enhancement) is used, such that $\phi = 1.4$. The pre-industrial concentration of N_2O is set consistent with the IPCC TAR, such that $C_{pre}^{N_2O} = 270$ ppb.

A key simplification in this approach is the constant decay rate used in the atmospheric gas cycle model. As discussed by IPCC Working Group I in Chapter 4 of the TAR, the lifetime of methane emissions in the atmosphere depends on temperature and the concentrations of CO, NOx, and other VOCs in the atmosphere (Ehhalt et al., 2001). Sensitivity analysis is used to understand the potential implications of ignoring these interactions by comparing the incremental atmospheric concentration projected by the simple model described above to the analogous projection from the climate model MAGICC,[3] which, while still relatively simple, incorporates these interactions between the lifetime of CH_4 in the atmosphere and the other gases and climate variables. This exercise uses CH_4 emissions from the EMF-22 MiniCAM reference scenario and considers a one tonne perturbation of CH_4 in 2015. It is noted that these results are robust across alternative emissions levels.[4]

Figure 2(a) presents the projected average decadal increment to atmospheric concentrations using both the simple one-box model with a constant decay rate and the MAGICC model with a variable decay rate. At the time of the perturbation (2015), the inter-annual time step of MAGICC allows for an uptake of the additional emissions into the atmosphere, whereas the strict annual time step of the simple model causes a year to pass before the change is registered. After the initial year, the models originally differ by around 15%. This difference falls to under 10% within the first decade, with the faster effective growth in the simple model causing its additional concentration to eventually fall below that of MAGICC.

The difference in the incremental radiative forcing from the perturbation between the simple model and MAGICC is also of importance. Although MAGICC relies on similar equations to derive the radiative forcing of atmospheric CH_4 concentrations, it differs in the way it handles indirect effects of CH_4 on tropospheric ozone and stratospheric water vapour, in addition to including other temperature-related feedbacks. Figure 2(b) presents the average additional radiative forcing per decade attributed to the 2015 CH_4 perturbation in both models. The average increase in radiative forcing over the decade is considered because this is the input required by DICE due to its ten-year time step and therefore a more relevant comparison (PAGE requires a similar multi-year average). When considering the average additional radiative forcing over the decade, the initial difference in concentration between MAGICC and the simple model has a minimal effect and the difference in radiative forcing between the two models is less than 2% over the first two decades. However, this difference grows to −18% over the subsequent two decades. This escalation in the difference is in part due to the use of a constant decay rate in the simple model, whereas MAGICC takes into account the growing atmospheric concentrations of other gases and increasing atmospheric temperature, which increase the lifetime of atmospheric CH_4.

To understand the effect that this difference would have on an estimate of the SC-CH_4, an experiment was conducted using the DICE model in which the additional forcing from a one tonne perturbation of CH_4, as computed using both the simple model and MAGICC, is added to the exogenous forcing projection. As above, the MiniCAM scenario is used and the sensitivity of the results to both perturbation year and discount rate is examined. Table 2 presents the results of this experiment. In line with the results comparing the radiative forcing perturbations above, the two approaches produce similar social cost estimates for emissions in 2015, where additional analysis has shown these results to hold with PAGE as well. The impact of assuming a constant decay rate is greater further out into the future, due to the projected increase in the atmospheric concentration of other relevant gases and atmospheric temperature that are accounted for in MAGICC, and the social cost

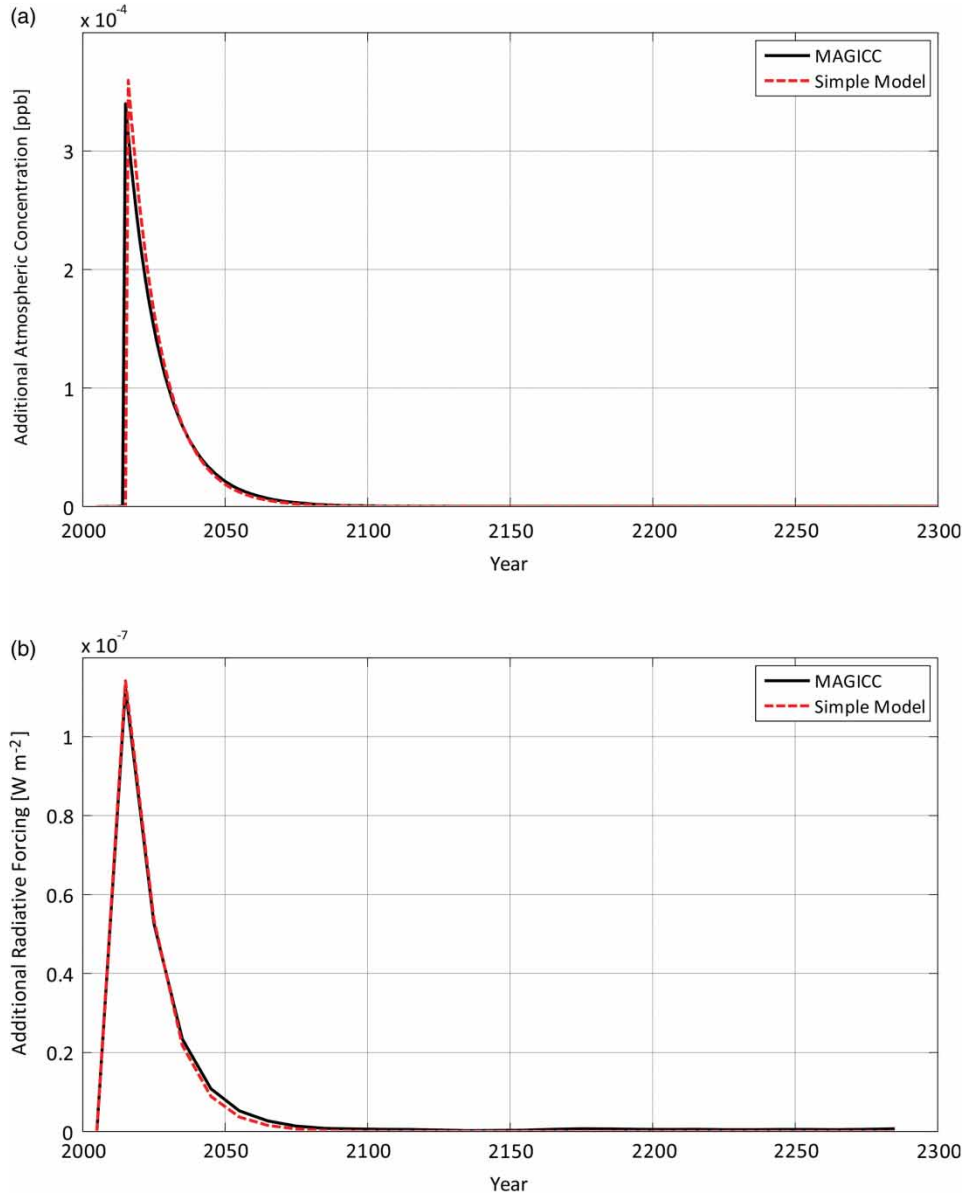

Figure 2 Effects of perturbation in 2015 CH_4 emissions for simple model vs. MAGICC: (a) additional atmospheric concentration; (b) additional radiative forcing

estimates begin to diverge for later emissions years. For the same reason, the two approaches will show greater differences for lower discount rates that give increased weight to future time periods. While over-simplification of the climate system can, in some circumstances, have significant effects on

TABLE 2 Effect of CH_4 gas cycle model on SC CH_4 (2007$ per tonne CH_4): DICE2010, MiniCAM

Perturbation year	Discount rate	Simple model	MAGICC	Percent difference
2015	2.5%	1135	1183	− 4%
	3.0%	822	851	− 3%
	5.0%	349	354	− 2%
2045	2.5%	2490	2707	− 8%
	3.0%	1933	2084	− 7%
	5.0%	956	1006	− 5%

social cost estimates (e.g. Marten 2011), the near-term differences based on this simplification seem relatively small considering the precision of such social cost estimates.

3.4. Nitrous oxide

The simple one-box atmospheric gas cycle model for N_2O takes a similar form to the model used for CH_4, such that the concentration of nitrous oxide in year t, $C_t^{N_2O}$ [ppb], is specified as

$$C_t^{N_2O} \quad C_{t-1}^{N_2O} + \delta_{N_2O}(C_{pre}^{N_2O} - C_{t-1}^{N_2O}) + \gamma_{N_2O}E_{t-1}^{N_2O}, \tag{4}$$

where δ_{N_2O} is the rate of decay, and γ_{N_2O} [ppb N_2O/Mt N] converts emissions, $E_{t-1}^{N_2O}$ [Mt N], from mass to atmospheric volume. Following the IPCC AR4, the mass to volume conversion factor is $\gamma_{N_2O} = 0.2079$ ppb N_2O/Mt N and the rate of decay is $\delta_{N_2O} = 1/114$ based on a 114-year lifetime. As with CH_4, the iteration begins in the year 2006 using the emissions from the EMF-22 scenarios (linearly interpolated between the decadal values reported), therefore requiring an assumption about the atmospheric concentration in 2005. The value from the Advanced Global Atmospheric Gases Experiment network as reported in the IPCC AR4 is used, such that $C_{2005}^{N_2O} = 319$ ppb.

The contribution of atmospheric N_2O to global radiative forcing, denoted $Q_t^{N_2O}$, is defined using the relationship in Table 6.2 of the IPCC TAR, such that

$$Q_t^{CH_4} \quad 0.12\left(\sqrt{C_t^{N_2O}} - \sqrt{C_{pre}^{N_2O}}\right) - [f(C_{pre}^{CH_4}, C_t^{N_2O}) - f(C_{pre}^{CH_4}, C_{pre}^{N_2O})], \tag{5}$$

where $f(C^{CH_4}, C^{N_2O})$ is defined in expression (3).

As with CH_4, a key simplifying assumption is the constant decay rate used in the simple gas cycle model (and potentially the time it takes the gas to become well mixed within the atmosphere). As discussed in the IPCC TAR, the decay rate of N_2O will depend on the atmospheric concentration of N_2O and so will not be constant in reality. To examine the extent to which this impacts the results of the simple model, an analogous set of experiments as conducted for CH_4 were performed. Given future

N_2O emissions based on the EMF-22 MiniCAM reference scenario, a one tonne N_2O perturbation in 2015 is considered. Figure 3(a) shows the projected atmospheric concentration increase from the perturbation using the simple one-box model with a constant decay rate and the MAGICC model with a variable decay rate. This comparison illustrates that the simple model tracks the output of MAGICC well for the entire 300-year time horizon. Outside the initial perturbation year, the two projections do not differ by more than 2% within the first century, with the largest difference occurring in the perturbation year, for the same reasons as with CH_4.

Figure 3(b) presents the estimates of average additional radiative forcing per decade as a result of the N_2O perturbation using both models. The additional radiative forcing from the N_2O perturbation in the one-box model is forecast to be slightly lower (7%) in the first decade compared to MAGICC. Subsequently, the difference is within 2% through to 2300.

As with CH_4, to assess the effect that this difference would have on the SC-N_2O, an experiment was conducted using the DICE model in which the additional forcing from a one tonne perturbation of N_2O computed using both the simple model and MAGICC is added to the exogenous forcing projection. As before, the MiniCAM scenario is used and the sensitivity of the results to both perturbation year and discount rate is examined. Table 3 presents the results of this experiment. As the comparisons of the projected radiative forcing perturbations would suggest, the difference between the social cost estimates for the two approaches is relatively small. In contrast to the case of CH_4, here an increase in the discount rate increases rather than decreases the divergence between the estimates due to the greater weight being placed on the earlier years when the radiative forcing perturbations have a slightly higher degree of divergence.

3.5. Effect of post-2100 non-CO_2 radiative forcing assumptions

The EMF-22 socio-economic-emissions scenarios used by the USG include years only up to 2100, while the USG ran the IAMs out to 2300. Therefore, additional assumptions were required to extrapolate the scenarios beyond 2100. For the purposes of this study, the most important of these assumptions is that non-CO_2 radiative forcing will remain constant at its 2100 level until 2300. Such a broad assumption was sufficient for the purposes of the USG in estimating the SC-CO_2. However, estimating the social cost of non-CO_2 GHGs requires explicit projections of baseline emissions of non-CO_2 gases in order to correctly determine the effect of the perturbation. The USG's broad assumption regarding the extrapolation of non-CO_2 gases is therefore problematic as constant non-CO_2 radiative forcing post 2100 may occur in an infinite number of ways. For instance, one way to achieve this outcome is to assume that emissions of each non-CO_2 gas falls to a level equal to its respective rate of decay in 2100. This assumption would keep atmospheric concentrations, and in turn radiative forcing, constant. Based on the simple gas cycle models laid out in the earlier sections this implies that, for gas X,

$$E_t^X \quad \frac{-\delta_X(C_{\text{pre}}^X - C_{2100}^X)}{\gamma_X} \forall t > 2100. \tag{6}$$

To put this assumption into context, the solid lines in Figure 4(a) and (b) present the emissions paths for CH_4 and N_2O, respectively, under the MiniCAM EMF-22 reference scenario extrapolated using

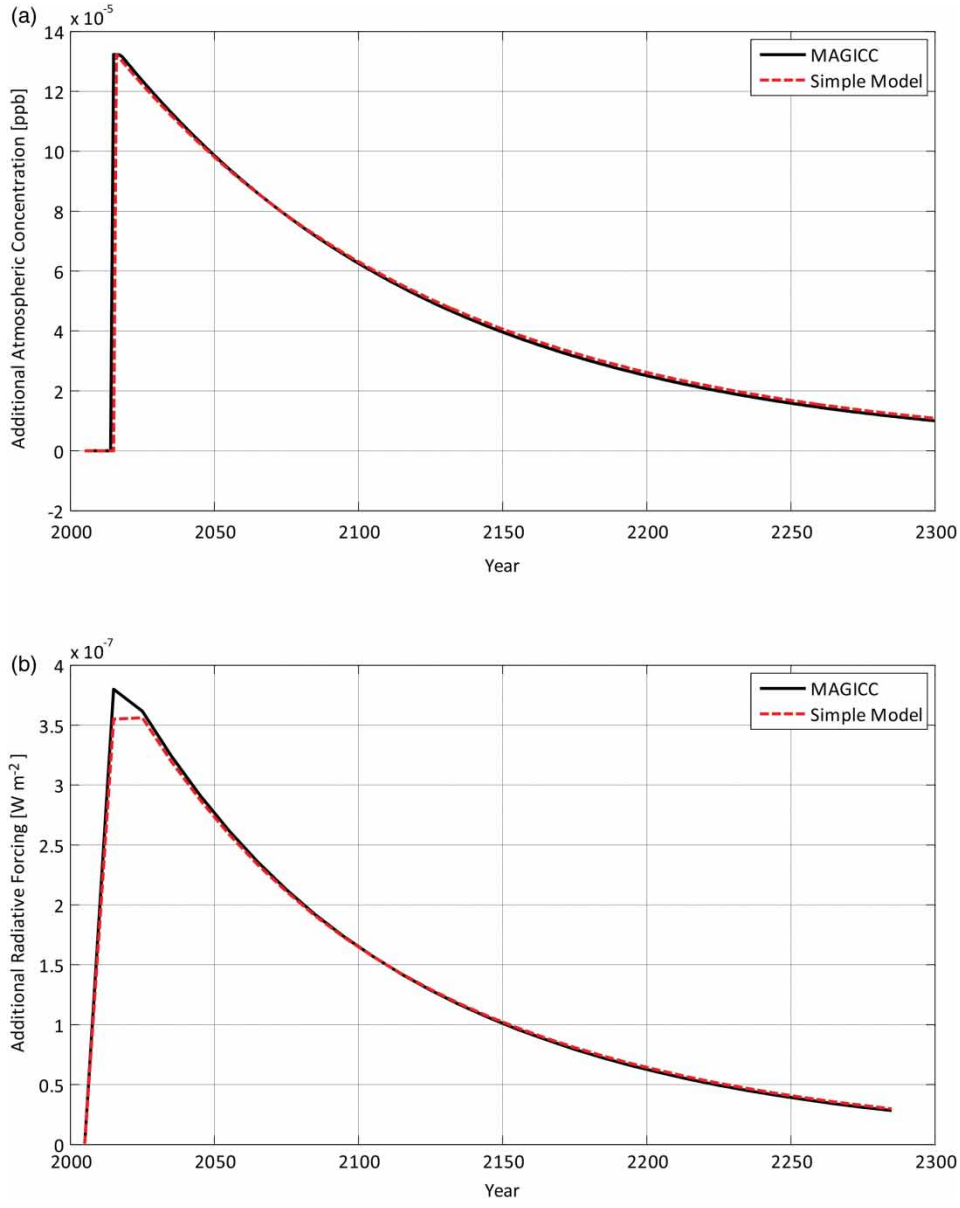

Figure 3 Effects of perturbation in 2015 N_2O emissions for simple model vs. MAGICC: (a) additional atmospheric concentration; (b) additional radiative forcing

TABLE 3 Effect of climate model on SC N_2O (2007$ per tonne N_2O): DICE2010, MiniCAM

Perturbation year	Discount rate	Simple model	MAGICC	Percent difference
2015	2.5%	19,689	19,819	− 1%
	3.0%	12,390	12,525	− 1%
	5.0%	3,346	3,419	− 2%
2045	2.5%	36,968	37,358	− 1%
	3.0%	25,030	25,427	− 2%
	5.0%	8,280	8,528	− 3%

expression (6), while the dashed lines show two alternative extrapolation approaches, one where emissions are held constant at their 2100 level and one that assumes emissions intensity (emissions/economic output) continues to decline at the same rate forecast by the EMF-22 scenario in 2090–2100 (dotted line). This latter alternative is analogous to the USG assumption regarding industrial CO_2 emissions. The two alternatives will not result in the radiative forcing contribution of gas *X* remaining constant post-2100, but do not in themselves violate the assumption that overall non-CO_2 radiative forcing remains constant. Noteworthy is the fact that the assumption in (6) is almost analogous to keeping CH_4 emissions constant at their 2100 levels, whereas for N_2O the assumption requires a sudden decrease in emissions of over 35%.

While Figure 4 illustrates that these three extrapolation approaches can lead to vastly different projections for emissions after 2100, the relevant comparison is how these assumptions affect the additional radiative forcing from a perturbation of the gas and in turn the SC-X estimates. Figure 5(a–d) present the additional radiative forcing resulting from a one tonne perturbation based on the simple model presented in Sections 3.1 and 3.2. Figure 5(a) and (b) demonstrates the difference for a perturbation in 2015, whereas Figure 5(c) and (d) represents perturbations in 2045. For CH_4, the cumulative radiative forcing from the projection over the time horizon differs by less than 0.001%, even for a

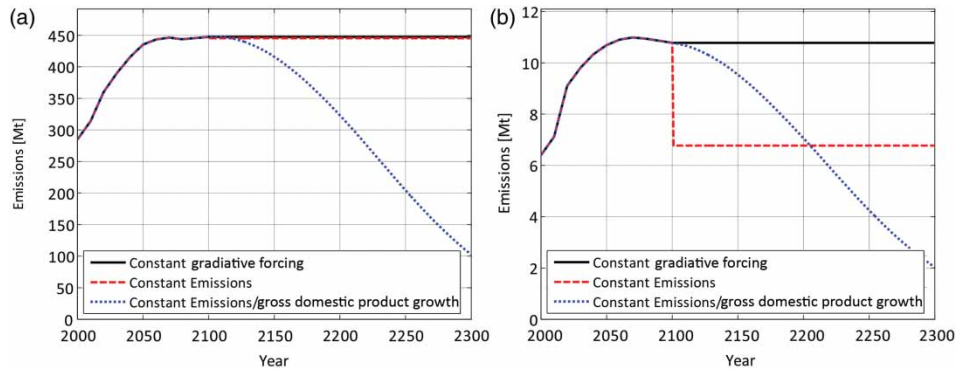

Figure 4 EMF 22 MiniCAM extended emissions scenario: (a) CH_4 emissions; (b) N_2O emissions

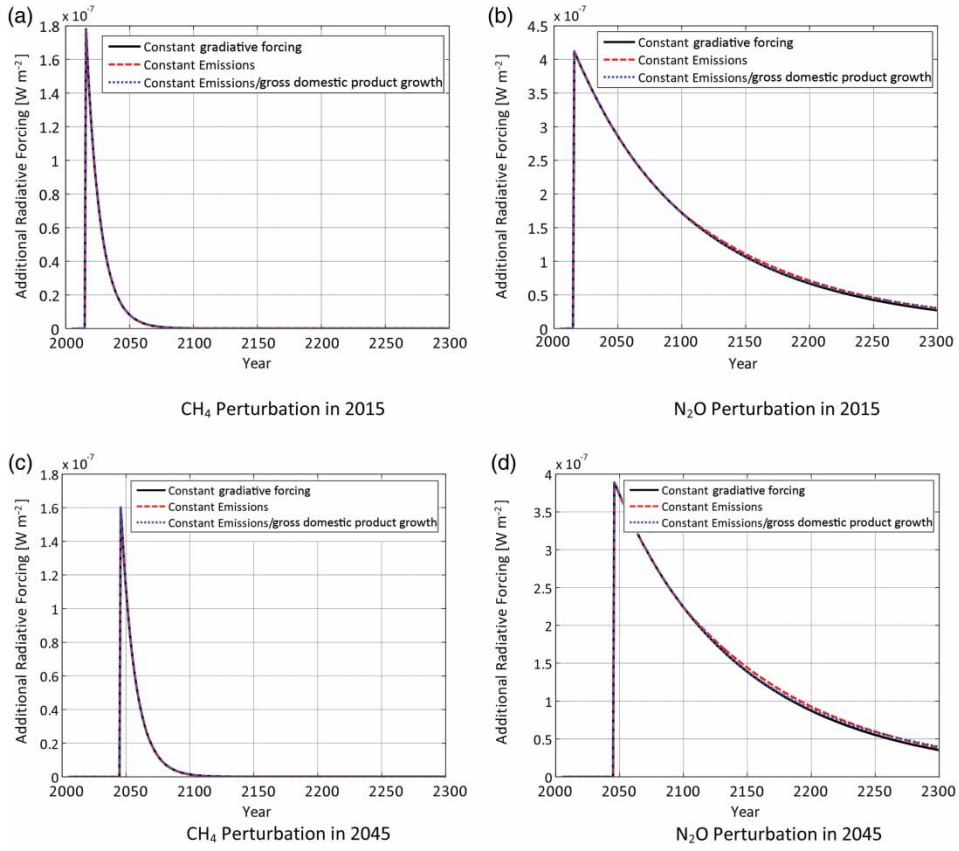

Figure 5 Effect of extrapolation approach on radiative forcing perturbation from simple model: (a) CH_4 perturbation in 2015; (b) N_2O perturbation in 2015; (c) CH_4 perturbation in 2045; (d) N_2O perturbation in 2045

perturbation in 2045. Accordingly, the relevant annual difference is smaller even than one-thousandth of a percent. This result occurs because of the short atmospheric lifetime of the gas, which renders assumptions regarding CH_4 emissions after 2100 unimportant for near-term perturbations. Post-2100 emissions will have a larger effect in the case of N_2O, which has a much longer atmospheric residence time. However, even for a perturbation in 2045, the difference in cumulative additional radiative forcing is less than 2.5% across the extrapolation assumptions.

To examine the impact of these assumptions on SC-CH_4 and SC-N_2O, an experiment was conducted using the DICE model based on the EMF-22 MiniCAM socio-economic-emissions scenario. The results of this experiment are presented in Table 4 for the perturbation year 2045 (noting that the extrapolation method will have greater impact on future emissions years). As may be seen, the relatively short atmospheric lifetime of CH_4 leads to a situation in which post-2100 assumptions do not affect SC-CH_4 estimates, even in 2045. For the longer-lived gas N_2O, in emission year 2045, where the effect of the post-2100 extrapolation approach would be largest, the difference across the three

TABLE 4 Effect of post 2100 extrapolation on the 2045 SC X (2007$ per tonne): DICE2010, MiniCAM

Gas	Discount rate	Constant RF	Constant emissions	Constant emissions intensity growth
CH_4	2.5%	2,490	2,490	2,490
	3.0%	1,933	1,933	1,933
	5.0%	956	956	956
N_2O	2.5%	36,968	36,588	36,662
	3.0%	25,030	24,837	24,868
	5.0%	8,280	8,261	8,263

assumptions is less than 1% and the projections are equivalent to two significant digits. Therefore, in the remainder of this article, non-CO_2 emissions are extrapolated past 2100 using expression (6) to ensure that the gas-specific contribution to overall radiative forcing remains constant in the simple model. While additional study may lead to improvements of long-term forecasts of CH_4 and N_2O emissions and possible correlations, compared to the paths in Figure 5(a), the very minimal effect of such assumptions on the social cost estimates suggests the impact of such efforts would be minimal in this context.

4. Results

For FUND, the social cost of non-CO_2 GHGs is estimated by perturbing the paths of emissions directly, while for DICE and PAGE the approach presented in Section 3 is used. In both cases, all additional assumptions made by the USG are applied, including the five EMF-22 socio-economic-emissions scenarios, the Roe and Baker (2007) distribution for the equilibrium climate sensitivity, and constant discount rates of 2.5%, 3.0%, and 5.0%. Following the USG, the estimates for the expected social cost are averaged across scenarios and models, with each model and scenario given equal weight. Estimates are not combined across discount rates, and a fourth estimate is included representing the 95th percentile when using the 3.0% discount rate. By using the same assumptions and procedures as the USG, estimates of the SC-CO_2 derived in this article are identical to the values used in US Federal rule making. Specifically, these estimates are equivalent to the recent 2013 update of the USG SC-CO_2, which revised the original 2010 USG upwards based on new versions of the IAMs used. The non-CO_2 results, as well as the USG SC-CO_2 estimates, are presented in Table 5 for emissions years 2020 and 2050.[5] Results for additional years, and the results of sensitivity analyses using Ramsey discounting, may be found in Appendix B and C, respectively.

As expected, considering their higher radiative efficacy, the social costs associated with a tonne of CH_4 and N_2O emissions are substantially higher than for CO_2. The values are higher at lower discount rates, although the impact of the discount rate is lower for CH_4 given its relatively short lifetime. Similar to CO_2, the social cost estimates for CH_4 and N_2O increase over time as the climate and economic systems become more stressed, although the growth rate of the social cost estimate may differ between the gases, as discussed in the following.

TABLE 5 SC X (2007$ per tonne)

Year	Gas	5.0% mean	3.0% mean	2.5% mean	3% 95th percentile
2020	CO_2	12	43	64	128
	CH_4	550	1,200	1,600	3,200
	N_2O	4,800	15,000	22,000	41,000
2050	CO_2	26	71	97	220
	CH_4	1,400	2,500	3,100	6,900
	N_2O	11,000	27,000	38,000	74,000

To better understand how the social costs of CH_4 and N_2O compare to CO_2, Table 6 presents the global damage potentials corresponding to the social cost estimates from Table 5. (The disaggregated results, by model and scenario, for 2020 are provided in Appendix B.) As explained in Section 2, the global damage potential for gas X is the ratio of SC-X to SC-CO_2, and therefore by construction captures all the important linkages between emissions and monetized climate change damages (to the degree they are captured by the IAMs) directly within the gas comparison metric. As noted by Frankhauser (1994), this is preferred to the commonly used GWP gas comparison metric, which only measures the additional radiative forcing from a perturbation of a given GHG relative to a perturbation of CO_2 over a specific time horizon (e.g. 100 years) and ignores important nonlinear relationships beyond radiative forcing in the chain between emissions and damages.

The global damage potential of CH_4 decreases with the discount rate due to the relatively shorter atmospheric lifetime. This difference in atmospheric lifetime leads to a situation where lowering the discount rate has a greater impact on the SC-CO_2 than the SC-CH_4. This finding is robust across the models. The estimates in Table 6 also present the same result for N_2O in the aggregate case, although this characteristic is not consistent across the models or the previous literature. Based on the disaggregated results (presented in Appendix B), the results from the DICE model suggests the global damage potential for N_2O increases with lower discount rates due to a lower effective decay rate over the relevant time horizon for N_2O than CO_2. This result is consistent with previous findings by Marten and Newbold (2012). However, for FUND the opposite is seen to hold. Waldhoff et al. (2011) show that this result is primarily due to the inclusion of increased production in the agriculture and forestry sectors from CO_2 fertilization effects. At lower discount rates these benefits place a greater downward

TABLE 6 Global damage potential

Year	Gas	5.0% mean	3.0% mean	2.5% mean	3% 95th percentile
2020	CH_4	46	29	25	25
	N_2O	397	359	353	317
2050	CH_4	52	36	32	31
	N_2O	414	388	387	338

impact on the SC-CO_2, thereby lowering the global damage potential. If one were to remove those impacts from the FUND model the global damage potential for N_2O becomes relatively insensitive to the discount rate. One would expect the role of the discount rate in determining the global damage potential in PAGE to be the same as in DICE, but the results suggest that this is not the case. It seems most likely that this is because the PAGE model has only ten time steps to cover the entire time horizon, which results in very large, up to 100-year, time steps further out in time. As noted in Section 3, the additional radiative forcing from the N_2O perturbation is implemented as the average across the model's time steps. It seems that PAGE does not average radiative forcing over the time step for CO_2, which causes the global damage potential for N_2O to decrease with the discount rate. It is not clear if this result would hold if the size of the time steps in the model were reduced.

A comparison across models further highlights the importance of CO_2 fertilization impacts on the global damage potential. CO_2 emissions, and the resulting increase in atmospheric concentration, have the potential to increase yields in the agriculture and forestry sector. This characteristic is not shared by other GHG emissions. Accordingly, the FUND model, which explicitly captures this effect, exerts downward pressure on the SC-CO_2 that is not present for the SC-CH_4 and SC-N_2O, allowing for the possibility of substantially higher global damage potential estimates. The results based on the FUND model presented in this article exhibit this effect; however, the CO_2 fertilization effect is not explicitly modelled in DICE and PAGE and therefore they are found to produce lower estimates of the global damage potential. For example, using the 3% discount rate, the global damage potential for CH_4 as estimated by FUND ranges between 58 and 88 depending on the scenario, whereas it ranges from 19 to 28 for DICE and PAGE. As the DICE and PAGE models only consider two natural system impacts, temperature and sea level, if they do implicitly include potential CO_2 fertilization benefits, they are included by using the temperature anomaly as a proxy for the increasing atmospheric CO_2 concentration. Fertilization benefits would therefore be allowed to falsely accrue to perturbations of other GHG emissions besides CO_2. It is not clear the degree to which these models try to incorporate CO_2 fertilization effects and therefore the degree to which this issue is of concern.

Finally, the results in this article show that the 100-year GWP (25 for CH_4 and 298 for N_2O; Forster et al., 2007) probably provides an underestimate of the global damage potential of each gas, a finding consistent with previous studies by Marten and Newbold (2012) and Waldhoff et al. (2011). Unlike the GWP as calculated by the IPCC, the global damage potential will be dependent upon the year of the emissions perturbations, so the degree of underestimation varies by year. For CH_4, the global damage potential in Table 6 is 0–84% higher than the GWP in 2020, increasing to 24–108% in 2050. For N_2O, the global damage potential is 6–33% higher than the GWP in 2020, increasing to 13–39% in 2050. While inaccurate, using the GWP to convert emissions reductions into CO_2 equivalents that can be valued with the SC-CO_2 would probably provide a conservative estimate for the abatement benefits.

For the comparison above, the GWP estimates presented in the AR4 by the IPCC (Forster et al., 2007) were used to maintain consistency with the assumptions regarding the direct and indirect effect of CH_4 and N_2O concentrations within the modelling. The recent AR5 by the IPCC (Myhre et al., 2013) has increased the estimate of the indirect effects of CH_4, which gives a higher 100-year GWP for CH_4 of 28. A reduction in their estimate of the radiative efficacy of N_2O has decreased its 100-year GWP to 265. It is likely that updated modelling of the social cost estimates based on similar assumptions would maintain the finding that the GWP is an underestimate of the global damage potential.

4.1. Comparison with previous estimates

For comparison, Table 7 presents the social cost estimates, when available, and the global damage potential estimates for CH_4 and N_2O from three recent studies in the literature whose features are more up to date and therefore more directly comparable with this study: Hope (2006a), Waldhoff et al. (2011), and Marten and Newbold (2012). A direct comparison to the longer list of studies presented in Table 1 is more difficult as they are based on models and socio-economic and emissions scenarios that were developed up to 20 years ago in a rapidly evolving field.

The social cost estimates presented in Table 5 are higher than the estimates in Hope (2006a) and Waldhoff et al. (2011) for CH_4, and in the range of Waldhoff et al. (2011) for N_2O. This result holds whether the comparison is made with the aggregate results in Table 5 or the disaggregated model-specific results. One reason for the significant difference in the SC-CH_4 estimates is that the earlier studies rely on older model versions (PAGE2002 and FUND3.5), neither of which include the indirect effects of CH_4 emissions on radiative forcing, but are included within this analysis. As noted in Section 3.3 the indirect effects of CH_4 are modelled as a 40% increase in its effective radiative forcing. The result of this change alone would likely be a greater than 40% increase in the SC-CH_4 due to the nonlinear damage functions. Furthermore, the assumptions regarding preference parameters in the main cases of Hope (2006a) and Waldhoff et al. (2011) lead to effective discount rates that are significantly higher than 3%. Other differences in input assumptions (e.g. equilibrium climate sensitivity, socio-economic emissions scenario) will also lead to differences, although these are likely to be of second-order importance given the relative similarity in the assumptions.

However, the results in Table 5 averaged across the combinations of the three models and five scenarios are relatively similar to those of Marten and Newbold (2012), which focused on a single scenario

TABLE 7 Previous estimates of the social cost of CH_4 and N_2O emissions

Study	Discount Rate	Emissions Year	Social cost (2007$/tonne X)[a]		Global damage potential (SC X/SC CO_2)	
			SC CH_4	SC N_2O	CH_4	N_2O
Hope (2006a)	Ramsey	2001	125		20	
Waldhoff et al. (2011)[b]	Ramsey	2010 2019	265	7,616	26	738
					8 221	383 3,503
Marten and Newbold (2012)	2.5%	2020	1,500	26,000	23	403
		2050	3,500	50,000	32	444
	3%	2020	1,100	17,000	27	400
		2050	2,900	34,000	36	439
	5%	2020	550	4,900	42	380
		2050	1,500	12,000	53	415

[a]All values are discounted to the year of the emissions perturbation.
[b]The first row presents the base case and the second row presents the range found from sensitivity analysis (over socio economic scenario, climate sensitivity, pure rate of time preference, climate sensitivity and CO_2 fertilization).

and model. This result is in part based on the fact that both sets of results include the indirect effects of CH_4, use the same discount rates and equilibrium climate sensitivity distribution, and relatively similar scenarios. The estimates in this study are slightly higher for the SC-CH_4 and slightly lower for the SC-N_2O compared to Marten and Newbold (2012). Of particular interest is the specific comparison of this article's estimates based on DICE 2010 and the MiniCAM scenario to those of Marten and Newbold (2012) using the same scenario, discount rates, and equilibrium climate sensitivity but an the older 2007 version of the DICE model and a more complete climate sub-model. In this case, estimates for both the SC-CH_4 and SC-N_2O (presented in Appendix B) are notably lower. The myriad of differences between the model vintages and climate sub-models make it difficult to assess which differences are most important for explaining this relationship.

As previously noted, the global damage potential may provide a better value with which to compare across studies that estimate the social cost of non-CO_2 GHG emissions, as it helps to control for some of the underlying differences in assumptions across studies. For example, the global damage potential is far less sensitive to the discount rate used than the SC-X values themselves. However, the global damage potential does not address the lack of indirect CH_4 effects, as may be seen in the lower estimates of Hope (2006a) and Waldhoff et al. (2011). In these cases the exclusion of the 40% additional increase in radiative forcing from the indirect effects of the CH_4 perturbation explains the majority of the difference. In comparison to Marten and Newbold (2012), the results presented in Table 6 are relatively similar for CH_4 in both the aggregate and disaggregated results. For N_2O, similar results are found in the DICE estimates, but notable differences are found in how the aggregate results respond to the discount rate, due to the differences in this relationship between the models as noted above.

5. Concluding remarks

This article presents a simple and transparent approach to estimating the social cost of CH_4 (SC-CH_4) and N_2O (SC-N_2O) in a manner that is consistent with estimates of the social cost of CO_2 (SC-CO_2) already in use in benefit–cost analysis (BCA) for US Federal regulations. This approach is used to estimate the SC-CH_4 and SC-N_2O for the period 2010–2050. These directly modelled estimates are found to be larger than approximations of the social costs of these gases based on the application of common physical gas comparison metrics, such as global warming potentials (GWPs), to the SC-CO_2. This result generalizes the empirical findings of Marten and Newbold (2012) that using a GWP-based approximation approach will likely offer a conservative estimate of the social cost of non-CO_2 GHGs.

The social costs associated with emissions of non-CO_2 GHGs are substantial and should be included within the BCAs used to assess the overall welfare implications of policy alternatives. For example, by not including monetized values of the benefits from reducing CH_4 and N_2O emissions, the BCA for recent standards regulating the fuel efficiency and GHG emissions of light duty vehicles implicitly assigned them a value of zero (US EPA, 2010). However, the results of this article suggest that those reductions have benefits of US$85–493 million (2007$) for CH_4 and $1.5–12 million (2007$) for N_2O in the year 2020 alone. Failing to account for such impacts could limit the ability of the analysis to serve as a transparent and informative input into the decision-making process about the relative benefits and costs of regulatory alternatives. That said, by restricting the article to a derivation of social cost estimates consistent with the USG SC-CO_2 estimates, the myriad issues related to

whether those estimates can themselves be improved are set aside.[6] Any limitations that apply to the USG SC-CO_2 estimates therefore also apply to the SC-CH_4 and SC-N_2O estimates derived here.

Supplemental data

Supplemental data for this article can be accessed 10.1080/14693062.2014.912981.

Notes

1. Examples include Minnesota's draft methodology for setting the value of a tariff to compensate solar panel owners for the surplus power they deliver to utilities (http://www.eenews.net/stories/1059992297, http://mn.gov/commerce/energy/images/DRAFT MN VOS Methodology 111913.pdf), the Northwest Power and Conservation Council's symposium supporting the development of the 7th Power Plan (http://www.nwcouncil.org/energy/powerplan/7/symposiums/greenhouse/agenda), BCA of Canada's Heavy duty Vehicle and Engine Greenhouse Gas Emission Regulations (http://canadagazette.gc.ca/rp pr/p2/2013/2013 03 13/html/sordors24 eng.html), analysis of climate change projects at the Inter American Development Bank (correspondence with Patrick Doyle, Senior Climate and Energy Officer, Structured and Corporate Finance Department), the International Monetary Fund's recent Energy Subsidy Reform report (http://www.imf.org/external/np/pp/eng/2013/012813.pdf), and Parry and Strand (2012).
2. An alternative approach for estimating the social cost of GHG emissions could be based on stated preference (SP) surveys designed to elicit respondents' maximum willingness to pay for various levels of GHG emission reductions (e.g. Longo, Markandya, & Petrucci, 2008; Soliño, 2010). This approach would not suffer from the difficulties associated with creating and parameterizing a numerical integrated assessment model. However, it would suffer from its own set of difficulties, including well known general limitations that affect all SP studies including the potential for 'hypothetical bias' (e.g. Carson, 2012; Hausman, 2012; Kling, Phaneuf, & Zhao, 2012), plus difficulties that may be specific to this application stemming from the generally limited knowledge base regarding the potential climatic, biophysical, and especially economic impacts of GHG emissions on current and far future generations that most respondents will bring to the survey.
3. The fork of MAGICC version 5.3 included in Pacific Northwest National Laboratory's open source model GCAM version 2 (Calvin et al., 2009) is used without carbon cycle feedbacks and, unless otherwise specified, an equilibrium climate sensitivity of 3 °C. We note that sensitivity analysis found the general results of this side analysis to be robust to other values of the equilibrium climate sensitivity.
4. The EMF 22 scenario is extended past 2100 assuming that emissions stay constant at the 2100 level. This assumption is revisited later in this article.
5. The PAGE 2009 model restricts the user to representing the entire time horizon, in this case out to 2300, with only ten time steps. This leads to the unrealistic situation in a small number of simulations where the marginal unit of emissions can cause 'catastrophic' climate impacts to occur one period earlier, which could be 100 years earlier in some cases. We consider these occurrences to be a limitation of the model and drop them from the overall distribution of estimates. Appendix A contains further details about this issue.
6. In addition to the critiques previously cited, we point the interested reader to the work of Marten et al. (2013) and Oppenheimer (2013) for a review of literature that considers potential improvements in the assessment and valuation of climate change impacts.

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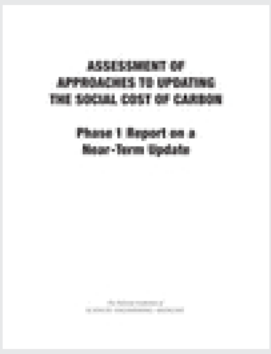

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Acknowledgment of Reviewers

This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Academies of Sciences, Engineering, and Medicine's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We thank the following individuals for their participation in their review of this report:

Kenneth J. Arrow, Department of Economics, Stanford University;
James (Jae) Edmonds, Joint Global Change Research Institute, Pacific Northwest National Laboratory;
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David Weisbach, The University of Chicago Law School and The Computation Institute, University of Chicago and Argonne National Laboratories.

Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the conclusions nor did they see the final draft of the report before its release. The review of this report was overseen by Elisabeth M. Drake, Massachusetts Institute of Technology, appointed by the Division of Behavioral and Social Sciences and Education, and Charles F. Manski, Northwestern University, appointed by the Report Review Committee, who were responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the authoring committee and the institution.

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Acronyms

AR4	IPCC's Fourth Assessment Report
AR5	IPCC's Fifth Assessment Report
CH_4	Methane
CMIP3	Coupled Model Intercomparison Project Phase 3
CMIP5	Coupled Model Intercomparison Project Phase 5
CO_2	Carbon dioxide
DICE	Dynamic Integrated Climate-Economy Model
ECS	Equilibrium climate sensitivity
EgC	Exagram of carbon, 1 trillion tons of fossil carbon
EMF 22	Energy Modeling Forum's 22nd study
FUND	Climate Framework for Uncertainty, Negotiation and Distribution
Gt	Gigaton, 1,000,000,000 tons
IAM	Integrated assessment model
IPCC	Intergovernmental Panel on Climate Change
IPT	Initial pulse-adjustment timescale
IWG	Interagency Working Group on the Social Cost of Carbon
N_2O	Nitrous oxide
OMB	Office of Budget and Management
PAGE	Policy Analysis of the Greenhouse Effect
PETM	Paleocene-Eocene Thermal Maximum (in Figure 3-1)
ppm	Parts per million
RCP/ECP	Representative concentration pathway/extended concentration pathway
SCC	Social cost of carbon
SF_6	Sulfur hexafluoride
TCR	Transient climate response
TCRE	Transient climate response to cumulative carbon emissions
Tt C	Teraton of carbon, 1 trillion tons of fossil carbon
USG1	U.S. Government 1 (a designation for one of the five socioeconomic scenarios used in the IAMs)
USG2	U.S. Government 2 (a designation for one of the five socioeconomic scenarios used in the IAMs)
USG5	U.S. Government 5 (a designation for one of the five socioeconomic scenarios used in the IAMs)
W/m^2	Watts per square meter

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Executive Summary

The social cost of carbon (SCC) for a given year is an estimate, in dollars, of the present discounted value of the damage caused by a 1-metric ton increase in carbon dioxide (CO_2) emissions into the atmosphere in that year or, equivalently, the benefits of reducing CO_2 emissions by the same amount in that year. The SCC is intended to provide a comprehensive measure of the monetized value of the net damages from global climate change that results from an additional unit of CO_2, including, but not limited to, changes in net agricultural productivity, energy use, human health effects, and property damages from increased flood risk. Federal agencies use the SCC to value the CO_2 emissions impacts of various regulations, including emission and fuel economy standards for vehicles; emission standards for industrial manufacturing, power plants, and solid waste incineration; and appliance energy efficiency standards.

The Interagency Working Group on the Social Cost of Carbon (IWG) developed a methodology for estimating the SCC and applied that methodology to produce estimates that government agencies use in regulatory impact analyses under Executive Order 12866. The IWG requested this Academies interim report to determine if a near-term update to the SCC is warranted, with specific questions pertaining to the representation of the equilibrium response of the climate system in the integrated assessment models used by the SCC modeling structure, as well as the presentation of uncertainty of the SCC estimates. This interim report is the first of two reports requested by the IWG: the second (Phase 2) report will examine potential approaches for a more comprehensive update to the SCC estimates.

The committee concludes that there would not be sufficient benefit of modifying the estimates to merit a near-term update that would be based on revising a specific parameter in the existing framework used by the IWG to reflect the most recent scientific consensus on how global mean temperature is, in equilibrium, affected by CO_2 emissions. Furthermore, the committee does not recommend changing the distributional form used to capture uncertainty in the equilibrium CO_2 emissions-temperature relationship. Rather than simply updating the distribution used for equilibrium climate sensitivity—the link that translates CO_2 emissions to global temperature change—in the current framework, the IWG could undertake efforts toward the adoption or development of a common representation of the relationship between CO_2 emissions and global mean surface temperature change, its uncertainty, and its profile over time. The committee outlines specific diagnostic criteria that can be used to assess whether such a module is consistent with the best available science.

Further, the committee recommends that the IWG provide guidance in their technical support documents about how SCC uncertainty should be represented and discussed in individual regulatory impact analyses that use the SCC. The committee recommends that each update of the SCC include a section in the technical support document that discusses the various types of uncertainty in the overall SCC estimation approach, addresses how different models used in SCC estimation capture uncertainty, and discusses uncertainty that is not captured in the estimates. In addition, the committee notes that it is important to separate the effects of the discount rate on the SCC from the effects of other sources of variability. Finally, the committee recommends that

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the IWG provide symmetric treatment of both low and high values from the frequency distribution of SCC estimates conditional on each discount rate.

The committee also reminds readers that it will be exploring these and other broader issues further in Phase 2 of this study; the committee may offer further discussion of these issues in its Phase 2 report including the modeling of the climate system and the representation of uncertainty in the estimation of the SCC.

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1
Introduction

The social cost of carbon (SCC) for a given year is an estimate, in dollars, of the present discounted value of the damage caused by a 1-metric ton increase in CO_2 emissions into the atmosphere in that year or, equivalently, the benefits of reducing CO_2 emissions by the same amount in that given year.[1] The SCC is intended to provide a comprehensive measure of the monetized value of the net damages from global climate change from an additional unit of CO_2, including, but not limited to, changes in net agricultural productivity, energy use, human health effects, and property damages from increased flood risk.[2] Federal agencies use the SCC to value the CO_2 emissions impacts of various policies including emission and fuel economy standards for vehicles, regulations of industrial air pollutants from industrial manufacturing, emission standards for power plants and solid waste incineration, and appliance energy efficiency standards.

HISTORY AND DEVELOPMENT OF THE SCC

The effort to incorporate the SCC into regulatory decision making started during the latter part of the George W. Bush Administration. Prior to 2008, changes in CO_2 emissions were not valued in the cost-benefit analysis required when establishing federal rules and regulations (U.S. Government Accountability Office, 2014, p. 5). After a 2008 court ruling[3] that required incorporation of the benefits of CO_2 emissions reductions in every regulatory impact analysis, federal agencies began using a variety of methodologies for determining a dollar value for the SCC. In an effort to standardize SCC estimates across the federal government, in 2009 the Obama Administration assembled the Interagency Working Group on the Social Cost of Carbon (IWG) of technical experts from across the government to develop a single set of estimates.[4] Interim values for the SCC from the IWG were first used in a regulatory impact analysis for an August 2009 Department of Energy energy efficiency standard for beverage vending machines (74 *Federal Register* 44914). The SCC has since been used in dozens of regulatory actions (U.S. Government Accountability Office, 2014, App. I). For example, the March 2010 *Energy Conservation Program: Energy Conservation Standards for Small Electric Motors Final Rule*[5] used the SCC to monetize its global climate impacts.

Following the establishment of interim values for the SCC, the IWG undertook a more in-depth process that produced a February 2010 Technical Support Document with a more fully

[1] In this report, we present all values of the SCC as the cost per metric ton of CO_2 emissions.

[2] Here, and throughout this report, "damage" is taken to represent the net effects of both negative and positive economic outcomes of climate change.

[3] *Center for Biological Diversity v. National Highway Traffic Safety Administration,* U.S. Court of Appeals, Ninth Circuit, 538 F.3d 1172 (9th Cir. 2008).

[4] The IWG, which operates under the U.S. Global Change Committee, is cochaired by the Council of Economic Advisors and the Office of Management and Budget; the other members are the Council on Environmental Quality, the Domestic Policy Council, the Department of Agriculture, the Department of Commerce, the Department of Energy, the Department of Transportation, the Environmental Protection Agency, the National Economic Council, the Office of Science and Technology Policy, and the Department of the Treasury.

[5] EERE–2007–BT–STD–0007, 75 *Federal Register* 10873.

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developed methodology and a resulting set of four SCC estimates for use by government agencies. The estimates were developed employing the three most widely cited integrated assessment models (IAMs) that are capable of estimating the SCC, which this report refers to as "SCC-IAMs." Although the three SCC-IAMs were not developed solely to estimate the SCC, they are among the very few models that calculate net economic damages from CO_2 emissions. Since there are many IAMs in use in the climate change research community for multiple purposes, this report refers to these three models specifically as SCC-IAMs.[6]

The IWG retained most of the SCC-IAMs developers' default assumptions for the parameters and functional forms in the models, but with some important exceptions, and also a harmonized approach to discounting the results in future time periods across the models. The two exceptions are that the IWG used a single probability distribution for the equilibrium climate sensitivity (ECS)[7] parameter for all models, as well as a common set of five future socioeconomic and emissions scenarios. In addition, three constant discount rates were used for each SCC-IAM. The analysis resulted in 45 sets of estimates (three IAMs, five socioeconomic-emissions scenarios, one ECS distribution, and three discount rates) for the SCC for a given year, with each set comprising 10,000 estimates drawn on the basis of the uncertain variables in the models. The IWG summarized the results into an average value for each discount rate, plus a fourth value, selected at the 95th percentile for a 3 percent discount rate, intended to represent higher-than-expected impacts from temperature change farther out in the tail of the SCC estimates.

Motivation for the Study

There are significant challenges to estimating a dollar value that reflects all the physical, human, ecological, and economic impacts of climate change. Recognizing that the models and scientific data underlying the SCC estimates evolve and improve over time, the federal government made a commitment to provide regular updates to the estimates. For example, the IWG updated SCC estimates in May 2013 to take into account a variety of model-specific updates in each of the three SCC-IAMs.[8]

The IWG requested this National Academies of Sciences, Engineering, and Medicine study to assist future revisions of the SCC in two important ways. First, it requested that this study provide government agencies that are part of the IWG with an assessment of the merits and challenges of a limited near-term update to the SCC. Specifically, it requested that the committee consider whether there is sufficient benefit to conducting a limited near-term update to the SCC in light of ECS updates in the Fifth Assessment Report (AR5) of Working Group 1 of the Intergovernmental Panel on Climate Change (IPCC); whether a different distributional form should be used for the ECS; and whether the IWG should adopt changes in its approaches for

[6]There are many types of IAMs, which vary significantly in structure, resolution, computational algorithm, and application. In comparison with most other IAMs, the three SCC-IAMs used by the IWG, Dynamic Integrated Climate-Economy Model, Framework for Uncertainty, Negotiation and Distribution, and Policy Analysis of the Greenhouse Effect are specialized in their focus on modeling aggregate global climate damages and their highly aggregated economic and energy system representations, rather than being focused on potential economic, energy, and land system development and transformation. We note, however, that these models were not designed solely to estimate the SCC.

[7]ECS measures the long-term response of global mean temperature to a fixed forcing, conventionally taken as an instantaneous doubling of CO_2 concentrations from their preindustrial levels; see Chapter 3.

[8]In November 2013 and July 2015, the IWG also revised the estimates slightly to account for minor technical corrections.

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enhancing the qualitative characterization of limitations and uncertainties in SCC estimates to increase their transparency for use in regulatory impact analyses.

Second, the IWG requested that the committee consider the merits and challenges of a comprehensive update of the SCC to ensure that the estimates reflect the best available science. Specifically, it requested that the committee review the available science to determine its applicability for the choice of IAMs and damage functions and examine issues related to climate science modeling assumptions, socioeconomic and emissions scenarios, the presentation of uncertainty, and discounting. The full statement of task is in Box 1-1.

Accordingly, the committee will recommend approaches that warrant consideration in future updates of the SCC estimates, as well as recommendations for research to advance the science in areas that are particularly useful for estimating the SCC. The committee will examine the merits and challenges of potential approaches for both a near-term limited update and longer-term comprehensive updates to ensure that the SCC estimates reflect the best available science and methods. As such, the study will be conducted in two phases and will result in two reports. This interim report focuses on near-term updates to the SCC estimates, Phase 1 of the study, and is narrowly scoped so that a consensus report could be produced in the short time line required (within 6 months). Phase 2 allows for broader consideration of the SCC.

BOX 1-1
Statement of Task

An ad hoc multidisciplinary committee will be appointed to inform future revisions to estimates of the social cost of carbon (SCC) developed and used by the federal government. The committee will examine the merits and challenges of potential approaches for both a near-term limited update and longer-term comprehensive updates to ensure that the SCC estimates continue to reflect the best available science and methods. The study will be conducted in two phases and will result in two reports.

Phase 1.

In Phase 1, the committee will assess the technical merits and challenges of a narrowly focused update to the SCC estimates and make a recommendation on whether to conduct an update of the SCC estimates prior to recommendations related to a more comprehensive update based on its review of the science related to the topics covered in the second phase. Specifically, the committee will consider whether an update is warranted based on the following:

1. Updating the probability distribution for the ECS to reflect the recent Intergovernmental Panel on Climate Change (IPCC) consensus statement in the Fifth Assessment Report of the IPCC, rather than the current calibration used in the SCC estimates, which were based on the most authoritative scientific consensus statement available at the time (the 2007 Fourth IPCC Assessment).
2. Recalibrating the distributional forms for the ECS by methods other than the currently used Roe and Baker (2007) distribution.
3. Enhancing the qualitative characterization of uncertainties associated with the current SCC estimates in the short term to increase the transparency associated with using these estimates in regulatory impact analyses. Noting that as part of a potential comprehensive update Part 2 of the charge requests information regarding the opportunity for a more comprehensive, and possibly more formal or quantitative, treatment of uncertainty.

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The Phase 1 report will be an interim letter report to be completed in 6 months.

Phase 2.

In Phase 2, which represents the bulk of the statement of task, the committee will examine potential approaches, along with their relative merits and challenges, for a more comprehensive update to the SCC estimates to ensure the estimates continue to reflect the best available science. The committee will be asked to consider issues related to

1. an assessment of the available science and how it would impact the choice of integrated assessment models and damage functions,
2. climate science modeling assumptions,
3. socioeconomic and emissions scenarios,
4. presentation of uncertainty, and
5. discounting.

Within these areas, the committee will make recommendations on potential approaches that warrant consideration in future updates of the SCC estimates, as well as research recommendations based on their review that would advance the science in areas that are particularly useful for estimating the SCC.

Strategy to Address the Study Charge

This study was carried out by a committee of experts appointed by the president of the Academies. The committee consists of 13 members, with the assistance of a technical consultant and study staff. Committee expertise spans the issues relevant to the study task: environmental economics, climate science, energy economics, integrated assessment modeling, decision science, climate impacts, statistical modeling, and public policy and regulation. In composing the committee, care was taken to ensure that the membership possessed the necessary balance between research and practice by including academic scientists and other professionals, that members have the relevant disciplinary expertise, and to ensure there are no current connections that might constitute a conflict of interest with the Department of Energy, the Environmental Protection Agency, or other regulatory agency members of the IWG. The committee cochairs are experts in the fields of environmental and energy economics with demonstrated leadership capabilities. Biographical sketches of the committee members and staff are provided in Appendix A.

To address the Phase 1 task, the committee held one open meeting to receive information from federal agency staff to understand and explore its study charge; see Appendix B for the agenda. Closed sessions at the initial meeting and two subsequent meetings were held to refine and finalize the committee's findings and recommendations. The main body of the report addresses the Phase 1 charge questions.

CRITERIA AND CHALLENGES FOR A NEAR-TERM UPDATE

The committee considered a number of criteria for evaluating the merits and challenges of a near-term update to ECS assumptions within the framework for estimating the SCC. A

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"near-term update" was understood by the committee to be actions that government staff could undertake in less than 1 year. Specifically, the committee considered five main issues:

1. **Accuracy and characterization of uncertainty of climate system modeling.** If the ECS is updated within the existing SCC modeling framework to reflect the current scientific consensus as represented by the AR5, will it necessarily improve the representation of the response of temperature change to emissions, relative to more complete, state-of-the-art models of the climate system? Both the accuracy and characterization of uncertainty of the emissions-temperature relationship over time are important aspects of that representation.
2. **Overall SCC reliability.** Would a near-term improvement to the representation of ECS be likely to substantially improve the overall SCC estimate, given other elements of the IWG SCC framework that may also warrant improvement?
3. **Alternative options for climate system representation.** Are there near- to mid-term options—in addition to simply adjusting the ECS within the current framework—for altering the representation of the emission-temperature response in the SCC framework? Would these options enhance the ability of the IWG to undertake future updates in a manner that is well connected to developments in the climate science community?
4. **Opportunity cost of near-term efforts in terms of potential longer-term improvements.** Would the value of any near-term update, in terms of improvement in the SCC, justify the opportunity costs of engaging in the effort, rather than focusing instead on longer-term improvements to the SCC? Would such a change, if implemented, be likely to have a substantial effect on the SCC, thereby potentially warranting the near-term investment of resources related to the development of revised SCC estimates?
5. **Consistency of Phase 1 with possible Phase 2 conclusions and recommendations.** Would any actions taken in response to Phase 1 recommendations likely be consistent with actions taken in response to possible Phase 2 recommendations?

The committee also considered specific technical details in their analysis as described in later chapters.

STRUCTURE OF THE REPORT

The rest of the report covers the topics addressed in Phase 1. Chapter 2 describes how the IWG constructed the SCC estimates and is intended to be accessible to all readers. Chapters 3 and 4 present the technical details that underlie the committee's conclusions and recommendations. Chapter 3 describes the role of the ECS in determining temperature changes and discusses several additional relevant climate metrics that reflect the state of the climate literature. Chapter 4 highlights differences in the way the SCC-IAMs represent the climate system. Chapter 5 then summarizes the conclusions from the previous chapters and provides recommendations for whether a limited, short-term update to the ECS distribution is warranted and on how the qualitative characterization of uncertainty can be improved.

Consideration of broader updates to the SCC—including economic damages and damage functions, socioeconomic scenarios, and discounting—are not addressed in this report. These topics will be addressed in Phase 2 of the study, along with further assessment of climate system modeling the treatment of uncertainty (see Box 1-1, above).

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2
Modeling the Climate System within the Broader SCC Modeling Structure

This chapter reviews the current methodology used to calculate the social cost of carbon (SCC) to provide the context for the committee's analysis, conclusions, and recommendations. We focus in particular on the assumptions that differ among the SCC integrated assessment models (SSC-IAMs) and uncertainties in the modeling framework.

STEPS IN CONSTRUCTING THE SCC: OVERVIEW

In order to estimate the SCC, one needs to project both the sequence of future annual incremental changes in the climate and the resulting economic damages from a marginal increase in CO_2 emissions, and then convert the stream of incremental economic damages into a present value equivalent (i.e., the total dollar value at the time of emissions of the discounted stream of future damages).[9] Since the atmospheric impacts of CO_2 emissions are global and vary over time, this calculation is complex, and it requires a global model with a long time horizon. The approach taken by the Interagency Working Group on the Social Cost of Carbon (IWG) was to utilize damage valuations from the three SCC-IAMs, described in more detail below. The SCC-IAMs use the causal chain of modeling steps to project incremental changes in climate change and resulting economic damages; see Figure 2-1.

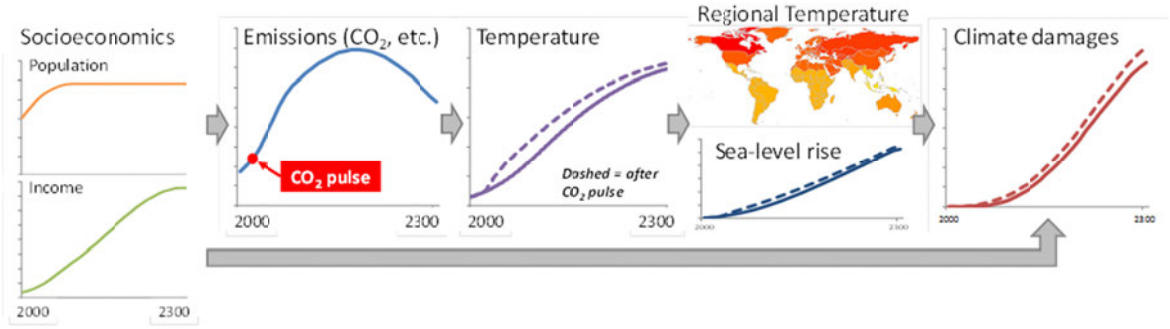

FIGURE 2-1 SCC modeling causal chain.
NOTE: Each figure in this chain represents a key element in the models used to produce estimates of the SCC with projections from one element flowing into the next element. Population and income projections are inputs to the derivation of projections for both emissions and climate damages.
SOURCE: Developed from Rose et al. (2014). Reprinted with permission.

[9] Damages from global climate change include, but are not limited to, changes in net agricultural productivity, energy use, human health effects, and property damages from increased flood risk.

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Each model takes as inputs a projection of human population growth and of global or regional income, as well as emissions paths of global greenhouse gases.[10] A simple climate model component of each SCC-IAM translates the reference emissions trajectory into a reference global mean temperature trajectory and a reference trajectory of global mean sea level rise. In two of the models, regional average temperature trajectories are also derived from global mean temperature. Each model then uses one or multiple damage functions to translate temperature and sea level rise into economic damages or benefits. In the IWG analysis, global damages in the Climate Framework for Uncertainty, Negotiation and Distribution (FUND) and Policy Analysis of the Greenhouse Effect (PAGE) are an equally weighted sum of regional damages (i.e., no equity weighting) (Interagency Working Group on the Social Cost of Carbon, 2010, p. 11).

In order to derive an SCC estimate, the impact of a CO_2 emissions pulse is calculated following the same causal chain: the CO_2 pulse is introduced in a particular year, creating a trajectory of temperature (global and regional), sea level rise, and climate damages. The difference between this damage trajectory (the dotted line in Figure 2-1, above) and the reference trajectory (the solid line) in each year is discounted to the present using annual discounting (a constant annual discount rate in the IWG application). The resulting value is an SCC estimate for the given set of assumptions used in the reference and perturbed scenarios.

There are several steps in the causal chain for each SCC-IAM that are worth highlighting because they are different across models and have notable implications for the ultimate calculation of an SCC estimate. We discuss these differences in more detail below, but flag them here:

- emissions can vary in terms of their coverage and time path;
- the reference and perturbed temperature trajectories depend on the way the climate system is modeled within each SCC-IAM; and
- there are significant observed differences in the global climate responses across SCC-IAMs and the regional temperatures derived by downscaling (i.e., by establishing geographically fine-scale information from changes in aggregate climate conditions).

Chapter 4 explores the relevant aspects of the climate systems of the SCC-IAMs in greater technical detail.

Another aspect in which the SCC-IAMs differ is in the handling of damages. The models differ in the spatial and sectoral resolution of damages, and they differ in which sectors are the most important sources of climate damages. For two of the models (Dynamic Integrated Climate-Economy Model [DICE], and PAGE), damages are functions of only temperature and income, while for the other (FUND) they are also functions of the rate of temperature increase, CO_2 concentrations, per capita income, population, and other drivers.

Overall, each SCC-IAM follows roughly the same causal chain in terms of the sequence of modeling information flow, yet differs in the model translations at each step. The IWG uses the following versions of three IAMs (IWG 2013, 2015):

[10] As designed, each of the three SCC-IAMs derives emissions from socioeconomic projections. However, in the IWG application of those models, socioeconomic and emissions projections were taken from an external source for two of the models, while the third derived its own fossil fuel combustion and industry CO_2 emissions.

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- the 2010 version of DICE by William Nordhaus;
- version 3.8 of FUND by Richard Tol and David Anthoff; and
- the 2009 version of PAGE model by Chris Hope.

We note, however, that the IWG model version may be different from the modeler's original or most recent versions.

As mentioned above, the three models differ in the details of their implementation. Table 2-1 provides a broad summary of their dimensions. For a more comprehensive comparison of those differences, see Rose et al. (2014). Specific differences in socioeconomic and emissions modeling are described below, and, in Chapter 4, we discuss climate system modeling.

TABLE 2-1 SCC-IAM Coarse Feature Comparison

	DICE 2010	FUND v3.8	PAGE 09
Regions	1 region	16 regions	8 regions
Damage Sectors	2 sectors	14 sectors	4 sectors
Regional Temperature Downscaling	No	Yes	Yes
Damage Drivers	Temperature (level), income (total)	Temperature (level and growth), CO_2 concentration, income (total and per capita), population size/composition, other[a]	Temperature (level), income (total and per capita)
Sea Level Rise (SLR) Damage Specification	Quadratic function of global sea level rise (i.e., Damage = αSLR^2)	Additive functions for coastal protection costs, dryland loss, and wetland loss, based on an internal cost-benefit rule for optimal adaptation	Power function of global sea level rise (i.e., Damage = $\alpha SLR^{0.7}$)
Damage Specification (Excluding Sea Level Rise)	Quadratic function of global temperature (i.e., Damage = αT^2)	Uniquely formulated by sector	Power function of regional temperature (i.e., Damage = $\alpha T^{1.76}$)
Model-Specific Parametric Uncertainties	None	Yes (in climate and damage modeling)	Yes (in climate and damage modeling)
"Catastrophic" or "Discontinuity" Damages Included	Yes (as expected damages)	No	Yes (as uncertain threshold)

[a]"Other" includes: dryland value, wetland value, topography (elevation, coast length), protection cost, ocean temperature, and technological change.
SOURCE: Developed from Rose et al. (2014). Reprinted with permission.

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As can be seen in the table above, there are several high-level structural differences among the SCC-IAMs. DICE is global (i.e., has only 1 region), while FUND and PAGE split the world into 16 and 8 regions, respectively. Each SCC-IAM covers multiple damage sectors, but only FUND disaggregates economic sectors in any detail. Since DICE is a global model, only FUND and PAGE downscale regional temperatures (with different methods).

The models also differ in the specific drivers of climate damages and their functional specification. DICE and PAGE use power functions—a quadratic or other polynomial function of temperature or sea level rise—for each of the represented sectors. FUND, on the other hand, disaggregates damage functions into a more detailed set of sectors. In addition, FUND and PAGE both consider model-specific climate and damage parametric uncertainty—each of those models allows for certain parameters to be drawn from probability distributions. Thus, FUND and PAGE reflect some uncertainty in their specifications; however, those characterizations and their implications vary between the two models (see Rose et al., 2014).

METHODOLOGY

The IWG methodology for constructing the official U.S. SCC estimates is discussed in detail in the IWG technical support documents (Interagency Working Group on the Social Cost of Carbon, 2010, 2013, 2015). The methodology results in 150,000 estimates of the SCC for each year and discount rate, yielding a frequency distribution of SCC results; see Figure 2-2. Percentiles and summary statistics of these estimates, also shown in Figure 2-2, are presented in the IWG technical support documents.[11]

In order to arrive at the 150,000 estimates for each discount rate, each of the three models was run 10,000 times with random draws from the equilibrium climate sensitivity (ECS) probability distribution (and other model-specific uncertain parameters), for each of the five socioeconomic scenarios (150,000 estimates = three models × five socioeconomic scenarios × 10,000 runs), for each of three discount rates (2.5 percent, 3 percent, and 5 percent).[12] Frequency distributions of results for 2020 estimates were summarized for each model, socioeconomic scenario, and discount rate.

To facilitate the use of the SCC in regulatory analysis, the values of the SCC are averaged across the three SCC-IAMs and the five emissions scenarios, implicitly defining a frequency distribution of SCC values conditional on each discount rate. In averaging the results across models and emissions scenarios, all models and all emissions scenarios are given equal weight. Figure 2-2 is an example of the resulting frequency distribution for 2020 SCC estimates as reported in the IWG's 2015 technical support documents.[13] The average value of the SCC is shown for each discount rate, using a vertical line, as is the 95th percentile of the frequency distribution of SCC results for the case of a 3 percent discount rate. The larger SCC estimates in Figure 2-2 arise, in part, from realizations in the positively skewed right tail of the ECS distribution used by the IWG.

[11]The full set of estimates is available on request from the IWG.

[12]In terms of standardized uncertainties across all three models, five reference socioeconomic and emissions scenarios projected until 2300 were used, as well as one common probability distribution for the ECS parameter—the equilibrium temperature change that results from a doubling of CO_2 relative to preindustrial levels. For FUND and PAGE, the IWG methodology included model-specific parametric uncertainties for both the climate and damage components.

[13]Summary statistics of the distribution of results for each model, conditional on discount rate and socioeconomic scenario are reported in an appendix of the IWG's technical support document (Interagency Working Group on the Social Cost of Carbon, 2010, Appendix).

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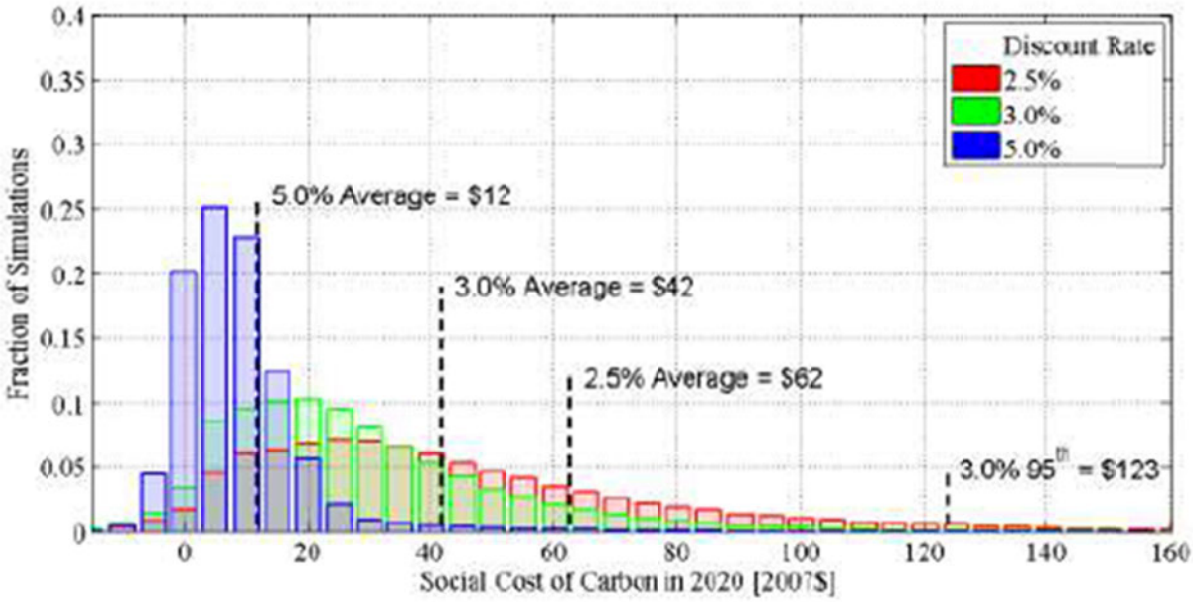

FIGURE 2-2 Frequency distributions of SCC estimates for 2020 (in 2007 dollars per metric ton CO_2).
NOTES: Each histogram (red, green, blue) represents model estimates, conditional on one of three discount rates, over five different socioeconomic-emissions scenarios, 10,000 random parameter draws, and the three SCC-IAMs (see text for discussion). The frequency distributions shown represent most of the 150,000 SCC estimates. However, they do not represent the entire distribution. Some estimates fall outside the range of the horizontal axis shown.
SOURCE: IWG Technical Support Document (Interagency Working Group on the Social Cost of Carbon, 2015, Figure 1).

In the appendix to each technical support document, the frequency distribution of results based on 10,000 runs is summarized for the year 2020 for each SCC-IAM, emissions scenario, and discount rate. Specifically, the average value of the SCC is reported, as well as the 1st, 5th, 10th, 25th, 50th, 75th, 90th, 95th, and 99th percentiles of the frequency distribution of SCC estimates. Table 2-2 illustrates this for a discount rate of 3 percent for each emissions scenario (i.e., 15 sets of results).

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TABLE 2-2 2020 Global SCC Estimates at a 3 Percent Discount Rate (2007 dollars/metric ton CO_2).

Percentile	1st	5th	10th	25th	50th	Avg	75th	90th	95th	99th
Scenario	PAGE									
IMAGE	4	7	9	17	36	87	91	228	369	696
MERGE Optimistic	2	4	6	10	22	54	55	136	222	461
MESSAGE	3	5	7	13	28	72	71	188	316	614
MiniCAM Base	3	5	7	13	29	70	72	177	288	597
5th Scenario	1	3	4	7	16	55	46	130	252	632
Scenario	DICE									
IMAGE	16	21	24	32	43	48	60	79	90	102
MERGE Optimistic	10	13	15	19	25	28	35	44	50	58
MESSAGE	14	18	20	26	35	40	49	64	73	83
MiniCAM Base	13	17	20	26	35	39	49	65	73	85
5th Scenario	12	15	17	22	30	34	43	58	67	79
Scenario	FUND									
IMAGE	-13	-4	0	8	18	23	33	51	65	99
MERGE Optimistic	-7	-1	2	8	17	21	29	45	57	95
MESSAGE	-14	-6	-2	5	14	18	26	41	52	82
MiniCAM Base	-7	-1	3	9	19	23	33	50	63	101
5th Scenario	-22	-11	-6	1	8	11	18	31	40	62

SOURCE: IWG Technical Support Document (Interagency Working Group on the Social Cost of Carbon, 2015, Table A.3).

The official SCC estimates are reproduced in Table 2-3 below. For the given years of a CO_2 emission (2010, 2015, 2020, etc.), the four estimates are the average SCC values conditional on the three discount rates, plus the 95th percentile of SCC estimates using a 3 percent discount rate. As noted in the IWG technical support document 2015 update (p. 2):

> The three values are based on the average SCC from three integrated assessment models [SCC-IAMs], at discount rates of 2.5, 3, and 5 percent. The fourth value, which represents the 95th percentile SCC estimate across all three models at a 3 percent discount rate, is included to represent higher-than-expected impacts from temperature change further out in the tails of the SCC distribution.

SCC ESTIMATES

In summary, each single estimate of the 150,000 SCC estimates for each discount rate depends on the SCC-IAM used, the socioeconomic and emissions scenario, a draw from the assumed distribution of the ECS, and, for FUND and PAGE, a draw from the distributions of their particular uncertain parameters. The resulting four official SCC estimates for an emissions year are the mean of the 150,000 results for each discount rate, as well as the 95th percentile for the 3 percent discount rate (see Table 2-3).

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TABLE 2-3 Revised Social Cost of CO_2, 2010 - 2050 (in 2007 dollars per metric ton of CO_2).

Discount Rate Year	5.0% Avg	3.0% Avg	2.5% Avg	3.0% 95th
2010	10	31	50	86
2015	11	36	56	105
2020	12	42	62	123
2025	14	46	68	138
2030	16	50	73	152
2035	18	55	78	168
2040	21	60	84	183
2045	23	64	89	197
2050	26	69	95	212

SOURCE: IWG Technical Support Document (Interagency Working Group on the Social Cost of Carbon, 2015, Table 2).

The most recent update of the official SCC estimates is shown in Table 2-3. SCC estimates are provided for different future years on the basis of modeling CO_2 pulses applied in each decade (half decade values are interpolations). The SCC estimates rise over time because, in the models, future emissions produce larger incremental damages as the economy grows and temperature rises.

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3
Determining Temperature Changes in Response to CO_2 Emissions

This chapter introduces the technical details that underlie the committee's conclusions and recommendations. The role of the equilibrium climate sensitivity (ECS) in determining temperature changes is described. Several additional relevant climate metrics that reflect the state of the literature are discussed.

The first question in the committee's charge is to consider the merits and challenges associated with a near-term revision of the distribution of the ECS. A broad perspective on the relationship between emissions (a key input to the physical climate/carbon cycle model in the social cost of carbon integrated assessment models [SCC-IAMs]) and global mean temperature (the output) is considered in this chapter. Four metrics are of particular importance to the discussion: ECS, transient climate response (TCR), transient climate response to emissions (TCRE), and the initial pulse-adjustment time (IPT); see Box 3-1. In comparison with other metrics used to summarize the relationship between emissions and temperature change, researchers have noted that the ECS is not necessarily the most relevant physical parameter over the nearer-term timeframes particularly important to determining the SCC (e.g., Otto et al., 2013b).

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BOX 3-1
Timescales and Key Metrics for Relating CO_2 Emissions to Temperature Change

The response of global mean temperature to climate forcing can be characterized by a number of different metrics, which represent different timescales.

Equilibrium climate sensitivity (ECS) measures the long-term response of global mean temperature to a fixed forcing, conventionally taken as an instantaneous doubling of CO_2 concentrations from their preindustrial levels. The "long-term" timeframe is set by the time it takes for the ocean as a whole to equilibrate with the change in forcing, typically on the order of many centuries to a couple of millennia. ECS is a measure of long-term planetary response, but it is not comprehensive. It includes the effects of atmospheric and ocean processes involving clouds, water vapor, snow, and sea ice. It does not, however, include other, mostly slower processes, that have not, at least until recently, been represented in coupled global climate models, such as those involving vegetation, land ice, or changes in the carbon cycle; see Figure 3-1.

Transient climate response (TCR) measures the transient response of global mean temperature to a gradually increasing forcing. The timeframe on which TCR is measured allows the shallow "mixed layer" of the ocean to approach equilibrium with the changed forcing, but it does not allow equilibration of the deep ocean. In models, TCR is assessed by increasing CO_2 concentrations at 1 percent per year until CO_2 concentrations double in year 70; TCR is the average temperature over the two decades around the time of doubling (years 61-80).

Transient climate response to emissions (TCRE) measures, on a similar timescale as TCR, the ratio of warming to cumulative CO_2 emissions. While the TCRE has become a widely used metric over the past decade, it has a shorter history in the scholarly literature than ECS or TCR, and thus the methods for assessing it are less established. In models, one way of assessing TCRE is from experiments similar to the 1 percent per year increase used to assess TCR, but using emissions rather than a prescribed change in concentrations to drive the experiment (see, e.g., Gillett et al., 2013). The TCRE is then estimated as the ratio of the TCR to the cumulative CO_2 emissions at the time of CO_2 doubling.

The initial pulse-adjustment timescale (IPT) has only recently been a focus of research and does not have a standard name or definition in the research community, but it may be of considerable importance for estimates of the SCC, which are driven by the injection of a pulse emission of CO_2. The IPT measures the initial adjustment timescale of the temperature response to a pulse emission of CO_2 (see. e.g., Joos et al., 2013; Herrington and Zickfeld, 2014; Ricke and Caldeira, 2014; Zickfeld and Herrington, 2015). For example, Joos et al. (2013) assessed the IPT by adding a 100 gigaton (Gt) carbon pulse to baseline emissions that stabilized CO_2 concentrations at a reference level of 389 ppm; the IPT from such an experiment is the time at which peak warming occurs in response to the pulse.

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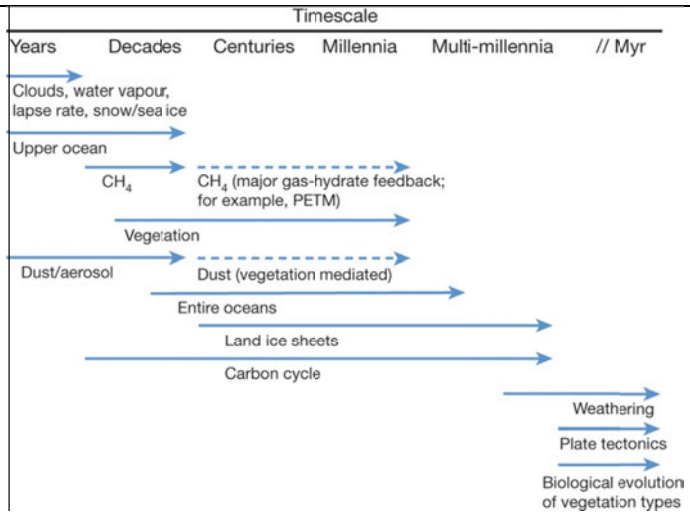

FIGURE 3-1 Different climate processes operate on different timescales.
NOTES: Atmospheric and oceanic processes operating on annual to decadal timescales affect the TCR; these include cloud formation, changes in water vapor, lapse rate, snow and sea ice, as well as heat exchange with the upper ocean. Heat exchange with the deep ocean also affects the ECS. Other processes that can contribute to the global mean surface temperature change caused by a forcing that have not, at least until recently, been included in coupled global climate models are not included in the definition of ECS and TCR. These include changes in vegetation, dust, ice sheets, and the carbon cycle. Some simple climate models do attempt to represent these additional processes.
SOURCE: PALAEOSENS Project (2012, Figure 1).

Modeling the effect of CO_2 emissions on global mean surface temperature entails estimating the effect of emissions on atmospheric CO_2 concentrations, the effect of CO_2 concentrations on radiative forcing, and the effect of forcing on temperature. Although this path is complex, the result appears to be a simpler relationship between temperature and cumulative emissions than between temperature and forcing. As described below ("The Carbon Cycle and TCRE"), the relationship between cumulative CO_2 emissions and global mean temperature change is approximately linear and can be summarized by a single parameter: the transient climate response to cumulative carbon emissions in the industrial era (TCRE). TCRE measures, on a time scale of decades, the ratio between CO_2-induced warming and cumulative emissions, expressed in units of °C/Tt C, where 1 Tt C is 1 trillion tons of fossil carbon or 3.67 trillion tons of CO_2. TCRE is, in turn, determined primarily by TCR (see Matthews et al., 2009; Gillett et al., 2013).

Calculating the SCC entails estimating a baseline temperature trajectory and the temperature response to a pulse of CO_2. The multidecade-to-century warming caused by a pulse of CO_2 can be approximated as the product of the TCRE and the total cumulative amount of carbon injected. The speed of this response, determined by the IPT, is also important for estimating the SCC; see discussion below ("Implications for Estimation of the SCC").

In Chapter 4, the committee details the implications of the discussion in this chapter for calculation of the SCC. The importance of ECS, relative to TCR, depends on the time pattern of damages associated with a time pattern of global temperature change. The higher the fraction of the present discounted value of damages that occur in the first century after emissions, the more important is the TCR relative to the ECS, since the TCR is a much better predictor of climate

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response on time scales of less than a century. In Chapter 4, the committee outlines tests that could be applied to the simple climate models used to generate the SCC to determine whether the central projections of these models agree with those of the class of Earth system models used by the Intergovernmental Panel on Climate Change (IPCC).[14]

EQUILIBRIUM CLIMATE SENSITIVITY AND TRANSIENT CLIMATE RESPONSE

The concepts of ECS and TCR arise, in their simplest form, from the conservation of energy. In equilibrium, the incoming solar radiation absorbed by Earth balances the outgoing longwave infrared radiation emitted by the planet to space. If either the absorbed solar radiation or the outgoing longwave radiation is perturbed from an equilibrium state, the heat content of the climate system will change at a rate set by the magnitude of the imbalance. The absorbed solar radiation is controlled by the amount of incoming solar radiation and by the Earth's albedo, which is the fraction of the incoming solar radiation reflected away by the atmosphere or the surface. The amount of outgoing longwave radiation is set primarily by the planet's radiative temperature—the temperature of the atmospheric level from which, on average, infrared radiation can be emitted through the "haze" of infrared-absorbing greenhouse gases and clouds to space. Because the radiative temperature increases as the climate system absorbs heat (thereby increasing outgoing longwave radiation) and declines as the climate system loses heat (thereby decreasing outgoing longwave radiation), the imbalance, and thus the rate of temperature change in response to a perturbation, declines over time until a new equilibrium is reached.

A climate forcing (measured in W/m^2 [watts per square meter]) refers to a decrease in net outgoing energy, relative to some initial state in which the planet was in equilibrium, driven by an exogenous factor, such as a change in greenhouse gas or aerosol concentrations. The change in temperature caused by a forcing triggers climate feedbacks: additional changes in the planet's albedo or emissivity that amplify or dampen the energy imbalance and thus cause additional changes in temperatures. Feedbacks involving greenhouse gases and clouds affect emissivity; those involving aerosols, clouds, and land surface characteristics affect albedo. For example, water vapor, which increases in concentration with temperature and thereby decreases emissivity, gives rise to one important amplifying feedback—sea ice—which decreases in surface area with temperature and thereby increases albedo, giving rise to another (amplifying) feedback.

To a good approximation, the equilibrium change in global mean temperature is proportional to the forcing applied. This magnitude is captured by ECS. However, the equilibrium response to a forcing may take centuries to be realized. Within the context of SCC estimates, it is therefore necessary to understand the *transient response* both to the range of human-caused forcings and to a pulse of CO_2, the marginal impact of which the SCC estimates. One common metric of the transient response is the TCR, which is defined as the global mean surface temperature change at the time of CO_2 doubling for a benchmark forcing scenario, specifically, an increase in CO_2 concentrations at a rate of 1 percent per year: see Figure 3-2. Under such a scenario, the time of CO_2 doubling occurs at year 70, and the TCR estimate is generally made by averaging global mean surface temperature over years 61-80. Just as ECS is a general measure of the equilibrium response to any indefinitely sustained radiative forcing, TCR is a general measure of the transient response to a gradually increasing radiative forcing. Because

[14]For formal definitions of IPCC-class Earth system models, see Randall et al. (2007).

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the climate system does not instantaneously re-equilibrate in response to a forcing, TCR is always less than ECS.

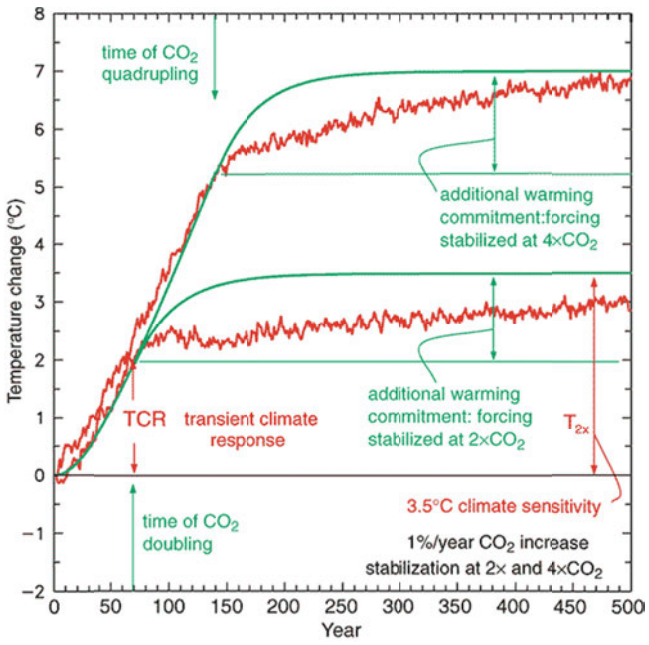

FIGURE 3-2 Global mean temperature response to selected scenarios.
NOTES: CO_2 concentrations increase at 1%/year and stabilize either at two times pre-Industrial CO_2 in year 70 or four times pre-Industrial CO_2 in year 140. Results from a coupled global climate model are shown in red; results from a one-box energy balance model are shown in green. TCR is measured as the average response of the system over years 61-80; ECS is measured after long-term equilibration at two-times CO_2.
SOURCE: Cubasch and Meehl (2001, Figure 9.1).

One source of the difference between ECS and TCR can be observed in a simple "one-box" energy balance model, in which all the heat taken up by the climate system as a result of a forcing is distributed evenly through the climate system as a whole. In such a simple model, the rate of increase in global mean temperature is directly proportional to the rate of heat uptake, with the proportionality set by the heat capacity of the climate system. In response to an instantaneous change in forcing, the temperature of a one-box climate will evolve toward its equilibrium response following an exponential decay with a single timescale. The timescale is directly proportional to both the heat capacity and ECS (see, e.g., Hansen et al., 1985). TCR therefore increases with ECS at a substantially less-than-linear rate: if the TCR is 2°C with an ECS of 3°C, then with the same heat capacity and an ECS of 6°C, TCR will be just 2.8°C.

In contrast to this simple one-box model, full-complexity climate models exhibit two dominant timescales of temperature change in response to a forcing: a fast timescale, associated with the response of the atmosphere and ocean mixed layer (the surface ~100 meters of the ocean), and a slow timescale, associated with the response of the deep ocean. The atmosphere and the mixed layer respond on a timescale of years to a change in forcing, while the deep ocean takes decades to centuries to warm, which slows down the overall response (see, e.g., Hansen et al., 1984; Held et al., 2010). In the scenario used to measure TCR, the mixed layer is nearly fully equilibrated with the applied forcing at the time TCR is assessed, but the deep ocean can be far from equilibrium. These two timescales can be adequately represented in a "two-box" simple

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climate model that distinguishes between the surface and the deep ocean (see, e.g., Gregory, 2000; Held et al., 2010).

The magnitude of ECS is uncertain due to a number of factors. First, the historical forcing, particularly the historical aerosol forcing, is uncertain (Myhre et al., 2013). Second, as noted, warming lags any radiative forcing, with the strong response implied by a high ECS that takes longer to realize than a weaker response associated with a low ECS. This lag makes it more challenging to distinguish values of ECS observationally. Third, the rate and magnitude of the heat flux from the mixed layer into the deep ocean are uncertain; accordingly, the same transient response can be produced either with a low ECS and faster ocean mixing, or a higher ECS and slower ocean mixing.

A fourth challenge has been identified in recent years: state-dependent feedbacks. Earth's outgoing longwave radiation depends not only on the average radiative temperature, but also on the spatial pattern of temperature, which changes as the planet warms. Accordingly, the rate of energy loss to space also depends on how far the system is from equilibrium (Held et al., 2010). As one example, cloud feedbacks can exhibit state dependence that is represented in atmosphere-ocean global circulation models and Earth system models but not in the simple climate models that specify a fixed ECS value.[15] State-dependent feedbacks can also be related to long-term changes in ocean circulations, land-surface conditions, ocean carbon uptake, and the cryosphere.

This state dependence gives rise to an *effective climate sensitivity*—not ECS, equilibrium climate sensitivity—that is constrained by observations of the recent energy budget constraint. Winton et al. (2010) found that, in 17 of the 22 global climate models participating in the Coupled Model Intercomparison Project Phase 3 (CMIP3),[16] the effective climate sensitivity at the time of CO_2 doubling was less than ECS. Estimates of ECS based on recent climate observations are actually estimates of effective climate sensitivity and may therefore significantly underestimate the true equilibrium response. Unfortunately, there are no clear observational constraints on the relationship between effective and equilibrium climate sensitivity, but this distinction does explain why different approaches to estimating ECS can provide very different ranges (depending on whether or not they assume, implicitly, a specific relationship between the two sensitivity parameters). Although paleoclimatic observations can provide additional constraints on ECS, they are hampered by uncertainties in past forcing and climate data.

Because of these four challenges and the associated uncertainties, the uncertainty in ECS is quite large, with a positively skewed tail of possible high values. A major source of this uncertainty can be seen from the simple treatment of Roe and Baker (2007), whose analysis gave rise to the form of the probability distribution for ECS currently used in the U.S. government's SCC analysis; see Figure 3-3. In the absence of any climate feedbacks other than the "Planck feedback" (by which changes in surface temperature stabilize radiative temperature), ECS would be about 1.2°C (e.g., Hansen et al., 1981). However, other feedbacks come into play. Using f to indicate the total magnitude of these feedbacks on temperature change and ECS_0 the value of ECS including only the Planck feedback gives $ECS = \frac{ECS_0}{1-f}$. The different processes contributing to f add linearly. The positive skewness of the ECS distribution arises from those values of f that approach 1. The Roe and Baker (2007) distributional form for ECS arises simply by assuming

[15]For formal definitions of atmospheric-ocean global circulation models, see Randall et al. (2007).

[16]CMIP provides a standard experimental protocol for IPCC-class global circulation models, and provides community-based support for climate model diagnosis, validation, intercomparison, documentation, and data access.

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that *f* has a truncated normal distribution; the associated long right tail would also arise from many other symmetric distributions of *f*.

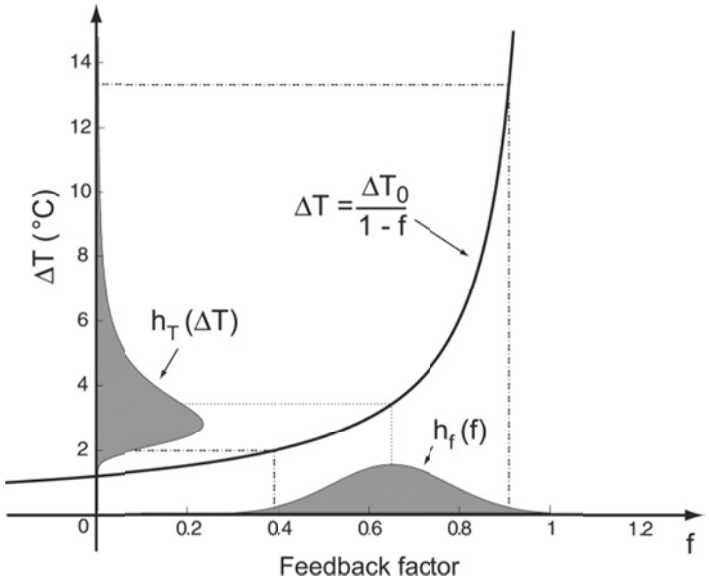

FIGURE 3-3 The relationship between ECS and a feedback factor.
NOTES: The feedback factor is given by $ECS = \frac{ECS_0}{1-f}$ (solid curve). The distributional form for ECS, plotted on the *y* axis, arises from a truncated normal distribution for the feedback factor, plotted on the x axis.
SOURCE: Roe and Baker (2007, Figure 1). Reprinted with permission from AAAS.

Because larger equilibrium responses caused by higher ECS take longer to realize, TCR is less skewed than ECS (Baker and Roe, 2009). Moreover, whereas ECS may take centuries of data to constrain, the transient response by definition plays out over timescales of less than a century; it can therefore be better constrained by observations (e.g., Gregory and Forster, 2008; Otto et al., 2013a). Box 3-2 describes how IPCC statements regarding the ECS and TCR have evolved from the Fourth to the Fifth Assessment Report (AR4 and AR5), as well as research since the AR5.

ECS and TCR by definition exclude feedbacks—such as those involving dust, vegetation, or land ice—that have not traditionally been represented in coupled climate models. If these other feedbacks are predominantly positive, for the timescales on which they are operative, measures such as ECS and TCR may understate the expected warming. Indeed, geological data suggest that omitted feedbacks may significantly amplify warming relative to that expected based on ECS alone (e.g., PALAEOSENS Project, 2012). Attempts to include relevant processes in Earth system models are a major area of active research. Some simple climate models also attempt to incorporate feedbacks traditionally absent from coupled climate models.

Because the experiments to assess ECS and TCR prescribe only CO_2 concentrations, these metrics also exclude carbon cycle feedbacks. The next section highlights the important role of land and ocean carbon cycle feedbacks in giving rise to CO_2 warming processes operating over millennia.

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BOX 3-2
IPCC Estimates of ECS and TCR

The IPCC AR4 concluded

> [on the basis of] observed climate change and the strength of known feedbacks simulated in GCMs [global circulation models] … that the global mean equilibrium warming for doubling CO_2, or "equilibrium climate sensitivity," is likely to lie in the range 2°C to 4.5°C, with a most likely value of about 3°C. Equilibrium climate sensitivity is very likely larger than 1.5°C.

Following the standard interpretation of IPCC likelihood statements (see Table 3-1), the Interagency Working Group on the Social Cost of Carbon (IWG) (Interagency Working Group on the Social Cost of Carbon, 2010) calibrated a Roe and Baker (2007) distribution such that there was a 67 percent probability of a value between 2°C and 4.5°C. Although the IPCC does not detail a specific interpretation for the phrase "most likely," the IWG interpreted it as indicating the median of the calibrated distribution.

The IPCC AR5 revised this assessment of ECS:

> ECS is likely in the range 1.5°C to 4.5°C with high confidence. ECS is positive, extremely unlikely less than 1°C (high confidence), and very unlikely greater than 6°C (medium confidence).

Two changes between AR4 and AR5 are noteworthy. First, AR5 provided no "most likely" value. Second, AR5 reduced the lower bound of the likely range to 1.5 ºC, which was also the value used in the First, Second, and Third Assessment Reports, largely in response to a set of studies based on comparisons of climate observations, extended into the most recent decades, with simple climate models. Subsequent work (Andrews et al., 2012; Gregory et al., 2015; Knutti et al., 2015) has noted that many of these approaches neglected the difference between effective climate sensitivity and ECS, and so these values may underestimate ECS.

Regarding TCR, whereas AR4 concluded that TCR was "very likely above 1°C" and "very likely below 3°C" (i.e., an 80% probability of being between 1°C and 3°C),[a] the AR5 concluded

> with high confidence that the TCR is likely in the range 1°C to 2.5°C, close to the estimated 5 to 95% range of CMIP5 [Coupled Model Intercomparison Project Phase 5] (1.2°C to 2.4°C), is positive and extremely unlikely greater than 3°C.

The AR5 thus reduced the probability of TCR values greater than 3°C from 10 percent to 5 percent. The estimate was based on the good agreement between the range of estimates from observationally constrained simple climate models and the CMIP5 range. One major driver of this change in observational estimates was the downward revision of the negative aerosol forcing. This revision reduced the probability that the historically observed warming was a response to a very low total forcing, which thereby reduced the probability of a correspondingly high TCR.

The consensus on TCR appears to have been maintained since the publication of the AR5: for example, despite being critical of the IPCC's estimates of ECS, Lewis and

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Curry (2014) arrive at a 5 to 95 percent confidence interval for TCR of 0.9°C-2.5°C, almost identical to the IPCC AR5 "likely" range. (IPCC statements on indirectly observable quantities are typically given at one level lower confidence than the formal evidence suggests, to account for unknown structural uncertainties). The only dissent is from Shindell (2014), who argues that TCR estimates based on recent observations may have been biased low by the assumption that spatially homogenous and inhomogenous forcings have identical efficacy. The attribution approach of Gillett et al. (2013), however, does not make this assumption of equal efficacies, and it arrives at a 5 to 95 percent range for TCR of 0.9°C-2.3°C. In contrast to TCR, ECS remains much more contested.

In summary, the change in the ECS distribution between AR4 and AR5 is small relative to the remaining uncertainties in this and other parameters that determine the SCC. This change arose primarily from assumptions about the multicentury adjustment of the climate system to a constant forcing that remain contested in the literature since the AR5. Neglected processes primarily affect the upper bound on ECS, continuing to support a positively skewed distributional form for this parameter such as that used by Roe and Baker (2007). The AR4 did not give a likely range for TCR that is directly comparable to that in the AR5, but the AR5 did reduce the probability of TCR values greater than 3°C from 10 to 5 percent, reflecting greater confidence and consensus on the upper bound for this parameter.

TABLE 3-1 AR5: Likelihood Scale

Term*	**Likelihood of the Outcome**
Virtually certain	99-100% probability
Very likely	90-100% probability
Likely	66-100% probability
About as likely as not	33-66% probability
Unlikely	0-33% probability
Very unlikely	0-10% probability
Exceptionally unlikely	0-1% probability

*Additional terms that were used in limited circumstances in the AR4 (*extremely likely,* 95-100% probability; *more likely that not*, >50-100% probability; and *extremely unlikely,* 0-5% probability) may also be used in the AR5 when appropriate.
SOURCE**:** Mastrandrea et al. (2010, Table 1). Reprinted with permission from Macmillan Publishers Ltd.

[a]The terms "most likely value," "likely," "very likely," and "zero probability" are the keys to translating the uncertainty information into probability distributions representing the IPCC assessments; see Table 3-1 for more details.

THE CARBON CYCLE AND TCRE

The discussion so far has focused on the response of global mean surface temperature to a particular level or time path of greenhouse gas concentrations in the atmosphere. To fully

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understand the response of temperature to CO_2 emissions, one must also understand how CO_2 emissions translate into atmospheric concentrations, how atmospheric CO_2 concentrations translate into forcing, and how forcing translates into temperature change.

For CO_2, the relationship between concentrations and forcing is fairly straightforward. To a good approximation, the radiative forcing of CO_2 is logarithmic in concentration (Arrhenius, 1896). This logarithmic relationship means that, for higher CO_2 concentrations, further incremental increases in the CO_2 concentration yields a diminishing increase in the CO_2 forcing.

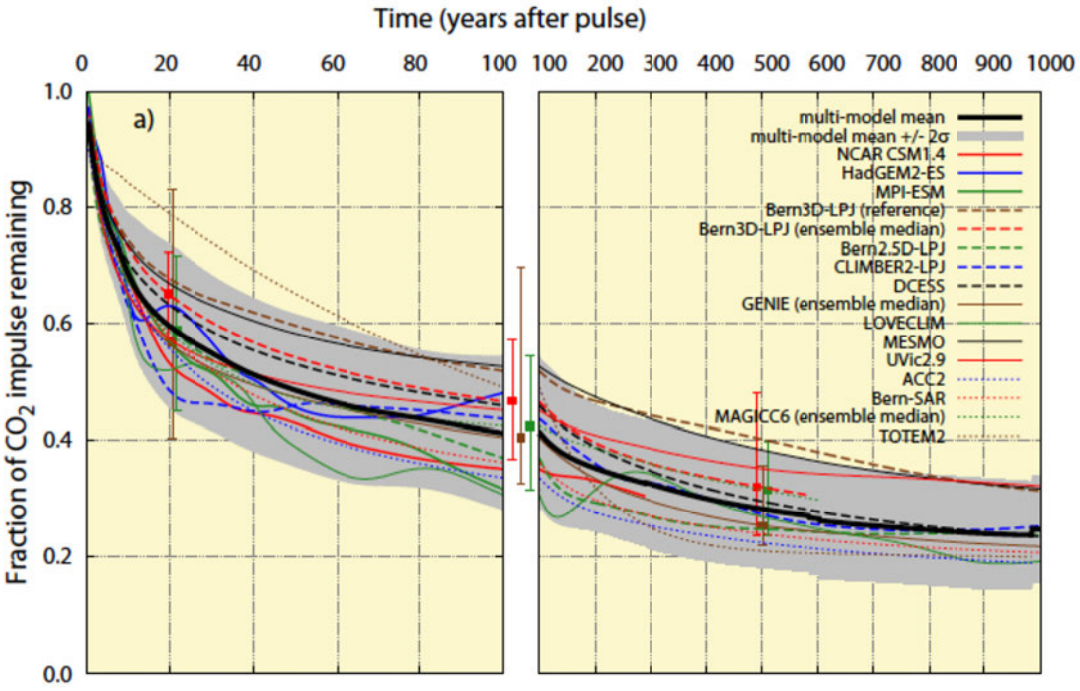

FIGURE 3-4 The perturbation to atmospheric CO_2 concentrations in response to an emission pulse.
NOTES: The figure uses an emission pulse of 100 billion tons of carbon (367 Gt CO_2) added to an atmospheric background concentration of 389 ppm, expressed as the fraction of the initial pulse remaining in the atmosphere for a range of Earth system models (thick solid lines), intermediate complexity (dashed and thin solid lines), and simple climate models (dotted lines). A value of 1.0 corresponds to an increase in CO_2 concentrations of 47.2 ppm. The multimodel mean, computed by giving each available model equal weight, and the corresponding ± two standard deviation range is shown by the black solid line and the grey shading.
SOURCE: Joos et al. (2013, Figure 1a). with caption reproduced, slightly edited for clarity.

The relationship between emissions and concentrations is more complicated, as it involves the full carbon cycle, including some crucial feedbacks between concentrations, temperatures, and fluxes. When a ton of CO_2 is emitted into the atmosphere, a small fraction, about 20 percent, is removed within the first 5 years by the land biosphere and by the ocean, so that about 80 percent is still airborne; see Figure 3-4. After 20 years about 40 percent of the emitted ton has been thus taken up, and about 60 percent is still airborne; after 100 years, about 60 percent has been removed from the atmosphere and about 40 percent is still airborne. Over

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the course of the following centuries, the oceans become the major repository of the added carbon.

There are two major bottlenecks in the ocean uptake of CO_2. The first is across the air-sea interface: the CO_2 partial pressure in the surface oceans, i.e., the pressure pushing CO_2 back into the atmosphere, increases with carbon uptake and the accompanying decrease in pH. The second is below the mixed layer, where carbon is mixed into the deeper ocean on multicentennial timescales. Yet even on multicentennial timescales, the carbonate chemistry and the ocean volume dictate that oceans cannot absorb 100 percent of the added carbon, and about 20 percent will remain in the atmosphere after a millennium (Broecker et al., 1979). The ultimate carbon sink occurs through weathering reactions and sedimentation on the ocean floor, which takes place on time scales of hundreds of thousands of years (Archer et al., 2009; Ciais et al., 2013).

The effect of climate change on the carbon cycle gives rise to an amplifying feedback between atmospheric CO_2 and temperature. Warming accelerates decomposition on land faster than CO_2 fertilization increases the rate of photosynthesis, weakening the land-carbon sink (Friedlingstein et al., 2006). Warming also further stratifies the oceans, slowing the penetration of heat and carbon to the deep ocean. The decreasing pH and the warmer temperatures (decreasing solubility) also shift the equilibrium of the carbonic acid/bicarbonate buffer and reduce the ocean absorption of CO_2 from the atmosphere (Archer and Brokin, 2008).

The weakening of the land and ocean carbon sinks as a result of warming increases the atmospheric residence time of CO_2 (Jones et al., 2013), giving rise to a convex relationship between cumulative carbon emissions and atmospheric CO_2 concentrations. When the convex relationship between emissions and concentrations is combined with the concave relationship between concentrations and forcing, the result is a coincidental cancellation that results in a nearly linear relationship between cumulative CO_2 emissions and radiative forcing.

The global mean surface temperature also responds approximately linearly to a continually increasing effective radiative forcing (Flato et al., 2013). Hence, provided the forcing is increasing slowly relative to the response time of the ocean mixed layer (Held et al., 2010), there is a linear relationship between the forcing at any given time and the resulting warming at that time. (Note that this warming is generally not in equilibrium with the forcing.) When the nearly linear relationship between cumulative CO_2 emissions and forcing is combined with the linear relationship between forcing and temperature, the result is a simple, nearly linear relationship between cumulative carbon emissions and the resulting warming (Goodwin et al., 2015).

Another cancellation, between the gradual decline of atmospheric CO_2 and the slow approach of the ocean to thermal equilibrium, causes temperatures to remain nearly constant for centuries following a complete cessation of CO_2 emissions (Matthews and Caldeira, 2008; Solomon et al., 2009). This cancellation arises because both of these processes operate on similar timescales set by the mixing of carbon and heat into the deep ocean; see Figure 3-5.

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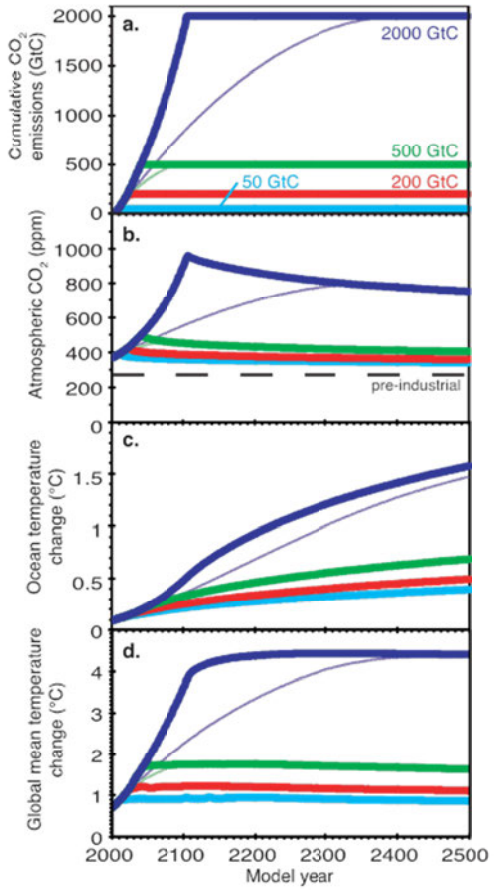

FIGURE 3-5 The response of an Earth system model of intermediate complexity to different levels of cumulative emissions

NOTES: The four responses reveal the long-lived nature of the CO_2-forced warming: (a) scenarios of cumulative CO_2 emissions, (b) resulting atmospheric CO_2 concentrations, (c) associated change in mean ocean temperature, and (d) associated change in global mean surface temperature. The combination of declining atmospheric CO_2 and increasing mean ocean temperature gives rise to a nearly stable global mean surface temperature after the cessation of emissions.

SOURCE: Matthews and Caldeira (2008, Figure 2). Reprinted with permission.

A series of papers published in the late 2000s (e.g., Allen et al., 2009; Matthews et al., 2009; Meinshausen et al., 2009; Zickfeld et al., 2009) pointed out that, as a consequence of the longevity of the warming associated with CO_2 emissions, temperatures in any given year were largely determined by cumulative CO_2 emissions up to that time. Gillett et al. (2013) updated the carbon budget estimates in these early papers to take into account updated estimates of the strength of anthropogenic forcing and the evolution of global temperatures since 2000; see Figure 3-6. In the AR5, Collins et al. (2013, p. 1033) concluded that "the principal driver of long-term warming is total emissions of CO_2 and the two quantities are approximately linearly related."

The approximately linear relationship between cumulative CO_2 emissions and the warming it causes simplifies the estimation of the climate response to CO_2 emissions. It means

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that the global mean temperature change induced by CO_2 can be largely summarized by a single parameter, the TCRE.

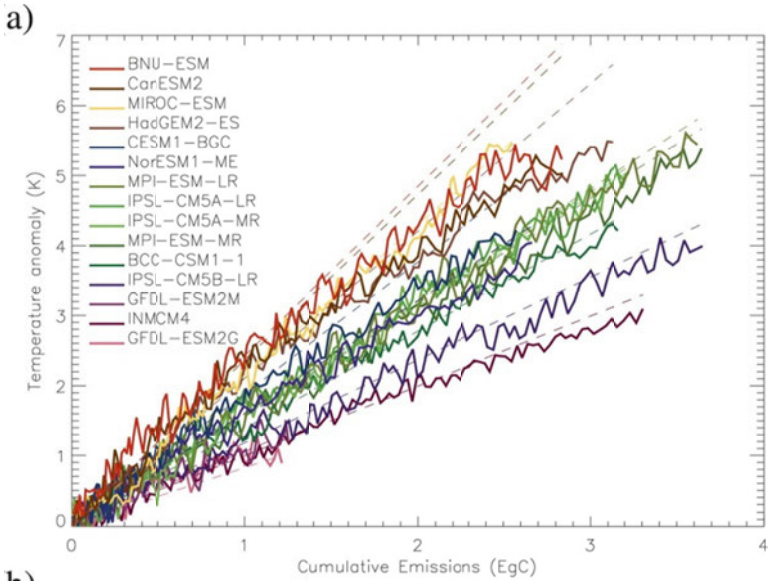

FIGURE 3-6 Temperature anomaly plotted against cumulative CO_2 emissions.
NOTES: The data are from the 1 percent/year CO_2 increase experiment for Earth system models participating in CMIP5. Dashed curves are lines with constant slope. The data show approximate linearity of warming in cumulative CO_2 emissions up to 1.5-2.0 exagrams of carbon (EgC) cumulative carbon emissions.
SOURCE: Gillett et al. (2013, Figure 1a). ©American Meteorological Society. Used with permission.

Herrington and Zickfeld (2014) show that the TCRE is a robust measure of the climate response, regardless of the timescale of injection for realistic emission scenarios, although the response takes up to a century to stabilize for very large instantaneous CO_2 pulses. The AR5 (Collins et al., 2013) suggested the TCRE was approximately constant for cumulative injections up to 2 teratons of carbon (Tt C), although Herrington and Zickfeld (2014), consistent with Allen et al. (2009), suggest it declines slightly for cumulative emissions in excess of 1.5 Tt C. Gillett et al. (2013), with a broader range of models, find evidence for a smaller decline, with any departure from linearity being small relative to uncertainty in the response (Figure 3-6).

TCRE is determined by two quantities. First, TCRE depends on the cumulative airborne fraction at the time of CO_2 doubling (or, approximately equivalently, after a cumulative release of 1 Tt C in the form of CO_2) following a gradual increase in concentrations over a multidecade period. This fraction is between 0.47 and 0.67 in current climate models (Gillett et al., 2013). Second, TCRE depends on the warming at the time of CO_2 doubling following a gradual increase in concentrations, or the TCR. Most of the uncertainty in TCRE arises from the uncertainty in TCR, leading to an AR5 consensus "likely" range, accounting for both model and observational lines of evidence, of 0.8°C-2.5°C/Tt C, which is equivalent to 0.2°C-0.7°C/1000 Gt CO_2 (Collins et al., 2013).

While uncertainty in ECS gives rise to uncertainty in the additional warming that would occur over centuries if atmospheric CO_2 concentrations were stabilized, current comprehensive Earth system models indicate that uncertainty in ECS is largely irrelevant to TCRE and hence to the temperature response to a pulse injection of CO_2. This irrelevancy occurs because, after a

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cessation of emissions, atmospheric CO_2 concentrations do not stabilize, but rather fall just fast enough that the "recalcitrant" warming reflected by ECS (Held et al., 2010) never materializes (Matthews and Caldeira, 2008; Solomon et al., 2009).

TEMPERATURE EFFECT OF A CO_2 PULSE AND THE INITIAL PULSE-ADJUSTMENT TIME

The constancy of the TCRE indicates that the multidecade-to-century-timescale climate response to any CO_2 injection can be accurately approximated by a constant temperature increase set by the total cumulative amount of carbon injected and the TCRE. A key remaining aspect of the response that is relevant to the SCC is the form and speed of the adjustment immediately following a pulse injection of carbon. The most comprehensive study to date to address this question was the multimodel comparison of Joos et al. (2013). They examined the impact of a 100 Gt C pulse injection of CO_2, relative to a baseline scenario in which CO_2 concentrations were held constant at 389 ppm following a historical transition to that point in a range of simple climate models and Earth system models of both intermediate and full complexity.

Results are shown in Figure 3-7, with solid lines corresponding to full-complexity models, dashed lines to intermediate-complexity models, and dotted lines to simple models. The full-complexity models display large fluctuations that can be understood entirely as random internal variability, given the small size of the temperature response even to a pulse of this magnitude (comparable to about a decade of CO_2 emissions at 2015 levels). Strikingly, all models, including the most complex, adjust relatively rapidly, with temperatures rising to about 0.2°C within 10 to 20 years of the pulse and then remaining constant for the remainder of a century. A slight decline is observed over the millennium (right panel).

In modeling the carbon cycle response to this pulse injection, Joos et al. (2013) find a very rapid IPT of only a few years and very slow subsequent adjustments on multidecade and multicentury timescales. The short IPT in Figure 3-7 is primarily set by the ocean mixed-layer thermal response time, which is known, on physical grounds, to be of the order of a decade or less (Held et al., 2010). The adjustment to a pulse injection of CO_2 can thus be adequately characterized by an initial adjustment within a timeframe of 4 years to a decade, followed by stable temperatures for a century and slow decline thereafter.

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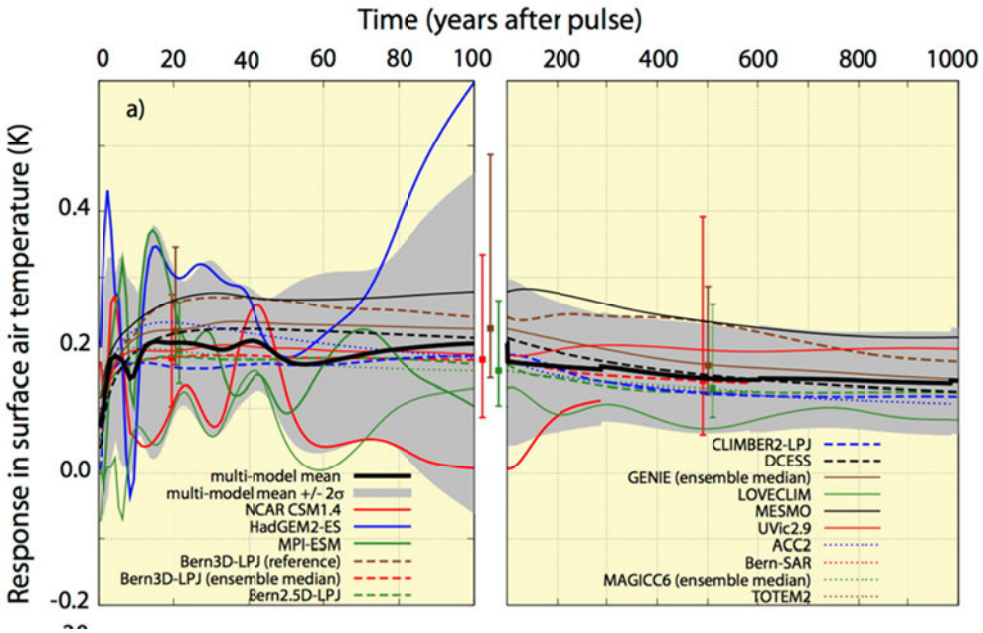

FIGURE 3-7 Response of global mean temperature to a 100 GtC pulse emission of CO_2.
NOTES: The data are from the same experiments shown in Figure 3-4 (above), with temperature change expressed relative to a stable baseline CO_2 concentration of 389 ppm. Participating full-complexity Earth system models (solid curves) have a high degree of variability. The Earth system models of intermediate complexity and simple climate models are shown with dashed and dotted lines, respectively.
SOURCE: Joos et al. (2013, Figure 2a).

Gasser and Caldeira (2014) use a simple climate model that combines a carbon cycle model fit to the results of Joos et al. (2013) with a simple model of the thermal response (similar to that of Held et al. [2010]) to obtain the temperature response to a pulse CO_2 emission. They find that temperature peaks between 7 and 31 years after the emissions (90% probability range, median of 10 years). While their simple climate model suggests a modest decline in temperatures after the peak, this finding arises from the lack of explicit climate carbon cycle feedback in their composite model, and it is not evident in the more complex models on which their composite model is based (Joos et al., 2013). In order for a simple climate model to generate the near linearity of warming in cumulative carbon emissions, as well as the longevity of the associated warming, it is necessary to use either a carbon cycle model that includes the effects of pH and warming on CO_2 solubility (e.g., Glotter et al., 2014), the impact of warming on land carbon sinks (e.g., Friedlingstein et al., 2006; Allen et al., 2009), or a direct approximation of the linearity in cumulative carbon emissions (e.g., Kopp and Mignone, 2013).

On the basis of the current evidence, the committee concludes that the likely approximation for characterizing the response over annual-to-centennial timescales of the climate system to a pulse of emissions of CO_2 is a simple rapid adjustment (4 years to one decade) to the level of warming indicated by the TCRE, with modest decline for at least a

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century thereafter.[17] As noted in Chapter 4, experiments like those of Joos et al. (2013) can be used to evaluate the SCC-IAM climate modeling.

IMPLICATIONS FOR ESTIMATION OF THE SCC

To estimate the SCC, it is necessary to project both the physical climate changes associated with a baseline emissions trajectory and the effect of a small, additional pulse of CO_2 emitted on top of that baseline trajectory.[18]

While the TCRE and IPT are relevant for capturing the response to cumulative or pulse emissions of CO_2, other measures are relevant for computing a baseline climate, which may be influenced by CO_2 emissions high enough (greater than approximately 1.5 Tt C) that the TCRE is not constant and is also affected by non-CO_2 forcers. The relative importance of TCR and ECS in characterizing the SCC depends on the relative proportion of net present value damages that occur in roughly the first century of emissions. By construction, TCR is a much better predictor than ECS of the climate response on timescales of less than a century.[19] As a result, Otto et al. (2013b) found that in their simple model for estimating the SCC, for a moderate emissions trajectory[20] and a quadratic damage function, reducing uncertainty in TCR leads to a greater reduction in SCC uncertainty than reducing uncertainty in ECS, provided that the discount rate is at least about 1 percent higher than the growth rate of consumption; see Figure 3-8. For highly convex damage functions and discount rates sufficiently close to the consumption growth rate, Otto et al. (2013b) found that learning about ECS leads to a greater reduction in SCC uncertainty than learning about TCR.

Factors that increase the fraction of the SCC due to damages after the first century, and thus increase the importance of ECS in comparison with TCR, include an increase in baseline temperatures as well as economic factors. In climate damage functions, such as those used in the SCC-IAMs, faster economic growth for a given discount rate or a lower discount rate for given economic growth will both tend to increase the importance of the more distant future and thus the ECS. In this context, it is worth noting that the IWG analysis holds the discount rate constant but assumes a decrease in growth rates after 2100, thereby increasing the importance of TCR over ECS relative to a constant growth-rate scenario or one in which the discount rate declines when the growth rate declines. In the 21st century, the average economic growth rate in the IWG scenarios ranges between 2.0 and 2.4 percent per year, while over 2100-2300 it ranges between

[17]Joos et al. (2013) found that the magnitude of the temperature response to a pulse injection (0.20 ± 0.12°C/100 Gt C) is comparable to—though slightly higher than—the AR5 range for TCRE, although their analysis was based on a subset of the models used by the AR5 for its statement on TCRE. In single-model studies, Herrington and Zickfeld (2014) and Zickfeld and Herrington (2015) found that TCRE falls with both the speed and magnitude of a pulse injection, while Krasting et al. (2014) found that TCRE is larger for both small (~2 Gt C/yr) and large (~20 Gt C/yr) rates of emissions than for current rates of emission (~10 Gt C/yr).

[18]This requirement can be seen in a simple, typical model: If damages are equal to economic output times a power function of temperature, $D(T) = aT^b$, then the change in damages associated with an emission pulse that shifts temperature from T to $T + \Delta T$ at time t is proportional to $T(t)^{b-1}\,\Delta T(t)$. Thus, the physical climate model underlying the SCC calculation must provide reasonable projections for both $T(t)$ and $\Delta T(t)$; that is, both the baseline temperature response and the long-term temperature changes due to an emissions pulse. The economic valuation also depends on the relative sizes of the growth rate of consumption and the rate at which damages are discounted.

[19]This finding can be seen from the 1 percent/year CO_2 concentration growth scenario used to define TCR, in which ECS provides no additional information about the temperature response until after year 70.

[20]Otto et al. used representative concentration pathway (RCP) 4.5. RCPs are greenhouse gas concentration trajectories used by the IPCC in AR5 (van Vuuren et al., 2011).

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0.5 and 1.9 percent per year.[21] In the context of the Otto et al. (2013b) results, the low growth rates after 2100 suggest that TCR will be a more important determinant than ECS of the SCC calculated using the IWG methodology, even at the lowest discount rate used (2.5% per year).

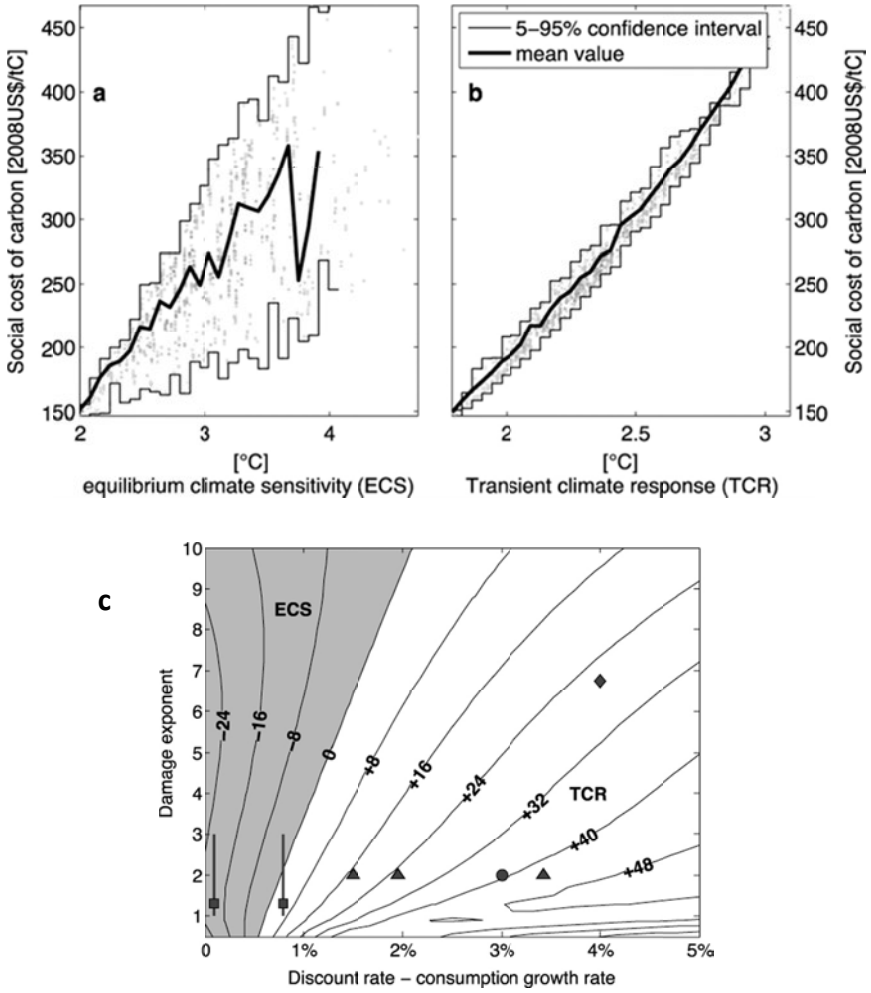

FIGURE 3-8 Impact of information on climate system properties for the SCC.
NOTES: Panel (a) shows the Otto et al. estimates of the SCC allowing for uncertainty in climate and carbon cycle properties plotted as a function of ECS, with the black line showing mean estimate and the shaded region showing 5 to 95 percent range and dots showing individual estimates, all assuming a discount rate minus consumption growth rate of 3 percent and a quadratic damage function [the round dot in panel (c)]. The broad vertical range indicates that learning the value of the ECS does not substantially reduce uncertainty in SCC except at very low values of ECS. Panel (b) shows the Otto et al. estimates of the SCC similarly plotted as a function of TCR. The narrow vertical range indicates that learning the value of TCR substantially reduces uncertainty in SCC. Panel (c) shows the relative benefits of learning the value of ECS or TCR as a function of the discount rate and curvature of the damage function, with high values of the damage exponent corresponding to strongly convex damage functions.

[21]The IWG used aggregate output (GDP) as a socioeconomic input, not macroeconomic aggregate consumption, which is a component of aggregate output. For this purpose, it is reasonable to think of consumption growth as proportional to output growth.

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White/grey regions indicate parameter combinations for which learning TCR is more or less informative than learning ECS.
SOURCE: Adapted from Otto et al. (2013b, Figures 2 and 3). Reprinted with permission.

TCRE is the crucial parameter determining the contribution of the physical climate system response to the SCC, since it determines the magnitude of multidecade-to-century timescale warming resulting from a pulse injection of CO_2. TCRE is primarily determined by TCR, not ECS. Revisions to ECS are therefore relevant to SCC estimation, principally through their possible implications for baseline warming after a century or more. TCR and IPT determine temperature changes over shorter time periods, including the response to a small pulse emission of CO_2. Hence, the revision of the "likely" range of ECS from 2.0°C to 4.5°C in the AR4 to 1.5°C to 4.5°C in the AR5 should have a minimal impact on estimates of the SCC.

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4
Climate System Modeling in the SCC-IAMs and the Role of ECS

This chapter provides information on how the social cost of carbon integrated assessment models (SCC-IAMs) currently model the climate system and how equilibrium climate sensitivity (ECS) is incorporated into each SCC-IAM. In addition, the committee outlines tests that could be applied to the simple climate models used to generate the SCC, to determine whether the central projections of these models agree with those of more comprehensive Earth system models.

REPRESENTATION OF THE CLIMATE SYSTEM IN THE SCC-IAMS

The three SCC-IAMs used by the Interagency Working Group on the Social Cost of Carbon (IWG) are the Dynamic Integrated Climate-Economy Model (DICE), the Policy Analysis of the Greenhouse Effect (PAGE) model, and the Climate Framework for Uncertainty, Negotiation and Distribution (FUND) model. The climate system in each of them consists of three major elements: calculation of the path of atmospheric concentrations of CO_2 from greenhouse gas emissions, translation of concentrations to radiative forcing, and the response of global mean surface temperature to changes in radiative forcing. However, the specification (structural and parametric) of each element varies across the models; see Table 4-1.[22] Significant differences exist in the structure of the carbon cycle, radiative forcing per doubling of CO_2 concentrations, the derivation of global mean temperature from forcing, the coverage of and interactions with non-CO_2 concentrations and forcing, and climate feedback representation. Differences in model time steps are also meaningful, as they have an impact on the climate system dynamics in the models.

[22]For additional discussion and details, see Rose et al. (2014). This is one of the few systematic reviews and comparisons of the SCC-IAMs; it is used in this chapter to introduce the differences between the three IAMs.

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TABLE 4-1 Climate Modeling Structural Characteristics for the SCC-IAMs.

Characteristic	DICE	FUND	PAGE
Atmospheric Concentrations			
CO_2	3-box carbon cycle	5-box carbon cycle	1-box carbon cycle
Non-CO_2 Kyoto	Not modeled	CH_4, N_2O, SF_6	Not modeled
Non-CO_2 non-Kyoto	Not modeled	SO_2	SO_2
Radiative forcing			
CO_2 (per doubling)	3.80 W/m^2	3.71 W/m^2	3.81 W/m^2
Non-CO_2 Kyoto	Exogenous	CH_4, N_2O, SF_6	Exogenous
Non-CO_2 non-Kyoto	Exogenous	SO_2	SO_2, non-SO_2 exogenous
Global Mean Surface Temperature	Rate temperature moves toward equilibrium is a function of climate sensitivity & surface temperature modulated by ocean heat uptake	Rate temperature moves towards equilibrium is a function of climate sensitivity	Function of global mean land and ocean temperatures
Ocean Temperatures	2-box (upper and deep ocean)	1-box	1-box
Regional Temperatures	n/a	Implicit with regional damage parameters calibrated to regional temperatures downscaled based on a linear pattern-scale average of 14 global circulation models	Explicit with regional temperatures downscaled according to latitude and landmass adjustment
Global Mean Sea Level Rise	Components (thermal expansion, glacier and small ice cap melt, GIS melt, WAIS melt) computed as functions of temperature and lagged temperature	Computed as a function of temperature and lagged temperature	Computed as a function of temperature and lagged temperature
Time Steps	10-year	1-year	Variable (10-year 2000-2060, 20-year 2060-2100, 100-year 2100-2300)
Implementation of CO_2 Pulse in Year t	Pulse spread equally over the decade straddling year t	Pulse spread equally over the decade from year t forward	Pulse distributed evenly over the two decades preceding and subsequent to year t
Model-Specific Uncertainties Other than ECS (number of parameters; distribution types)	None	11 – normal, truncated normal, triangular, and gamma distributions	10 – triangular distributions

NOTE: See text for discussion.
SOURCE: Modified from Rose et al. (2014, Table 5-1).

We note that the IWG has modified the SCC climate modeling components of each model. In DICE, the IWG changed the time steps and averaged CO_2 concentrations across time periods. In PAGE, the IWG modified the time-step scheme, the modeling of non-CO_2 emissions and forcing, and the ECD modeling approach.[23] The IWG also standardized the distribution of the ECS used in each model.

[23]Non-CO_2 forcing is also captured in the models in significantly different ways, with FUND deriving non-CO_2 concentrations and forcing, and DICE and PAGE using forcing assumptions developed from sources outside the models. Also, the models vary in their coverage of non-CO_2 forcing, with all three different in total forcing coverage: FUND covers the fewest of the broad set of non-CO_2 forcing constituents, including long-lived and short-lived gases and aerosols.

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Differences in the derivation of temperature from forcing are also noteworthy with regard to the IWG's standardization of the ECS distribution. In DICE and FUND, the rate at which temperature moves toward equilibrium is affected by ECS. In these two models, a higher ECS corresponds to a slower convergence toward the equilibrium temperature (i.e., a longer period of time, or lag, before reaching the equilibrium temperature). Varying the adjustment speed (or lag) with the climate sensitivity parameter ensures some consistency with historical observations. Importantly, it also moderates the effect of changing the ECS parameter, in particular on transient climate response (TCR). The temperature response in PAGE, which does not include this temperature lag adjustment, is more sensitive to alternative ECS values. DICE, which uses a two-box ocean model, also includes a moderating feedback from the ocean, with deep ocean temperatures moderating the rate at which surface temperature increases. Finally, FUND and PAGE include an explicit climate carbon cycle feedback that accelerates global warming at higher temperatures. The feedback represents global physical mechanisms (e.g., terrestrial drying and vegetation dieback) that release additional emissions into the atmosphere as the planet warms and in so doing increase the rate of global warming.

Global mean surface temperature is the primary climate variable driving the climate damage estimates in all three of the models. In addition, the rate of temperature change and CO_2 concentrations are also used in some FUND damage categories. Other climate variables such as precipitation, weather variability, and extreme weather events are not modeled explicitly, although these effects may be captured implicitly in the calibration of damage response to global mean temperature change.

Global mean surface temperature drives projected global average mean sea level rise in all three models and projected regional average temperatures in FUND and PAGE, which in turn drive damages. However, differences in the downscaling approach lead to differences in projected regional temperatures across FUND and PAGE for the same global mean surface temperature, with PAGE projecting greater warming for many regions. The sea level rise calculations also vary across models, with projected sea level rise in 2100 varying by a factor of two across models for the same projected levels of warming (Rose et al., 2014).

It is worth noting that in the IWG's SCC methodology, climate system parametric uncertainty is accounted for in all three models, but to different degrees. All models consider ECS parameter uncertainty through a probability distribution for ECS calibrated to the likelihoods of the Intergovernmental Panel on Climate Change (IPCC, 2007), with a distributional form adopted from Roe and Baker (2007). In addition, FUND and PAGE incorporate additional climate-model-specific parametric uncertainties.

In the DICE model, the climate model component is represented using a two-layer ocean (see Chapter 3, "Determining Temperature Changes in Response to CO_2 Emissions"). In FUND and PAGE, the temperature response is characterized by a single exponential decay. In DICE and FUND, the timescale of the temperature response varies with the ECS.[24]

Figure 4-1 shows that the models used in the IWG analysis vary by decades in the time taken to reach peak warming associated with a pulse emission. This contrasts with the time of about one decade indicated by the models participating in the Joos et al. (2013) intercomparison (see Figure 3-7 in Chapter 3). However, direct comparison between the two sets of results is complicated by differences in their experimental design and baselines.

[24]In the standard version of the 2009 PAGE model, the timescale and TCR are parameters, and ECS is a function of them. In the IWG version of PAGE, timescale is invariant to the ECS parameter, and TCR is not an explicit parameter.

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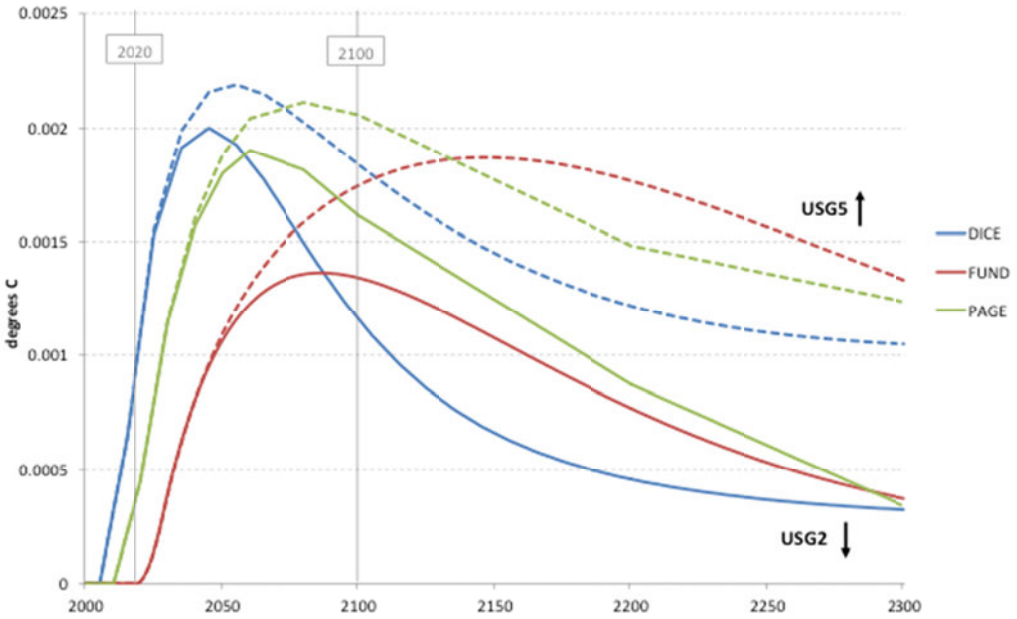

FIGURE 4-1 Incremental annual global mean temperature responses to 2300 from the climate components of the SCC-IAMs.
NOTES: The responses are for a 1 GtC emissions pulse in 2020 with higher (USG2, solid) and lower (USG5, dashed) reference emissions. USG2 and USG5 are the socioeconomic scenarios that produce the highest and lowest fossil fuel and industrial CO_2 emission projections respectively in the IWG methodology. The lower baseline USG5 results (dashed) are more comparable to those from the Joos et al. (2013) experiment shown in Figure 3-7 (in Chapter 3), which performed a pulse experiment on top of a 389 ppm CO_2 baseline. Note that the Joos et al. (2013) experiment is not fully comparable.
SOURCE: Developed from Rose et al. (2014). Reprinted with permission.

Harmonization of Emissions Inputs and the ECS by the IWG

The IWG methodology harmonizes assumptions across the three models along three dimensions: socioeconomic and emissions projections (five cases), ECS uncertainty (using a common assumed ECS probability distribution), and discount rates (three alternative constant values). Given their climate modeling and projection implications, this section discusses the socioeconomic/emissions and ECS harmonizations. Note that the IWG socioeconomic and emissions and ECS modeling approaches were developed for the IWG's 2010 SCC estimates (Interagency Working Group on the Social Cost of Carbon, 2010) and retained for the 2013 and 2015 estimates (Interagency Working Group on the Social Cost of Carbon, 2013, 2015). The IWG methodology regarding socioeconomic and emissions modeling differs to different degrees from each model's standard structure.

Socioeconomic and emissions variability are considered in the IWG SCC calculations through the five alternative scenarios (USG1 through USG5). Four of the scenarios are described as "baseline" futures assuming negligible greenhouse gas mitigation, and one is described as a "policy" future that stabilizes atmospheric concentrations by 2100 at 550 ppm CO_2-equivalent. Each scenario consists of a set of projections for gross domestic product, population, fossil and industrial CO_2 emissions, land use CO_2 emissions, and non-CO_2 emissions and forcing.

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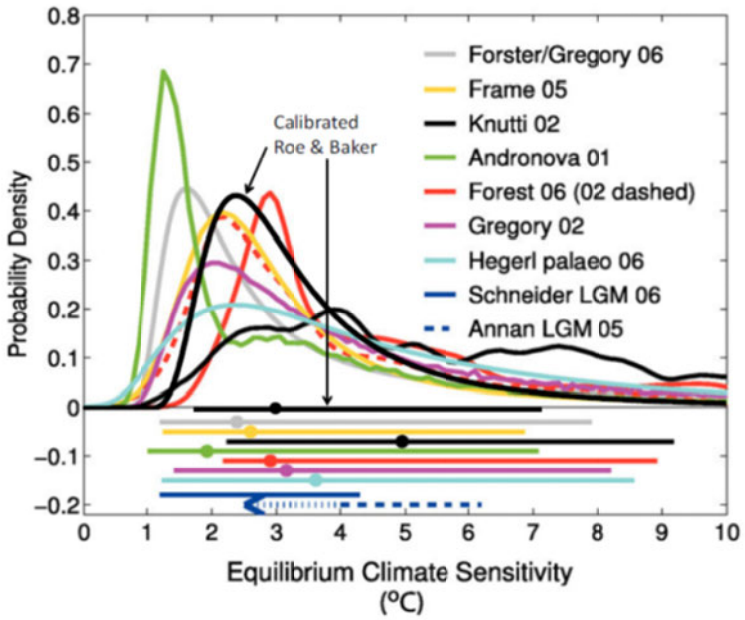
In the IWG methodology, the baseline socioeconomic, emissions, and forcing projections to the year 2100 are drawn from scenario data from the Energy Modeling Forum's 22nd study, EMF 22 (Clarke et al., 2009), which was a multimodel scenario exercise of 10 global IAMs with detailed energy sectors to explore the cost and energy transformation implications of climate targets and international cooperation. The four baseline scenarios are reference "no climate policy" futures associated with 4 of the 10 models participating in the EMF 22 study. The "policy" scenario was derived by the IWG by averaging the 550 ppm CO_2-equivalent scenario results from the same four models, with each variable averaged separately. In the IWG exercise, the SCC estimates resulting from each socioeconomic/emission scenario are given equal weight in the averaging used to derive the overall SCC estimates.

Implementation of these inputs varied somewhat across the three models (see Rose et al., 2014): FUND and PAGE require translation of the projections into model-specific regional population and income; PAGE and DICE use level values, and FUND uses growth rates; and FUND requires derivation of its own fossil and industrial CO_2 emissions in lieu of the standardized projections. In addition, only FUND uses explicit emissions for a subset of non-CO_2 Kyoto greenhouse gases (CH_4, N_2O, SF_6); and DICE and PAGE include non-CO_2 forcing exogenously. To estimate climate damages beyond 2100, the IWG extrapolated the EMF 22-based socioeconomic and emissions inputs from 2100 to 2300.

The IWG approach standardized one climate system modeling assumption, the distribution of the ECS parameter. The IWG calibrated Roe and Baker (2007) distributional form (see discussion in Chapter 3) to match statements regarding the likelihood of the ECS value made in the IPCC Fourth Assessment Report. Figure 4-2 depicts the chosen calibrated Roe and Baker distribution.[25]



[25]For a detailed discussion, see IWG (2010); also see Box 3-2 in Chapter 3.

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FIGURE 4-2 IWG calibrated Roe and Baker ECS distribution.
NOTES: The black line is based on the Roe and Baker (2007) functional form. Additional probability distributions adopted from Figure 9.20 in the source for this figure. The circles below the distributions reflect the median ECS estimate; the ends of the horizontal bars represent the 5th and 95th percentiles of the ECS distributions.
SOURCE: Interagency Working Group on the Social Cost of Carbon (2010, Figure 2).

Role of ECS and Other Assumptions in Determining the Emissions-to-Temperature Link

Projecting global mean surface temperature change from projected emissions in the SCC-IAMs requires sequentially translating emissions trajectories into concentrations, concentrations into radiative forcing, and radiative forcing trajectories into temperature. In the IWG analysis, the ECS parameter is one of several critical parameters governing the last translation from forcing to temperature.

The ECS is a long-standing metric for climate system responsiveness (e.g., Arrhenius, 1896) and is used as an input parameter to most simple climate models, such as those used by the IWG. However, the ECS is not an input parameter to more complex climate models. Rather, it emerges from the behavior of each complex model and is derived as an output based on each model's global mean surface temperature response to a doubling of CO_2 concentrations. The ECS is therefore unique to each model's structure, parameterization, and settings.

The ECS is recognized as an influential parameter in the three IAMs used to calculate the SCC, with studies finding SCC estimates to be relatively sensitive to the assumed ECS (Anthoff and Tol, 2013a, 2013b; Hope, 2013; Butler et al., 2014). This reflects in part the way the ECS is incorporated into these models. Direct comparison of the SCC-IAMs' climate responses has also found that the sensitivity of projected temperature (level and incremental) to the ECS assumptions varies significantly across the three models, with PAGE being the most sensitive and FUND the least sensitive (see Figure 4-3).

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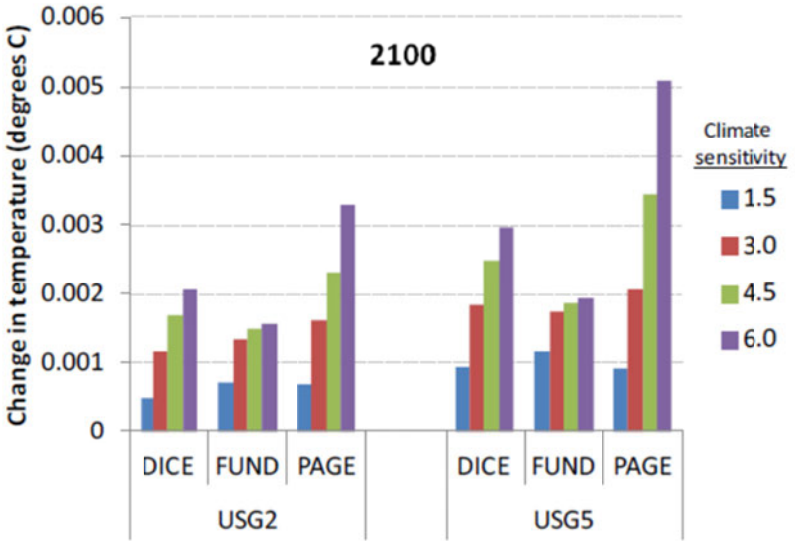

FIGURE 4-3 Projected incremental global mean temperature increase in 2100 of the SCC-IAMs varying the ECS assumption.
NOTES: In DICE, FUND, and PAGE, the increase is in response to a 2020 1 GtC pulse varying the ECS parameter and reference emissions scenario. USG2 and USG5 represent the IWG's highest and lowest emission scenarios, respectively.
SOURCE: Rose et al. (2014, Figure 5-13). Reprinted with permission.

Other climate modeling elements of the three SCC-IAMs, in addition to the ECS, play a significant role in translating emissions into projected global mean temperatures. These include the specifications for the carbon cycle, the ocean response to forcing, non-CO_2 forcing, climate feedbacks, and non-ECS parametric uncertainties. As a result of variations in these specifications across the models, PAGE has slower CO_2 concentration accumulation but higher projected temperatures, FUND has faster accumulation of CO_2 concentrations and higher non-CO_2 forcing but lower projected temperatures, and DICE has CO_2 concentrations and temperature that are the most sensitive to projected emissions. Non-ECS uncertainty also plays a role in FUND and PAGE in defining the distribution of projected temperature.

SENSITIVITY OF THE SCC TO OTHER MODELING ASSUMPTIONS

The committee's charge emphasizes the role of the ECS in estimating the SCC, but the ECS is one of many assumptions that can influence an SCC estimate. Other assumptions include the projected size of the economy and population, emissions levels, discount rate, non-ECS climate parameters, regional temperature downscaling, the assumed sea level rise response rate, and the functional forms and parameterizations for the various climate damages (Anthoff and Tol, 2013a, 2013b; Hope, 2013; Butler et al., 2014; Rose et al., 2014). Some assumptions are potentially more influential than the ECS, as well as interacting with the ECS.

Looking specifically at damages, Anthoff and Tol (2013a, 2013b) identified key sensitivities for FUND SCC estimates in parameters associated with cooling damages, agricultural damages, migration, and energy efficiency improvement. Looking more broadly across the overall PAGE modeling framework, Hope (2013) finds key sensitivities in the model's discounting parameters, climate feedback response, sulfate aerosol effects, and noneconomic damage function exponent and weight parameters. In addition, Butler et al. (2014) illustrate with

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a modified version of the DICE model the potential importance of interactions between uncertain parameters.

Direct comparison of the model damage components of the three IWG SCC models illustrates the differences in sensitivity of damage estimates to assumed warming levels and the size of the economy. Such comparison finds that PAGE damages are the most sensitive to changes in the level of warming, and FUND damages are the least sensitive. At low levels of warming, DICE and PAGE damages are the most sensitive to changes in the size of the economy, but at high levels of warming, FUND damages are the most sensitive. In both contexts there are warming and income ranges for which there are even differences in the sign of estimated damages, as well as the responsiveness.

These insights suggest that it is important to look beyond the ECS when evaluating current methods and identifying opportunities for improvement. Those opportunities include not only other climatic factors, but also sensitivity to changes in other model inputs and assumptions in other components of the causal chain. There are also uncertainties, and potential sensitivities, associated with elements not currently modeled, including other factors that will drive the physical impacts of global climate change, such as changes in the regional and temporal distribution of precipitation, humidity, changing aerosol and cloud patterns, sea level rise, and potential extreme events.

ASSESSMENT OF SIMPLE CLIMATE MODEL PERFORMANCE

The climate modeling community assesses the performance of its models in two ways: (1) intermodel comparison diagnostics and (2) comparison of projections to historical data. With the exception of some limited intermodel comparison exercises (e.g., Warren et al., 2010; van Vuuren et al., 2011; Rose et al., 2014), similar diagnostics and historical comparisons have not been applied to the simple climate models that serve as inputs to SCC-IAMs calculations.

Simple climate models, such as the ones used in SCC-IAMs, can be assessed through a set of diagnostic experiments described below. The key point of comparison is whether the central projections and ranges of the simple climate models agree with those of more comprehensive Earth system models. These diagnostics should not necessarily disqualify models based on broader responses than the Earth system models, however, as the latter models are known to cluster near central estimates (e.g., Huybers, 2010; Roe and Armour, 2011). Similarly, it is not inappropriate for simple climate models to include feedbacks not represented in Earth system models; but the diagnostics should be run with these additional feedbacks disabled so as to facilitate comparison with more complex models that, because of computational limits, do not include such feedbacks.

Four key properties of any simple climate model can be assessed:

- Transient climate response to emissions (TCRE) can be assessed using extended release experiments along the lines of those conducted by Matthews and Caldeira (2008) or Herrington and Zickfeld (2014). In these experiments, CO_2 is emitted at a constant rate of 20 Gt C/year until such time that cumulative emissions reached 50, 200, 500 or 2000 Gt C, at which point emissions are ceased. The TCRE is given by the ratio of warming to cumulative emissions at the end of the emission period. The TCRE experiments assess the combined response of the climate and the carbon cycle to CO_2 emissions.
- TCR can be assessed with an experiment in which CO_2 concentrations are increased at 1 percent/year from a preindustrial initial value, with the mean warming over years

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60-80 defining the TCR. This assesses the multidecade response of climate to CO_2 concentrations, removing from the equation the effects of the carbon cycle and the multicentury adjustments that contribute to ECS.

- The initial pulse-adjustment timescale (IPT) can be assessed with experiments such as that of Joos et al. (2013), in which the temperature response over time to a pulse emission of 100 GtC was assessed relative to a steady-state baseline CO_2 concentration of 389 ppm. Such experiments provide information on both the IPT and the TCRE, but extended release experiments are more relevant to TCRE.
- Finally, the overall baseline response to forcing can be assessed using the representative concentration pathway/extended concentration pathway (RCP/ECP)[26] experiments driven by total forcing (Collins et al., 2013). Specifically, a range of possible forcings can be examined by using the high-emissions 6 RCP/ECP 8.5 and low-emissions RCP/ECP 2.6 pathways. By driving the model directly with climate forcing, these experiments isolate the energy balance portion of the simple climate model.

Although these experiments and this report focus on the climate effect of CO_2 emissions, similar diagnostics can be applied to the simple climate models used in the calculation of the social cost of other climate forcers.

[26]Extended concentration pathways are an extension of representative concentration pathway emissions scenarios from 2100 through 2300 (van Vuuren et al., 2011).

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5
Discussions, Conclusions, and Recommendations

The first part of this chapter summarizes the committee's conclusions and presents its recommendation on the first two questions covered in this first phase of the study. The second part of this chapter introduces concepts relevant to the committee's third question and provides conclusions and recommendations on that question.

NEAR-TERM UPDATES TO CLIMATE SYSTEM MODELING IN SCC ESTIMATION

The first two charge questions direct the committee to consider near-term updates to the social cost of carbon (SCC). Specifically, the committee considered whether a near-term update is warranted on the basis of recent evidence regarding the sensitivity of temperature change to carbon emissions. The basic issues are the technical merits and challenges of a narrowly focused update to the SCC estimates and whether the Interagency Working Group on the Social Cost of Carbon (IWG) should conduct a near-term update of the SCC prior to receiving recommendations related to a more comprehensive update (Phase 2 of the committee's study).

In its analysis, the committee considered the criteria outlined in Chapter 1, including

- the accuracy and characterization of uncertainty of climate system modeling (e.g., assessing whether a near-term update would necessarily improve the representation of the response of temperature change to emissions relative to more complete, state-of-the-art models of the climate system);
- overall SCC reliability;
- alternative options for climate system representation; and
- whether there is sufficient benefit to warrant investing limited available resources in conducting a near-term update to the SCC estimates, relative to investing those resources in lasting improvements to the methods and science underlying the SCC.

CONCLUSION 1 The equilibrium climate sensitivity (ECS) is only one parameter affecting the social cost of carbon (SCC). Each of the three SCC integrated assessment models also embodies a different representation of the climate system and its underlying uncertainties, including relationships and parameters beyond the ECS. Therefore, updating the ECS alone within the current SCC framework may not significantly improve the estimates.

CONCLUSION 2 The relationship between CO_2 emissions and global mean surface temperature can be summarized by four metrics: equilibrium climate sensitivity (ECS), transient climate response, transient climate response to emissions, and the initial pulse-adjustment timescale. ECS is less relevant than the other three metrics in characterizing the climate system response on timescales of less than a century. As a long-term, equilibrium metric, ECS alone does not provide an adequate summary of the relationship between CO_2 emissions and global mean surface temperature for calculating the social cost of carbon (SCC). Therefore, simply

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updating the distribution of ECS without assessing the impact on these other metrics may not result in an improved estimate of the SCC.

RECOMMENDATION 1 The committee recommends against a near-term update to the social cost of carbon based simply on a recalibration of the probability distribution of the equilibrium climate sensitivity (ECS) to reflect the recent consensus statement in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Consequently, the committee also recommends against a near-term change in the distributional form of the ECS.

Rather than updating the ECS in the current framework, the IWG could undertake efforts to adopt or develop a common "module" that represents the relationship between CO_2 emissions and global mean surface temperature change, its uncertainty, and its profile over time. If the IWG pursues such an effort, the following criteria would provide a more robust alternative to assessing the link between CO_2 emissions to temperature change than ECS alone:

1. The module's behavior should be consistent with the best available scientific understanding of the relationship between emissions and temperature change, its pattern over time, and its uncertainty. Specifically, the module should be assessed on the basis of both its response to a pulse of emissions and its response to long-term forcing trajectories (specifically, trajectories designed to assess transient climate response and transient climate response to emissions, as well as high- and low-emissions baseline trajectories). Given the degree of assessment they face, including consistency with observational data, the IPCC-class Earth system models provide a reference for evaluating the central projections of a climate module.
2. The proposed module should strive for simplicity and transparency so that the central tendency and range of uncertainty in its behavior are readily understood, are reproducible, and are amenable to continuous improvement over time through the incorporation of evolving scientific evidence.
3. The possible implications of the choice of a common climate module for the assessment of impacts of other, non-CO_2 greenhouse gases should also be considered.

NEAR-TERM ENHANCEMENT OF THE QUALITATIVE CHARACTERIZATION OF SCC UNCERTAINTY TO INCREASE TRANSPARENCY

The third charge question directs the committee to consider ways to enhance the qualitative characterization of uncertainties associated with the current SCC estimates in the near term to increase the transparency associated with using these estimates in regulatory impact analyses.

To be well defined, the SCC must be conditioned on certain variables, for example, the year in which the change in emissions is assumed to occur. Parameters that may require policy or value judgments must also be specified: these may concern how effects across people are aggregated, including across time, across different income levels, and over political jurisdictions. The SCC may be presented on the basis of different assumed values for such parameters, but it is generally inappropriate to take averages across such values because the variation does not reflect—or does not *only* reflect—uncertainty. For practical regulatory purposes, for example, it is necessary to present SCC estimates conditional on alternative discount rates in order to allow

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those SCC estimates to be combined with other cost and benefit estimates that use different discount rates.

The SCC depends on a number of inputs that are uncertain. Some are aspects of the natural world, such as the sensitivity of temperature change to emissions and how it evolves over time. Others are consequences of current and future human behavior, such as population growth, economic growth, and the trajectory of global greenhouse gas emissions. For regulatory decision making, it is at least conceptually possible to describe the uncertainty of these inputs in SCC calculations using probability distributions. Ideally, joint probability distributions could be defined for all of the uncertain inputs to an SCC-IAM, and the impact of uncertainty on the SCC could be evaluated using Monte Carlo analysis or a related approach.

One reason for modeling uncertainty is related to nonlinearities. If the SCC calculation involves nonlinearities over the range of uncertain parameters, the average value of the SCC computed from random draws of these uncertain inputs may not be the same as the single SCC computed from the average parameter values. The implications of such nonlinearities may be difficult to know a priori, suggesting it is best to compute the SCC from random draws of uncertain inputs.

It is also important to model uncertainty in order to provide a range of plausible estimates for cost-benefit analysis. The U.S. Office of Budget and Management (OMB) Circular A-4 requests a formal quantitative analysis of uncertain costs and benefits for major rules with effects of $1 billion or more. Given the consequences of the presence of CO_2 emissions across many government rulemakings, it is important to address this need.

Handling of Uncertainty in IWG Analysis

In constructing the SCC, the IWG treated some parameters of the climate system and damage functions as uncertain and random and represented these parameters using probability distributions. A common distribution, using a distributional form developed by Roe and Baker (2007), was used to represent the ECS in each of the three SCC-IAMs: the Dynamic Integrated Climate-Economy Model (DICE), the Policy Analysis of the Greenhouse Effect (PAGE), and the Climate Framework for Uncertainty, Negotiation and Distribution (FUND). In addition, 11 climate system parameters in FUND and 10 in PAGE were also represented by probability distributions, as were 50 parameters in FUND's damage model and 46 in PAGE's damage model (see Chapter 2 for an overview of these models). Socioeconomic and emissions uncertainty was also considered through five alternative scenarios. In calculating the SCC, each SCC-IAM was run by taking 10,000 draws from the relevant probability distributions and calculating the SCC for each draw, conditional on a socioeconomic and emissions scenario and discount rate.

CONCLUSION 3 The Interagency Working Group on the Social Cost of Carbon (SCC) technical support document explicitly describes the factors on which the SCC is conditioned, such as the year emissions occur and the discount rate and also makes explicit the sources of distributions for various inputs. However, it does not detail all sources of model-specific uncertainty in the social cost of carbon integrated assessment models.

RECOMMENDATION 2 When presenting the social cost of carbon (SCC) estimates, the Interagency Working Group (IWG) on the SCC should continue to make explicit the sources of uncertainty. The IWG should also enhance its efforts to describe uncertainty by adding an appendix to the technical support document that

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describes the uncertain parameters in the Climate Framework for Uncertainty, Negotiation and Distribution and Policy Analysis of the Greenhouse Effect models.

CONCLUSION 4 Multiple runs from three models provide a frequency distribution of the social cost of carbon (SCC) estimates based on five socioeconomic-emissions scenarios, three discount rates, draws from the equilibrium climate sensitivity distribution, and other model-specific uncertain parameters. This set of estimates does not yield a probability distribution that fully characterizes uncertainty about the SCC.

Sources of Uncertainty Omitted from the IWG Analysis

The committee notes that none of the three SCC-IAMs (nor any others of which the committee is aware) are sufficiently comprehensive to include all of the uncertainties in the inputs that are likely to be important in calculating the SCC. Moreover, explicit distributions for some important inputs (e.g., emission scenarios, economic growth, and population) have not been developed by the IWG for use in estimating the SCC. Factors omitted or not adequately captured by the analysis need to be better characterized. In addition, a single unifying discussion of captured and omitted uncertainty is needed. There is, however, no section of the IWG's technical support documents that contain a unified discussion of this topic.

RECOMMENDATION 3 The Interagency Working Group on the Social Cost of Carbon (IWG) should expand its discussion of the sources of uncertainty in inputs used to estimate the social cost of carbon (SCC), when presenting uncertainty in the SCC estimates. The IWG should include a section entitled "Treatment of Uncertainty" in each technical support document updating the SCC. This section should discuss various types of uncertainty and how they were handled in estimating the SCC, as well as sources of uncertainty that are not captured in current SCC estimates.

The uncertainties discussed in this section would include the uncertain parameters unique to each of the models, uncertainty about climate change impacts and their valuation, and the risk of potential catastrophic outcomes. The section would also discuss the implicit, equal weight placed on the three IAMs and five socioeconomic scenarios in computing an average SCC, the possible alternatives of unequal weights or alternative models and scenarios, and the motivation for the chosen approach. The executive summary of the technical support document and individual regulatory impact analyses that use the SCC might usefully provide a summary of this discussion.

Reporting of Results

In the executive summaries of the IWG's technical support documents, the presentation of SCC estimates and the description of the uncertainty underlying them are brief. For each year of interest, four summary estimates of the SCC are shown (see Table 2-3, in Chapter 2): the average SCC for 2.5, 3, and 5 percent discount rates, as well as the 95th percentile for a 3 percent

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discount rate.[27] Thus, the only range of SCC estimates presented in the executive summary of the technical support documents is the range based on discount rates, together with the 95th percentile of the SCC based on a 3 percent discount rate. A more complete characterization of uncertainty would include other sources of variability in the SCC, for each discount rate, and would include both high and low values. These values could be used in sensitivity analyses in regulatory impact analyses.

CONCLUSION 5 It is important to continue to separate the impact of the discount rate on the social cost of carbon from the impact of other sources of variability. A balanced presentation of uncertainty includes both low and high values conditioned on each discount rate.

RECOMMENDATION 4 The executive summary of each technical support document should provide guidance concerning interpretation of reported social cost of carbon (SCC) estimates for cost-benefit analysis. In particular, the guidance should indicate that SCC estimates conditioned on a particular discount rate should be combined with other cost and benefit estimates conditioned on consistent discount rates, when they are used together in a particular analysis.

The guidance should also indicate that when uncertainty ranges are presented in an analysis, those ranges should include uncertainty derived from the frequency distribution of SCC estimates. To facilitate such inclusion, the executive summary of the technical support document should present symmetric high and low values from the frequency distribution of SCC estimates with equal prominence, conditional on each assumed discount rate.

One approach to the implementation of this recommendation would be to present in the executive summary a table similar to Table 5-1 below which would show high and low estimates of the SCC, as well as the average estimate, for each discount rate. The executive summary could also display the frequency distribution of SCC estimates as in Figure 5-1, with separate graphs for each discount rate. Separating the presentation of frequency distributions will encourage careful attention to the special role of discount rates on the basis of the regulatory context and the need to combine the SCC with other cost and benefit estimates. Also, the IWG could identify a high percentile (e.g., 90th, 95th) and corresponding low percentile (e.g., 10th, 5th) of the SCC frequency distributions on each graph. This approach would define a usable uncertainty range for the regulatory impact analysis for each discount rate.

[27]The most recent IWG technical support document states (Interagency Working Group on the Social Cost of Carbon, 2015, p. 2): "Three values are based on the average SCC from three integrated assessment models (SCC-IAMs), at discount rates of 2.5, 3, and 5 percent. The fourth value, which represents the 95th percentile SCC estimate across all three models at a 3 percent discount rate, is included to represent higher-than-expected impacts from temperature change further out in the tails of the SCC distribution."

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TABLE 5-1: An Example of a Table of SCC Estimates

Year	Discount Rate								
	5.00%			3.00%			2.50%		
	Low	Avg.	High	Low	Avg.	High	Low	Avg.	High
2020	--	--	--	--	--	--	--	--	--
2025	--	--	--	--	--	--	--	--	--
…									
2050	--	--	--	--	--	--	--	--	--

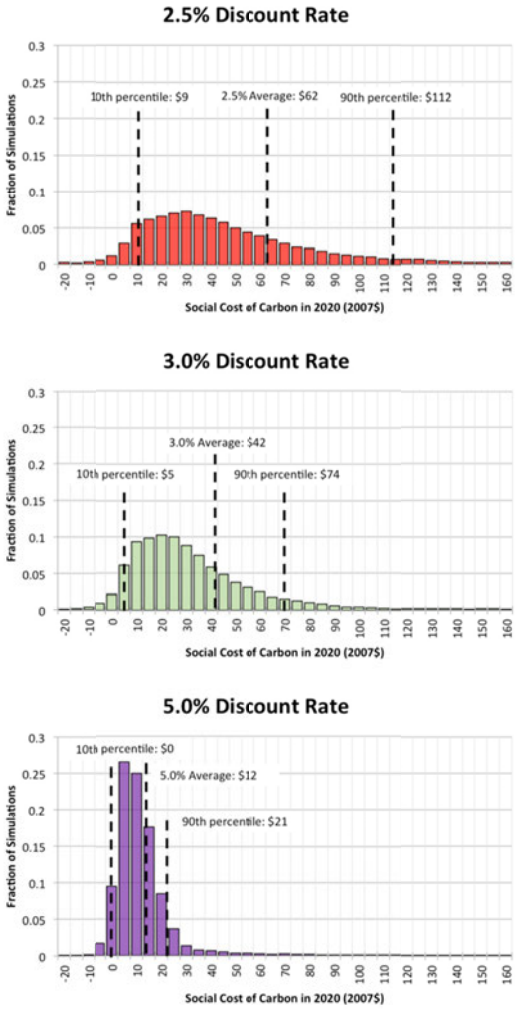

FIGURE 5-1 Examples of the frequency distribution of SCC estimates for 2020 (in 2007 dollars per metric ton of CO_2).
NOTES: The 10th and 90th percentiles of the SCC estimates are identified only as an example for presentation. The frequency distributions shown represent most of the 150,000 SCC estimates. However, they do not represent the entire distribution. Some estimates fall outside the range of the horizontal axis shown.
SOURCE: Developed from IWG SCC estimates provided to the committee by the U.S. Environmental Protection Agency.

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Appendix A
Biographical Sketches of Committee Members and Staff

MAUREEN L. CROPPER (*Cochair*) is a distinguished university professor and chair of the Department of Economics at the University of Maryland. She is also a senior fellow at Resources for the Future and a research associate of the National Bureau of Economic Research. Previously, she was a lead economist at the World Bank. Her research has focused on valuing environmental amenities (especially environmental health effects), on the discounting of future health benefits, and on the tradeoffs implicit in environmental regulations. Her current research focuses on energy efficiency in India, on the impact of climate change on migration, and on the benefits of collective action in pandemic flu control. She has served as chair of the Economics Advisory Committee of the Science Advisory Board of the U.S. Environmental Protection Agency and as past president of the Association of Environmental and Resource Economists. She is a member of the National Academy of Sciences. She has a B.A. in economics from Bryn Mawr College and a Ph.D. in economics from Cornell University.

RICHARD G. NEWELL (*Cochair*) is the Gendell professor of energy and environmental economics at Duke University's Nicholas School of the Environment and director of the Duke University Energy Initiative. Previously, he served as the administrator of the U.S. Energy Information Administration and as the senior economist for energy and environment on the President's Council of Economic Advisers. He is on the board of directors of Resources for the Future, a research associate of the National Bureau of Economic Research, and a member of the North Carolina Energy Policy Council. His work has covered the economics of markets and policies for energy, the environment, and related technologies, including energy systems forecasting, market-based policy, energy efficiency, discounting, and incentives for technological innovation and adoption. He has a B.S. and a B.A. from Rutgers, an M.P.A. from the Woodrow Wilson School of Public and International Affairs at Princeton University, and a Ph.D. from Harvard University.

MYLES ALLEN is professor of geosystem science in the Environmental Change Institute in the School of Geography and the Environment and in the Department of Physics, both at the University of Oxford. His research focuses on how human and natural influences on climate contribute to observed climate change and extreme weather events. He founded climateprediction.net and weatherathome.org experiments, using volunteer computing for weather and climate research. His recent work has dealt with quantifying the cumulative impact of carbon dioxide emissions on global temperatures and on the implications of reframing climate change as a carbon stock problem. He has served on several working groups on the physical science assessments of the Intergovernmental Panel on Climate Change and on the core writing team of the synthesis report in 2014. He was awarded the Appleton Medal from the Institute of Physics in 2010. He has a doctorate in physics from the University of Oxford.

MAXIMILIAN AUFFHAMMER is the George Pardee Jr. professor of international sustainable development and associate dean of interdisciplinary studies at the University of California at Berkeley. His research focuses on environmental and resource economics, energy economics, and applied econometrics. He is a research associate at the National Bureau of Economic Research in the Energy and Environmental Economics group, a Humboldt Fellow, and a lead author for the Intergovernmental Panel on Climate Change (IPCC). He is a recipient of the Cozzarelli Prize awarded by the *Proceedings of the National Academy of Sciences* and of the

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Campus Distinguished Teaching Award and the Sarlo Distinguished Mentoring Award from the University of California at Berkeley. He has a B.S. in environmental science and an M.S. in environmental and resource economics from the University of Massachusetts at Amherst and a Ph.D. in economics from the University of California at San Diego.

CHRIS E. FOREST is associate professor of climate dynamics in the Departments of Meteorology and Geosciences, an associate in the Earth and Environmental Systems Institute, and associate director for the Network for Sustainable Climate Risk Management, all at Pennsylvania State University. He studies how to characterize uncertainties in climate projections from global to regional scales and understanding how these uncertainties should be included in climate change decision analyses. He served as a lead author on the Intergovernmental Panel on Climate Change chapter on the evaluation of climate models and as a lead author on a Climate Change Science Program synthesis and assessment report examining atmospheric and surface temperature trends. He serves on the leadership team for the Atmospheric and Hydrospheric Sciences Section of the American Association for the Advancement of Science. He has a B.S. in applied math, engineering, and physics from the University of Wisconsin-Madison and a Ph.D. in meteorology from the Massachusetts Institute of Technology.

INEZ Y. FUNG is a professor of atmospheric sciences at the University of California at Berkeley. She is also a member of the science team for NASA's Orbiting Carbon Observatory. She studies the interactions between climate change and biogeochemical cycles, particularly the processes that maintain and alter the composition of the atmosphere. Her research emphasis is on using atmospheric transport models and a coupled carbon-climate model to examine how CO_2 sources and sinks are changing. She is a recipient of the American Geophysical Union's Roger Revelle Medal. She is a member of the National Academy of Sciences, and a fellow of the American Meteorological Society, the American Geophysical Union, the American Academy of Arts and Sciences, and the American Philosophical Society. She has a S.B. in applied mathematics and a Sc.D. in meteorology from the Massachusetts Institute of Technology.

JAMES K. HAMMITT is professor of economics and decision sciences at the T.H. Chan School of Public Health and director of the Center for Risk Analysis, both at Harvard University, and an affiliate of the Toulouse School of Economics. His research concerns the development and application of quantitative methods—including benefit-cost, decision, and risk analysis—to health and environmental policy. Topics include management of long-term environmental issues with important scientific uncertainties, such as global climate change and stratospheric-ozone depletion, evaluation of ancillary benefits and countervailing risks associated with risk-control measures, and characterization of social preferences over health and environmental risks using revealed-preference, stated-preference, and health-utility methods. He has a Ph.D. in public policy from Harvard University.

HENRY D. JACOBY is the William F. Pounds professor of management (emeritus) in the Sloan School of Management and former codirector of the Joint Program on the Science and Policy of Global Change, both at the Massachusetts Institute of Technology (MIT). His work has focused on the integration of the natural and social sciences and policy analysis in application to the threat of global climate change. Previously, he served on the faculties of the Department of Economics and the Kennedy School of Government, both at Harvard University. He has also served as director of the Harvard Environmental Systems Program, director of the

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MIT Center for Energy and Environmental Policy Research, associate director of the MIT Energy Laboratory, and chair of the MIT faculty. He has an undergraduate degree in mechanical engineering from the University of Texas at Austin and a Ph.D. in economics from Harvard University.

JENNIFER A. HEIMBERG (*Study Director*) is a senior program officer in the Division of Earth and Life Sciences (DELS) and the Division of Behavioral and Social Sciences and Education. In her work for the Nuclear and Radiation Studies Board in DELS, she has focused on nuclear security, nuclear detection capabilities, and environmental management issues, and she has directed studies and workshops related to nuclear proliferation, nuclear terrorism, and the management of nuclear wastes. Previously, she worked as a program manager at the Johns Hopkins University Applied Physics Laboratory, where she established its nuclear security program with the Department of Homeland Security's Domestic Nuclear Detection Office. She has a B.S. in physics from Georgetown University, a B.S.E.E. from Catholic University, and a Ph.D. in physics from Northwestern University.

ROBERT KOPP is associate director of Rutgers Energy Institute and an associate professor in the Rutgers University Department of Earth & Planetary Sciences. His research focuses on understanding uncertainty in past and future climate change, with major emphases on sea level change and on the interactions between physical climate change and the economy. He is a contributing author to the working groups on physical science and on impacts, adaptation, and vulnerability of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. He is a Leopold Leadership fellow and a recipient of the Sir Nicholas Shackleton Medal of the International Union for Quaternary Research and the William Gilbert Medal of the American Geophysical Union. He has an undergraduate degree from the University of Chicago and a Ph.D. in geobiology from the California Institute of Technology.

WILLIAM PIZER is a professor in the Sanford School of Public Policy and faculty fellow at the Nicholas Institute for Environmental Policy Solutions at Duke University. His current research examines how public policies to promote clean energy can effectively leverage private-sector investments, how environmental regulation and climate policy can affect production costs and competitiveness, and how the design of market-based environmental policies can be improved. Previously, he was Deputy Assistant Secretary for Environment and Energy at the U.S. Department of the Treasury, overseeing the department's role in the domestic and international environment and energy agenda of the United States. He was also a researcher at Resources for the Future in Washington, D.C. He has a bachelor's degree in physics from the University of North Caroling at Chapel Hill and a master's degree and a Ph.D. in economics from Harvard University.

STEVEN ROSE is a senior research economist in the Energy and Environmental Research Group at the Electric Power Research Institute. His research focuses on long-term modeling of energy systems and climate change drivers, mitigation, and potential climate risks and responses, as well as the economics of land use and bioenergy as they relate to climate change and energy policy. He serves on the U.S. government's Carbon Cycle Scientific Steering Group and Environmental Protection Agency's Science Advisory Board panel on biogenic carbon dioxide emissions accounting. He was also a lead author for the Fifth and Fourth Assessment Reports of the Intergovernmental Panel on Climate Change and for the U.S. National Climate Assessment.

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He has a B.A. in economics from the University of Wisconsin-Madison and a Ph.D. in economics from Cornell University.

RICHARD SCHMALENSEE is the Howard W. Johnson professor of management (emeritus) and professor of economics (emeritus) at MIT. Previously, at MIT, he was the John C. Head III dean of the Sloan School of Management, director of the Center for Energy and Environmental Policy Research, and a member of the Energy Council. He also previously served as a member of the President's Council of Economic Advisers. His research and teaching have focused on industrial organization economics and its applications to business decision making and public policy. He is a fellow of the Econometric Society and of the American Academy of Arts and Sciences. He has served on the executive committee of the American Economic Association and as a director of several corporations, and he is currently chair of the board of Resources for the Future. He was a distinguished fellow of the Industrial Organization Society. He has an S.B. and a Ph.D. in economics from the Massachusetts Institute of Technology.

JOHN P. WEYANT is professor of management science and engineering, director of the Energy Modeling Forum, and deputy director of the Precourt Institute for Energy Efficiency, all at Stanford University. His current research focuses on analysis of global climate change policy options, energy efficiency analysis, energy technology assessment, and models for strategic planning. He has been a convening lead author or lead author for several chapters of the IPCC reports, and, most recently, as a review editor for the climate change mitigation working group of the IPCC's Fourth and Fifth Assessment Reports. He was also a founder and serves as chair of the Scientific Steering Committee of the Integrated Assessment Modeling Consortium, a collaboration of 53 member institutions from around the world. He is a recipient of the Adelmann-Frankel award from the U.S. Association for Energy Economics for unique and innovative contributions to the field of energy economics. He has a B.S./M.S. in aeronautical engineering and astronautics and M.S. degrees in engineering management and in operations research and statistics from Rensselaer Polytechnic Institute and a Ph.D. in management science with minors in economics, operations research, and organization theory from the University of California at Berkeley.

CASEY J. WICHMAN (*Technical Consultant*) is a fellow at Resources for the Future in Washington, D.C. His research is concentrated at the intersection of environmental and public economics, with an emphasis on examining the ways individuals make decisions in response to environmental policies using quasi-experimental techniques. In particular, his work analyzes the effectiveness of price and nonprice interventions for water conservation, the role of information in the design of environmental policy, and the effect of water scarcity in the energy sector. He has a B.A. in economics from Ithaca College, an M.S. from North Carolina State University, and an M.S. and a Ph.D. in agricultural and resource economics from the University of Maryland at College Park.

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Appendix B

Open Meeting Agenda

First Meeting
Committee on Assessing Approaches to Updating the Social Cost of Carbon

Room 208
Keck Center
500 5th St., NW
Washington, DC 20001

Wednesday, September 2, 2015
OPEN SESSION (open to the public)

9:30 Welcome Introductions
MaryEllen O'Connell, Interim Director, Board on Environmental Change and Society
Maureen Cropper and Richard Newell, Cochairs
Marisa Gerstein Pineau, Program Officer

9:45 Presentation: Sponsors' Interests and Goals for the Study
Ken Gillingham, Council of Economic Advisers
Q&A: **Richard Newell and Maureen Cropper**, Moderators

10:45 *Break*

11:15 Presentation: Methodology for the Social Cost of Carbon Estimates
Elizabeth Kopits, U.S. Environmental Protection Agency
Q&A: **Richard Newell and Maureen Cropper**, Moderators

12:45 Closing Remarks
Maureen Cropper and Richard Newell, Co-Chairs

1:00 Adjourn Open Session

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Revisiting the social cost of carbon

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Contributed by William D. Nordhaus, November 21, 2016 (sent for review June 8, 2016; reviewed by James K. Hammitt, Al McGartland, and Gary W. Yohe)

The social cost of carbon (SCC) is a central concept for understanding and implementing climate change policies. This term represents the economic cost caused by an additional ton of carbon dioxide emissions or its equivalent. The present study presents updated estimates based on a revised DICE model (Dynamic Integrated model of Climate and the Economy). The study estimates that the SCC is $31 per ton of CO_2 in 2010 US$ for the current period (2015). For the central case, the real SCC grows at 3% per year over the period to 2050. The paper also compares the estimates with those from other sources.

social cost carbon | climate change | economics | DICE model

The most important single economic concept in the economics of climate change is the social cost of carbon (SCC). This term designates the economic cost caused by an additional ton of carbon dioxide emissions or its equivalent. In a more precise definition, it is the change in the discounted value of economic welfare from an additional unit of CO_2 equivalent emissions.

The SCC has become a central tool used in climate change policy, particularly in the determination of regulatory policies that involve greenhouse gas emissions (1, 2). Estimates of the SCC are necessarily complex because they involve the full range of impacts from emissions, through the carbon cycle and climate change, and including economic damages from climate change. At present, there are few established integrated assessment models (IAMs) that are available for estimation of the entire path of cause and effect and can therefore calculate an internally consistent SCC. The DICE model (Dynamic Integrated model of Climate and the Economy) is one of the major IAMs used by scholars and governments for estimating the SCC. Up to now, the most recent full model estimates have been with the DICE 2013R model (2).

The present study presents the results of a fully revised version of the DICE model (as of 2016). This is the first major revision since the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). This article describes the changes in the model from the last round, presents updated estimates of the SCC, partitions the changes in the SCC from 2013 to 2016 into the different parts of the model that have changed, and compares the new estimates with other models. The major result is a substantial increase in the estimated SCC.

Structure of the DICE-2016R Model

Background on the DICE Model. The analysis begins with a discussion of the DICE 2016R model, which is a revised version of the DICE 2013R model (1, 3). It is the latest version of a series of models of the economics of global warming developed in collaboration with colleagues at Yale University. The first version of the global dynamic model was in ref. 4. The discussion explains the major modules of the model, and describes the major revisions since the 2013 version. (The current version of the DICE 2016R is available at www.econ.yale.edu/~nordhaus/homepage/DICEmodels09302016.htm.)

The DICE model views climate change in the framework of economic growth theory. In a standard neoclassical optimal growth model known as the Ramsey model, society invests in capital goods, thereby reducing consumption today, to increase consumption in the future. The DICE model modifies the Ramsey model to include climate investments, which are analogous to capital investments in the standard model. The model contains all elements from economics through climate change to damages in a form that attempts to represent simplified best practice in each area.

Equations of the DICE-2016R Model. Most of the analytical background is similar to that in the 2013R model, and, for details, readers are referred to ref. 3. Major revisions are discussed as the equations are described.

The model optimizes a social welfare function, W, which is the discounted sum of the population weighted utility of per capita consumption. The notation here is that V is the instantaneous social welfare function, U is the utility function, $c(t)$ is per capita consumption, and $L(t)$ is population. The discount factor on welfare is $R(t) = (1+\rho)^{-t}$, where ρ is the pure rate of social time preference or generational discount rate on welfare.

$$W = \sum_{t\ 1}^{T\max} V[c(t),\ L(t)]R(t) = \sum_{t\ 1}^{T\max} U[c(t)]L(t)R(t). \qquad [1]$$

The utility function has a constant elasticity with respect to per capita consumption of the form $U(c) = c^{1-\alpha}/(1-\alpha)$. The parameter α is interpreted as generational inequality aversion.

Net output is gross output reduced by damages and mitigation costs,

$$Q(t) = \Omega(t)[1-\Lambda(t)]Y(t). \qquad [2]$$

In this specification, $Q(t)$ is output net of damages and abatement, and $Y(t)$ is gross output, which is a Cobb–Douglas function of capital, labor, and technology. Total output is divided between total consumption and total gross investment. Labor is proportional to population, whereas capital accumulates according to an optimized savings rate.

Significance

The most important single economic concept in the economics of climate change is the social cost of carbon (SCC). At present, regulations with more than $1 trillion of benefits have been written for the United States that use the SCC in their economic analysis. The DICE model (Dynamic Integrated model of Climate and the Economy) is one of three integrated assessment models used to estimate the SCC in the United States. The present study presents updated estimates based on a revised DICE model (DICE-2016R). The study estimates that the SCC is $31 per ton of CO_2 in 2010 US$ for the current period (2015). This study will be an important step in developing the next generation of estimates of the SCC in the United States and other countries.

Author contributions: W.D.N. designed research, performed research, analyzed data, and wrote the paper.

Reviewers: J.K.H., Harvard University; A.M., US Environmental Protection Agency; and G.W.Y., Wesleyan University.

The author declares no conflict of interest.

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The current version develops global output in greater detail than earlier versions. The global output concept is purchasing power parity (PPP) as used by the International Monetary Fund (IMF). The growth concept is the weighted growth rate of real gross domestic product (GDP) of different countries, where the weights are the country shares of world nominal GDP using current international dollars. We constructed our own version of world output, and this corresponds closely to the IMF estimate of the growth of real output in constant international (PPP) dollars. The earlier model used the World Bank growth figures, but the growth rates by region could not be replicated.

The present version substantially revised both the historical growth estimates and the projections of per capita output growth. Future growth is based largely on a survey of experts conducted by Peter Christensen and colleagues at Yale Uni versity. Growth in global per capita output over the 1980 2015 period was 2.2% per year. Growth in global per capita output from 2015 to 2050 is projected at 2.1% per year, whereas that to 2100 is projected at 1.9% per year. The revisions are updated to incorporate the latest output, population, and emissions data and projections. Population data and projections through 2100 are from the United Nations. CO_2 emissions are from the Carbon Dioxide Information Analysis Center and are updated using various sources. Non CO_2 radiative forcings for 2010 and projections to 2100 are from projections prepared for the IPCC Fifth Assessment.

The additional variables in the production function are $\Omega(t)$ and $\Lambda(t)$, which represent the damage function and the abate ment cost function, respectively. The abatement cost function, $\Lambda(t)$ in Eq. **2**, was recalibrated to the abatement cost functions of other IAMs as represented in the Modeling Uncertainty Project (MUP) study (5). The result was a slightly more costly abatement function than earlier estimates.

The damage function is defined as $\Omega(t) = D(t)/[1 + D(t)]$, where

$$D(t) = \varphi_1 T_{AT}(t) + \varphi_2 [T_{AT}(t)]^2. \quad [3]$$

Eq. **3** describes the economic impacts or damages of climate change, which is a key component in calculating the SCC. The DICE 2016R model takes globally averaged temperature change (T_{AT}) as a sufficient statistic for damages. Eq. **3** assumes that dam ages can be reasonably well approximated by a quadratic function of temperature change.

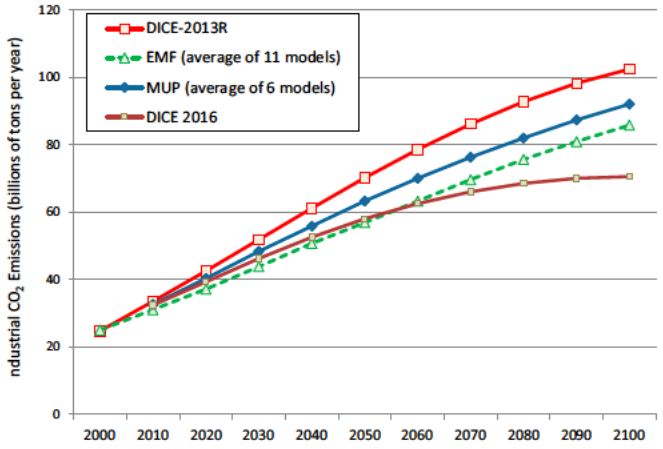

Fig. 1. Projected industrial CO_2 emissions in baseline scenario. The figure compares the projections of the most recent DICE models and two model comparison exercises. The estimates from the MUP project are from ref. 5, and the EMF 22 estimates are from ref. 14.

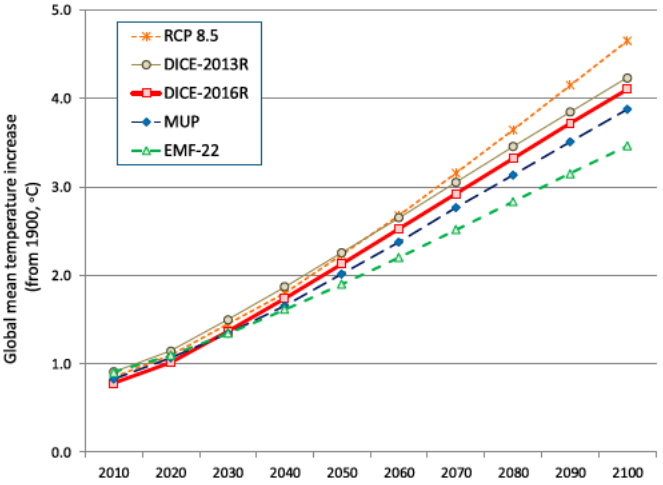

Fig. 2. Global mean temperature increase as projected by IPCC scenarios and integrated assessment economic models. The figure compares the pro jections of the most recent DICE models, the IPCC RCP high scenario (RCP 8.5), and two model comparison exercises.

The damage function was revised in the 2016 version to re flect new findings. The 2013 version relied on estimates of monetized damages from ref. 6. It turns out that that survey contained several numerical errors (7). The current version continues to rely on existing damage studies, but these were collected by Andrew Moffat and the author and independently verified (see *Supporting Information* for details). Including all factors, the final estimate is that the damages are 2.1% of global income at a 3 °C warming, and 8.5% of income at a 6 °C warming.

Uncontrolled industrial CO_2 emissions are given by a level of carbon intensity, $\sigma(t)$, times gross output. Total CO_2 emissions, $E(t)$, are equal to uncontrolled emissions reduced by the emissions reduction rate, $\mu(t)$, plus exogenous land use emissions.

$$E(t) = \sigma(t)[1 - \mu(t)]Y(t) + E_{Land}(t). \quad [4]$$

The model has been revised to incorporate a more rapid decline in the CO_2–output ratio to reflect the last decade's observations. The decade through 2010 showed relatively slow decarbonization, with the global CO_2/GDP ratio changing at −0.8% per year. However, the most recent data indicate a sharp downward tilt, with the global CO_2/GDP ratio changing at −2.1% per year over the 2000 2015 period (preliminary data). Whether this is structural or the result of climate policies is unclear at this point. For the DICE model, we assume that the rate of decarbonization going forward is −1.5% per year (using the IMF output concept).

The geophysical equations link greenhouse gas emissions to the carbon cycle, radiative forcings, and climate change. Eq. **5** repre sents the equations of the carbon cycle for three reservoirs.

$$M_j(t) = \phi_{0j} E(t) + \sum_{i\ 1}^{3} \phi_{ij} M_i(t-1). \quad [5]$$

The three reservoirs are $j = AT$, UP, and LO, which are the atmo sphere, the upper oceans and biosphere, and the lower oceans, respectively. The parameters ϕ_{ij} represent the flow parameters between reservoirs per period. All emissions flow into the atmo sphere. The 2016 version incorporates new research on the carbon cycle. Earlier versions of the DICE model were calibrated to fit the short run carbon cycle (primarily the first 100 y). Because we plan to use the model for long run estimates, such as the impacts on the

Table 1. Global SCC by different assumptions

Scenario	Assumption	2015	2020	2025	2030	2050
Base parameters						
	Baseline*	31.2	37.3	44.0	51.6	102.5
	Optimal controls†	30.7	36.7	43.5	51.2	103.6
2.5 degree maximum						
	Maximum†	184.4	229.1	284.1	351.0	1,006.2
	Max for 100 y†	106.7	133.1	165.1	203.7	543.3
The Stern Review discounting						
	Uncalibrated†	197.4	266.5	324.6	376.2	629.2
Alternative discount rates*						
	2.5%	128.5	140.0	152.0	164.6	235.7
	3%	79.1	87.3	95.9	104.9	156.6
	4%	36.3	40.9	45.8	51.1	81.7
	5%	19.7	22.6	25.7	29.1	49.2

The SCC is measured in 2010 international US dollars.
*Calculation along the reference path with current policy.
†Calculation along the optimized emissions path.

melting of large ice sheets, it was decided to change the calibration to fit the atmospheric retention of CO_2 for periods up to 4,000 y. Based on ref. 8, the 2016 version of the three box model does a much better job of simulating the long run behavior of larger models with full ocean chemistry. This change has a major impact on the estimate of the SCC (see Table 4 below).

The relationship between GHG accumulations and increased radiative forcing is shown in Eq. **6**.

$$F(t) = \eta\{\log_2[M_{AT}(t)/M_{AT}(1{,}750)]\} + F_{EX}(t). \quad [6]$$

$F(t)$ is the change in total radiative forcings from anthropogenic sources such as CO_2. $F_{EX}(t)$ is exogenous forcings, and the first term is the forcings due to atmospheric concentrations of CO_2.

Forcings lead to warming according to a simplified two level global climate model,

$$T_{AT}(t) = T_{AT}(t-1) + \xi_1\{F(t) - \xi_2 T_{AT}(t-1) - \xi_3[T_{AT}(t-1) - T_{LO}(t-1)]\} \quad [7]$$

$$T_{LO}(t) = T_{LO}(t-1) + \xi_4[T_{AT}(t-1) - T_{LO}(t-1)]. \quad [8]$$

In these equations, $T_{AT}(t)$ is the global mean surface temperature and $T_{LO}(t)$ is the mean temperature of the deep oceans.

The climate module has been revised to reflect recent Earth system models. We have set the equilibrium climate sensitivity (ECS) using the analysis in ref. 9. Ref. 9 uses a Bayesian approach, with a prior based on previous studies and a likelihood based on observational or modeled data. The reasons for using this approach are provided in ref. 5. The final estimate is mean warming of 3.1 °C for an equilibrium CO_2 doubling. We adjust the transient climate sensitivity (TCS) (sometimes called the transient climate response) to correspond to models with an ECS of 3.1 °C, which produces a TCS of 1.7 °C.

The treatment of discounting is identical to that in DICE 2013R. We always distinguish between the welfare discount rate (ρ) and the goods discount rate (r). The welfare discount rate applies to the well being of different generations, whereas the goods discount rate applies to the return on capital investments. The former is not observed, whereas the latter is observed in markets. When the term "discount rate" is used without a modifier, this will always refer to the discount rate on goods.

The economic assumption behind the DICE model is that the goods discount rate should reflect actual economic outcomes; this implies that the assumptions about model parameters should generate savings rates and rates of return on capital that are consistent with observations. With the current calibration, the discount rate (or, equivalently, the real return on investment) averages 4¼% per year over the period to 2100. The discount rate is the global average of a lower figure for the United States and a higher figure for other countries and is consistent with estimates in other studies that use US data. (This specification is sometimes called the "descriptive approach" to discounting. The alternative approach, used in ref. 10 and elsewhere, is called the "prescriptive discount rate." Under this second approach, the discount rate is assumed on a normative basis and determined largely independently of actual market returns on investments.)

Major Results for DICE-2016R

It will be useful to show some representative results from the revised model. We also compare the results with other models and studies. Fig. 1 shows the projected industrial emissions of CO_2 over the coming century. DICE 2016R is at the low end of different projections after midcentury. The reason (as explained

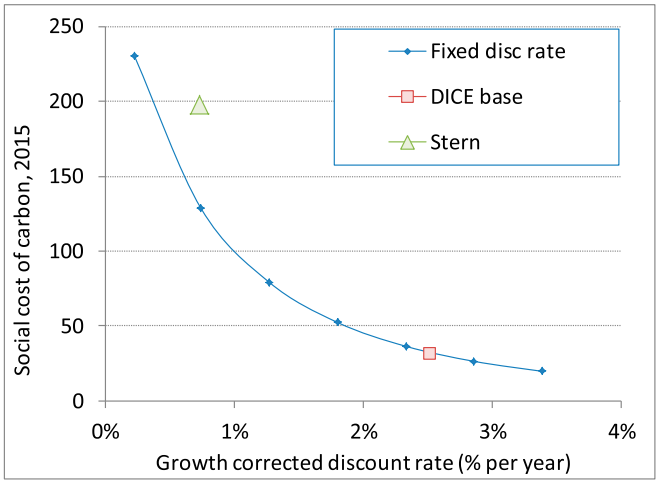

Fig. 3. Social cost of carbon and growth corrected discount rate in DICE model. The growth corrected discount rate equals the discount rate on goods minus the growth rate of consumption. The solid line shows the central role of the growth corrected discount rate on goods in determining the SCC in the DICE model. The square is the SCC from the full DICE model, and the triangle uses the assumptions of *The Stern Review* (10). A further discussion and derivation of the growth corrected discount rate is given in *Supporting Information*.

Table 2. Regional SCC

Region	SCC 2015, $/tCO$_2$, 2010 $	RICE 2010, % global	FUND 2013, % global	PAGE 2011, % global	This study, % global
United States	4.78	10	17	7	15
EU	4.79	12	24	9	15
Japan	1.07	2	3	na	3
Russia	0.91	1	10	na	3
Eurasia	1.56	1	na	na	5
China	6.61	16	8	11	21
India	2.93	12	5	22	9
Middle East	2.16	10	na	na	7
Africa	1.03	11	6	26	3
Latin America	1.87	7	na	11	6
Other high income	1.00	4	na	na	3
Other	2.50	12	[28]	[16]	8
Global	31.21	100	100	100	100

This table distributes the global SCC from Table 1 by region. The first and last columns assume that the SCC is proportional to the discounted value of output in each region over the 2020 2050 period, discounted at a discount rate of 5% per year. na, not available in the source document; tCO_2, metric tons of CO_2. Brackets around estimates are total of omitted regions.

in the discussion of Eq. **4**) is that the rate of decarbonization has increased in recent years. The lower emissions trend is reflected in the 2016 DICE version but not in most other model projections, which often reflect models constructed several years ago.

Fig. 2 shows the projected temperature trajectories in five dif ferent approaches. The results for DICE 2016R are in the middle of the pack after all of the different revisions are included. The DICE results are above those of the Energy Modeling Forum 22 (EMF 22) exercise as well as the central projections from the MUP project (5). The top line is the ensemble average from the Fifth Assessment Report of the IPCC (11) for the Representative Concentration Pathway (RCP) 8.5 scenario. However, the IPCC Representative Concentration Pathway (RCP) 8.5 projection has a higher radiative forcing than the baseline DICE 2016R model. Thus the summary is that the DICE temperature projection is roughly unchanged from the last version and is consistent (although a little lower) than the IPCC RCP8.5 ensemble average.

Estimates of the SCC

Definition of the SCC. Solving Eqs. **1**–**8** by optimizing the social welfare function (W) yields a path of all variables. We then de fine the SCC at time t as

$$\mathrm{SCC}(t) \equiv \frac{\partial W}{\partial E(t)} \Big/ \frac{\partial W}{\partial C(t)} \equiv \partial C(t)/\partial E(t). \quad [9]$$

Looking at the middle term, the numerator is the marginal welfare impact of emissions at time t, and the denominator is the marginal welfare impact of a unit of aggregate consumption in period t; this gives the third term of Eq. **9**, in which the SCC equals the economic impact of a unit of emissions in terms of t period consumption as a numéraire. In actual calculations, we take a discrete approximation to Eq. **9**. Note that the SCC is time indexed because the marginal damage of emissions changes over time.

We have estimated the SCC in the DICE 2016R model for several alternative scenarios. These scenarios reflect differing assumptions about policy and discounting. The units are 2010 US international dollars (that is, in PPP) per metric ton of CO_2 and are expressed in terms of consumption in the given year.

SCC for Standard DICE Model Parameters. The central cases for the SCC are shown in the first two rows of Table 1. The first row shows the estimate for the standard DICE model with baseline or current climate policy. The SCC figure here is $31.2 per ton of CO_2 for emissions in 2015, with the value rising at 3% per year in real terms through 2050. The SCC along an optimized path, shown in row 2, is

Table 3. Estimates of SCC for 2020 from US Interagency Working Group and comparison with DICE model in 2010 US$

Model and scenario	5% per year discount rate on goods	DICE	4% per year discount rate on goods	3% per year discount rate on goods	2.5% per year discount rate on goods
Estimates of 2020 SCC from US Working Group, 2013 (2010$)					
DICE 2010	12	na	na	40	59
PAGE	23	na	na	74	105
FUND	3	na	na	22	37
Average	13	na	na	**45**	67
Estimates for different DICE model versions (2010$)					
DICE 2013R	15	24	26	50	74
DICE 2016R	23	**37**	41	87	140

Upper rows show estimates of the 2020 SCC from the IAWG. The three models have harmonized outputs, emissions, populations, and ETS distribution and use constant discount rates. Lower rows show the results of the estimates from the two latest versions of the DICE model for the baseline (Table 1) and using constant discount rates.

slightly lower than the baseline path. The difference between the two cases is small because marginal damages change relatively little between the optimal and baseline case.

Alternative Estimates. Table 1 shows alternative estimates. We show a calculation for constraining temperature to a 2½ °C limit in two cases: one with a hard cap of 2½ °C, and the second where that cap is for an average of 100 y rather than a single period. The average would be a more sensible objective if damages are a function of average rather than peak temperature. (The hard cap is infeasible for a maximum of 2 °C and would only be feasible if technologies were available that allow substantial negative emissions by around 2050.) The SCCs for the two limit cases are $184 and $107 per ton of CO_2 in 2015 for the two cases of maximum and average limit.

It is well known that the discount rate has an important impact on the SCC. A closer look shows that the key variable is the "growth corrected discount rate," which is the difference between the discount rate on goods and the rate of growth of output (see *Supporting Information* and ref. 2). The estimates of the SCC with different discount rates on goods are shown at the bottom of Table 1. Table 1 also shows the SCC for the discounting procedure proposed in ref. 10. The relationship between the growth corrected discount rate and the SCC is shown in Fig. 3.

Regional SCCs. A few IAMs disaggregate the global SCC into the regional SCCs. These regional estimates represent the marginal damages of emissions for a particular country or region, that is, the SCC when only the damages to that particular region are included in the calculation. These estimates are important for understanding the impacts on individual regions as well as the problem of noncooperative behavior. (In noncooperative behavior, national efforts will be determined by the national SCCs rather than the global SCC and will therefore be much lower; see ref. 12.) Table 2 shows four different sets of estimates of the regional composition of the SCC. The first three are from the three models used by the Interagency Working Group on Social Cost of Carbon (IAWG), and the fourth shows an estimate based on the discounted value of GDP of the regions. One point is clear: The regional estimates are poorly understood, often varying by a factor of 2 across the three models. Moreover, regional damage estimates are highly correlated with output shares ($R = 0.71$).

The dollar estimates of regional SCCs shown in the first numerical column of Table 2 allocate the global SCC based on the output shares. This estimate is used partially because the regional damage estimates are both incomplete and poorly understood. Additionally, regional output shares are well defined and easy to replicate and, in most cases, fall within the estimates of the different models. A key message here is that there is little agreement on the distribution of the SCC by region except for the important point that each country's SCC is well below the global total.

Comparison with the IAWG. The US government has relied on the work of the IAWG to develop estimates of the SCC (see ref. 13 for different versions). The IAWG concept is conceptually comparable to the baseline in the first row of Table 1. The IAWG combines estimates from three models and multiple scenarios. Table 3 compares the latest round of estimates of the IAWG with estimates from the DICE 2013R and DICE 2016R models for the baseline model and different discount rates. The preferred SCC estimate of the most recent DICE model is about one fifth lower than the IAWG's preferred SCC. At comparable discount rates, the DICE model estimate would be roughly twice that of the IAWG.

Uncertainty About the SCC

The central estimates in Tables 1–3 use the expected values of the parameters such as productivity growth. Developing reliable estimates that incorporate uncertainty has proven extremely challenging on both methodological and empirical grounds (5). Two major sources of uncertainty about the SCC are "model uncertainty" and "structural uncertainty." The difference across models in Table 3 shows model uncertainty. These estimates actually underestimate model uncertainty because they have been harmonized by the IAWG for several inputs (discounting, outputs, and temperature sensitivities) but retain differences in other model structures (particularly damage functions). Model uncertainty is more than a factor of 3 for the IAWG's preferred 3% discount rate.

Structural uncertainty, or uncertainty within models, arises from imprecision in knowledge of structural parameters or variables. The MUP project (5) was the first study to developed harmonized estimates of uncertainties of different models for a variety of models. I replicated the MUP methodology to estimate structural uncertainty about the SCC in the DICE model arising from three sources: productivity growth, equilibrium temperature sensitivity (ETS), and the damage function. The exact approach is described in *Supporting Information*.

That calculation provides an estimated SD of the SCC in 2015 of $32 per ton of CO_2. The 10th to 90th percentile range of the SCC for 2015 is $7 to $77. The IAWG estimates that the ratio of the 95th percentile to the average is 3.0, whereas the current estimate is a ratio of 2.8. Because the IAWG includes only uncertainty about the ETS, it is surprising that the IAWG uncertainty bounds are higher than those in the current model. These estimates confirm that there is extremely large structural uncertainty about the SCC even in a single model.

Accounting for the SCC Changes Since DICE-2013R

The estimated SCC has increased substantially since the last version, as shown in Table 3. We can decompose the changes by introducing each of the major components one by one. Table 4 accounts for the changes by major revision variable. Other than the adjustment of the damage function, other major changes had the effect of increasing the SCC between 2013 and 2016. The two major changes were the carbon cycle (discussed above) and estimated economic activity.

The reasons for the changes in economic estimates are important to understand. Data revisions have tended to increase measured output because statisticians "find" more output, and because of methodology changes. One important change has been from the movement among IAMs from market exchange rates (MER) (typical in models a decade ago) to PPP. As an example, estimated nominal world output in 2005 with MER was $46 trillion in the 2006 IMF database. In the 2016 estimate using PPP, world output in 2005 was $67 trillion, or 50% higher. Because damages are generally proportional to output, increasing output increases the SCC in a proportional fashion.

Table 4. Accounting for changes in SCC from DICE-2013R

Version	Model	SCC (2015), 2010 $	Change, %
1	Dice 2016	31.23	
2	1 + old damages	35.63	14
3	2 + old population	33.36	6
4	3 + old temp sensitivity	30.58	8
5	4 + old economics	21.25	31
6	5 + old carbon cycle	16.01	25
7	DICE 2013R	17.03	6

The table shows the impact of introducing model changes starting with the 2016 model and ending with the 2013 model in a step fashion. The last column shows the change moving from a later specification to an earlier one. A negative number in the last column is a decrease from 2016 to 2013. For example, introducing "old economics" in version 5 lowers the SCC by 25% relative to DICE 2016. The two major changes are economic assumptions and the carbon cycle (see *Accounting for the SCC Changes Since DICE 2013R* for a discussion).

Conclusion

As the National Research Council (1) report emphasizes, natural and social scientists need to develop the research base for climate science and economics substantially to refine our estimates of the SCC. Over the last decade, federal regulations with estimated benefits of over $1 trillion have used the SCC. Although damages, particularly those in poor regions, have proven most difficult to develop firm estimates for, revisions in the SCC estimates involve many factors other than dam ages, including the carbon cycle and economic growth assumptions.

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Supporting Information

Nordhaus 10.1073/pnas.1609244114

Model Version

The base file for calculating the SCC is DICE2016R 091916s.gms. This is updated from the version of May 2016, with the primary change since the May version being the damage function. It runs for 500 y starting in 2015 over 5 y increments. The code is available on the website. The estimated SCC for 2015 in 2010 US international dollars is 31.20 per ton of CO_2. If set up in the General Algebraic Modeling System (GAMS) program, the results are in an output file named "Dice2016RResults.csv." Major changes are as documented in the manuscript. Other details are contained here. The models and discussion are available at www.econ.yale.edu/~nordhaus/homepage/DICEmodels09302016.htm.

Federal Regulations Using the SCC

The SCC has been used in many small and large federal regulations pertaining to the environment and energy. A recent compilation of costs and benefits as calculated in regulatory impact analyses is contained in ref. 15 and is also discussed in ref. 2. Important examples totaling over $500 billion in total benefits are ones relating to automobile fuel efficiency standards and power plants.

Growth-Corrected Discounting

Fig. 3 shows the importance of the growth corrected discount rate in determining the SCC. This section describes that point further, drawing on ref. 2. Assume that we linearize all of the equations of the DICE model and that all environmental variables have reached a stationary state where emissions, concentrations, population, temperature, and other physical variables are constant. Output, consumption, and damages are growing at constant rate g, and the goods discount rate is r. If we perturb emissions by 1 unit, this will cause a path of damages that is distributed over the distant future. For simplicity, assume that the damages start immediately but the damage–output ratio declines at a decay rate of δ per year.

We can use the Ramsey equation to evaluate the SCC as a function of the key variables. The Ramsey equation provides the equilibrium rate of return in an optimal growth model with constant growth in population and per capita consumption without risk or taxes. In this equilibrium, the real interest rate (r) equals the pure rate of social time preference (ρ) plus the rate of growth of per capita consumption (g) times the consumption elasticity of the utility function (α). In long run equilibrium, we have the Ramsey equation $r = \rho + \alpha g$. The key variable will be the growth corrected discount rate, $r \quad g$. Under our assumptions, $r \quad g = \rho + (\alpha - 1)g$. To simplify, assume that $\alpha = 1$, or that the utility function is logarithmic, which implies that $r \quad g = \rho$. [These long run growth and discounting assumptions are used in *The Stern Review* (10) and are approximately the case for the DICE model.] Under these assumptions, the SCC is proportional to $1/(\rho + \delta)$. This relationship is shown by the near hyperbolic curve in Fig. 3.

Damage Function Revision

The major change in DICE 2016R is the method for estimating the damage function. In earlier versions until 2010, we relied on either estimates gathered by the team at Yale or by surveys. The 2013 version relied on the Tol survey of damages (6, 7). This survey contained numerous errors and could not be used in the present version. The basic method for setting the damage function was similar to that in the DICE 2013R model as described in ref. 3. The method for calculating the damage function is described here.

We examined different damage estimates and used these as underlying data points and then fitted a regression to the data points. We also added an adjustment of 25% for omitted sectors and nonmarket and catastrophic damages, as explained in ref. 3.

The new estimates start with the survey of damage estimates by the author and Andrew Moffat. The survey included 26 studies. Of these, 16 contained independent damage estimates and were included, and, of these, 9 received full weight. Those receiving less than full weight were ones that were earlier (but different) versions of a model (for example, the FUND model) or had serious shortcomings. If a study had several estimates (say, along a damage function), the sum of the weights was constrained to be 1.

The estimates were made using four techniques. The central specification was a one parameter quadratic equation with a zero intercept and no linear term. Unweighted least squares and median regressions generally had lower coefficients than the weighted versions. The weighted ordinary least squares (OLS) estimates had slightly higher coefficients than the weighted median regression. Additionally, the tests were made with different lower bound thresholds from 0 °C to 4 °C, and upper bound estimates from 3 °C to 10 °C, but these made virtually no difference to the estimates. A specification with both linear and quadratic terms was extremely unstable and was rejected.

The final estimate was an equation with a parameter of −0.236% loss in global income per degree Celsius squared; this leads to a damage of 2.1% of income at 3 °C, and 8.5% of global income at a global temperature rise of 6 °C. This coefficient is slightly smaller than the parameter in the DICE 2013R model (which was −0.267% per degree Celsius squared). The change from the earlier estimate is due to corrections in the estimates from the Tol numbers, inclusion of several studies that had been omitted from that study, greater care in the selection of studies to be included, and the use of weighted regressions.

The uncertainty of the damage coefficient is an ingredient in the uncertainty analysis discussed in *Uncertainty Estimates*. From a technical standpoint, the t statistic on the estimated coefficient is −7.8, so it is extremely well determined. However, this estimate does not reflect specification uncertainty, parameter uncertainty, or study dependence. As an illustration, the prediction of the different specifications at 3 °C is 3.8 times the SD for the one parameter specification and 2.2 times the SD for the two parameter specification. We have taken a polar value for the uncertainty of the damage parameter that is one half the parameter. This value reflects the great divergence today among different studies.

Decomposition of the Change in SCC

Calculating the decomposition of the SCC by major change is straightforward. It involves introducing parametric changes in a cumulative fashion. For example, the change in "Economics" involves using the earlier value of world GDP and productivity growth instead of the 2016 version.

Regional Estimates of SCC

The regional estimates of the SCC are drawn from ref. 2 for the three IAMs. The discounted value of GDP for different regions is constructed as follows: We took estimates of 2020 GDP for countries and regions from the IMF World Economic Outlook database for April 2016.

Uncertainty Estimates

To estimate the uncertainty of the SCC, we discretized the distributions of three key uncertain variables and estimated the SCC for each discrete combination. More precisely, the probability density functions (pdfs) for the variables were taken from the MUP (5) study for ETS and productivity growth and from the damage survey for the damage coefficient. The means and SDs

of the variables were (0.236, 0.118)% of income per degree Celsius squared for the damage parameter, (3.10, 0.84) °C for equilibrium CO_2 doubling for the ETS, and (1.52, 1.00)% per year for initial period productivity growth.

The pdfs for each of the three uncertain variables were divided into deciles, and the mean of each decile was calculated for each uncertain variable. The mean for each variable across its deciles was therefore the mean of the variable; this produces 1,000 equally probable states of the world, and runs were made for each state of the world with no policy. In terms of decision theory, these are an "act, then learn" set of outcomes. The SD of the SCC for 2015 was $31.5 per ton of CO_2.

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Social Costs of Greenhouse Gases

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Climate change imposes significant costs on society.

Scientific studies show that climate change will have, and in some cases has already had, severe consequences for society, like the spread of disease, increased food insecurity, and coastal destruction. These damages from emitting greenhouse gases are not reflected in the price of fossil fuels, creating what economists call "externalities." **The social cost of carbon (SCC) is a metric designed to quantify climate damages, representing the net economic cost of carbon dioxide emissions.** The SCC can be used to evaluate policies that affect greenhouse gas emissions. Simply, the SCC is a monetary estimate of the damage done by each ton of carbon dioxide[1] that is released into the air.

In order to maximize social welfare, policymakers must ensure that the market properly accounts for all externalities, like greenhouse gas pollution. By failing to account fully for carbon pollution, for example, policymakers would tip the scales in favor of dirtier energy sources, letting polluters pass the costs of their carbon emissions onto the public. **Incorporating the SCC into policy analysis removes that bias by accounting for the costs of such pollution.**

The Social Cost of Carbon is a critical tool, offering information to help assess policies.

The SCC allows federal agencies to weigh the benefits of mitigating climate change against the costs of limiting carbon pollution when they conduct regulatory analyses of federal actions that affect carbon emissions. To date, the SCC has been used to evaluate approximately 100 federal actions.

Any effort to limit the use of the SCC, or alter its value so it no longer reflects the best available science, would be detrimental to the public interest. Such efforts would threaten an important policy tool and conceal the economic impacts of climate change.

A federal court ruling spurred the development of the official U.S. SCC.

A ruling by the U.S. Court of Appeals for the Ninth Circuit in 2008 required the federal government to account for the economic effects of climate change in a regulatory impact analysis of fuel efficiency standards.[2] As a result, President Obama convened an Interagency Working Group (IWG) in 2009 to develop an SCC value for use in federal regulatory analysis. The SCC is now used in agencies' regulatory cost-benefit analyses and environmental impact statements of federal actions that affect greenhouse gas emissions. More recently, a 2016 ruling by the U.S. Court of Appeals for the Seventh Circuit upheld the Department of Energy's use of the SCC in its analysis of a rule on energy efficiency standards for commercial refrigerators.[3]

The SCC was developed through an academically rigorous, regularly updated and peer-reviewed process.

The IWG developed the SCC values using the three most widely cited climate economic impact models that link physical impacts to the economic damages of CO_2 emissions. All of these integrated assessment models—known as DICE, FUND, and PAGE[4]—have been extensively peer reviewed in the economic literature.[5] Each model translates emissions into changes in atmospheric carbon concentrations, atmospheric concentrations into temperature changes, and temperature changes into economic damages.[6] The IWG gives each model equal weight in developing the SCC values.[7]

The IWG used a robust, rigorous process, incorporating peer review of the estimates underlying the models and other inputs. Since its inception, **the IWG has met several times to update its modeling to incorporate new scientific literature, and has sought input from experts to ensure that the SCC is based on the latest science.** The most recent update by the IWG in 2016 reflects recommendations on the SCC from the National Academy of Sciences, and expands the group's analysis to include two additional potent greenhouse gases: methane and nitrous oxide.[8]

The National Academy of Sciences completed a robust review of the SCC calculation in 2017, lending additional credibility to the metric and endorsing several changes that would likely lead to a higher SCC estimate.[9] The National Academy of Sciences' full recommendations lay out future steps for the IWG to ensure that the SCC reflects the best available science and economics. The recommendations support the use of both declining discount rates (which would likely increase the SCC value) and a global damage calculation (more on both topics below). **Because the federal SCC estimates have been based on rigorous and peer-reviewed science and economics, these values are a good basis for thoughtful policy analysis.**

The SCC is the most accurate existing estimate of the external cost of carbon dioxide emissions.

The central SCC estimate of around $41 per ton of CO_2 (in 2016 dollars) is the best available estimate. Of course, there is uncertainty over the science and economics of climate change. This uncertainty is due to the complexity of the climate system, the difficulty of placing a monetary value on environmental services, the long time horizon over which climate change occurs, and the unprecedented amount of carbon emissions that have entered the atmosphere since the industrial revolution. As science and economics improve and progress, this uncertainty will decline, but **uncertainty can never be fully eliminated from future predictions. The fact that there is uncertainty about the exact impacts of climate change does not mean that there is no social cost of carbon dioxide emissions.** In fact, according to the models that calculate the SCC, uncertainty implies a higher SCC value and a need for more stringent climate policies.[10]

The SCC increases over time to reflect how the effects of climate change will intensify as more greenhouse gases accumulate in the atmosphere. The IWG's central estimate for 2050 will be almost $70.[11]

Several categories of climate damages are omitted from the SCC.

While the 2016 IWG estimate is the best available SCC figure, it **likely represents a lower bound for the costs of climate change** because the models omit several categories of damage. Many omissions result from a lack of readily available monetary damage estimates for certain climate impacts. Damages currently omitted from the models include the effects of climate change on fisheries; the effects of increased pest, disease, and fire pressures on agriculture and forests; and the effects of climate-induced migration. Additionally, these models omit the effects of climate change on economic growth and the rise in the future value of environmental services due to increased scarcity.[12]

U.S. states and corporations also use a value for the cost of carbon in their decisionmaking and planning.[13]

Increasingly, **U.S. states are using the federal SCC.** California, Illinois, Minnesota, Maine, New York, and Washington have begun using the federal SCC in energy-related decisionmaking.[14] Different states make different choices for what SCC estimates to use: Minnesota uses a range of SCC values; New York uses the "central" estimate (with a 3% discount rate); and Washington uses a higher estimate (based on a 2.5% discount rate). The importance of choosing the right SCC value is explored below.

Many major companies also quantify the cost of carbon pollution in their financial planning. According to a 2013 Carbon Disclosure Project (CDP) report, 29 prominent companies based in or doing business in the United States reported that they use an internal price on carbon pollution in their financial planning, to help weigh risks and opportunities related to climate change.[15]

Decisionmakers can choose from multiple SCC values.

The federal SCC estimates are not a single number, but instead a range of four estimates, based on three discount

rates, plus a 95th percentile estimate that represents catastrophic, low-probability outcomes.[16] Discount rates allow economists to measure the value of money over time—the tradeoff between what a dollar is worth today and what a dollar would be worth in the future.[17] Higher discount rates result in a lower SCC; if future climate damages are discounted at a high rate, we would be placing less value on avoiding those damages today. The IWG uses discount rates of 5, 3, and 2.5 percent.[18] The fourth value is taken from the 95th percentile of the SCC in all models with the 3-percent discount rate, which represents catastrophic but unlikely situations.[19] Frequently, agencies will conduct their economic analyses using a range of SCC values.[20] Other analyses will focus on a "central" estimate of the SCC.[21] The SCC estimate using the 3-percent discount rate is considered to be the "central" estimate.[22]

Choosing the most appropriate discount rate is crucial to obtaining the best SCC estimate. A policymaker might decide that the uncertainty associated with climate damages warrants using a discount rate that declines over time, leading to a higher SCC.[23] A consensus has emerged among leading climate economists that a declining discount rate should be used for climate damages, to reflect long-term uncertainty in interest rates. The National Academy of Sciences January 2017 recommendations to the IWG support this approach.[24] Furthermore, because several types of damage from climate change are missing or poorly quantified in the SCC estimates, **the federal SCC estimate associated with a 3-percent discount rate should be interpreted as a lower bound on the central estimate**.[25]

Finally, the global nature of climate change affects the scope of damages that go into the SCC calculations. Some commentators have argued that the SCC should include only domestic damages.[26] However, the IWG and many others have concluded that the SCC should reflect global climate damages, citing numerous reasons including the trans-border nature of most damages and the need to encourage international coordination to address climate change.[27] As the National Academy of Sciences and others have shown, disaggregating domestic damages from the models is exceedingly complex, and current approaches tend to ignore the interconnectedness of the global economy.[28] **Using a domestic-only SCC would underestimate the true extent of climate damages.**

The SCC includes benefits from climate change.

Some have argued against using the SCC because climate change might have some beneficial effects, which they imply are being ignored in the SCC. But many categories of benefits that might result from climate change, such as potential increases in agricultural yields, are already captured in the SCC estimate. Other benefits are omitted, such as the increased availability of oil due to higher temperatures in the Arctic and the potential for fewer transportation delays from snow and ice. However, **omitted negative impacts almost certainly counteract any omitted benefits**.[29] Other benefits from the use of fossil fuels that are unrelated to climate change (e.g., economic output) are omitted from the SCC estimates, but are included in any cost-benefit analysis in which the SCC is used. In such an analysis, the cost of a regulation, such as the potential loss of output, is always balanced against the benefits of carbon emissions reductions.

There are social cost estimates for other greenhouse gases.

The IWG has also developed robust federal estimates of the social cost of methane ($SC\text{-}CH_4$) and social cost of nitrous oxide ($SC\text{-}N_2O$). The $SC\text{-}CH_4$ and $SC\text{-}N_2O$ methodologies build directly on the IWG's SCC methodology, and replace the less accurate methodology of multiplying the SCC by these gases' relative global warming potential. Therefore, the same rigorous, consensus-based, transparent process used for the federal SCC has shaped the federal $SC\text{-}CH_4$ and federal $SC\text{-}N_2O$ estimates. Just as the federal SCC likely underestimates the true social cost of carbon, the

federal SC-CH_4 and SC-N_2O are **likely to underestimate the true social cost of these other greenhouse gases** due to omitted damages and uncertainties regarding the scope of the effects in the underlying models.[30] Nonetheless, the 2016 IWG SC-CH_4 and SC-N_2O are the best available estimates of the social costs associated with the emission of those greenhouse gases.

Endnotes

1 There are many ways to measure a ton (2000 pounds) of carbon dioxide. Simply, a ton of carbon dioxide is the amount of carbon dioxide that the average U.S. car emits in 2 to 2.5 months. An important distinction is that, because carbon dioxide consists of carbon and oxygen, 3.67 tons of carbon dioxide is equivalent to 1 ton of carbon.

2 *Ctr. for Biological Diversity v. Nat'l Highway Traffic and Safety Admin.*, 538 F.3d 1172 (9th Cir. 2008).

3 *Zero Zone, Inc. v. U.S. Dep't of Energy*, Case No. 14-2147 (7th Cir. Aug. 8, 2016).

4 More specifically: DICE (Dynamic Integrated Climate and Economy), developed by William Nordhaus (more information *available at* http://www.econ.yale.edu/~nordhaus/); PAGE (Policy Analysis of the Greenhouse Effect), developed by Chris Hope; and FUND (Climate Framework for Uncertainty, Negotiation, and Distribution), developed by Richard Tol (more information *available at* http://www.fund-model.org/). *See* Interagency Working Group On Social Cost Of Greenhouse Gases, United States Government, Technical Support Document: Social Cost Of Carbon For Regulatory Impact Analysis Under Executive Order 12866, at II-3 (2010) 14A-5 n.b. [hereinafter 2010 TSD].

5 *See id.* at 14A-4.

6 *Id.* at 14A-6.

7 *Id.* at 14A-5.

8 Interagency Working Group On Social Cost Of Greenhouse Gases, United States Government, Technical Support Document: Technical Update Of The Social Cost Of Carbon For Regulatory Impact Analysis Under Executive Order 12866 (2016) [hereinafter 2016 TSD].

9 *See* Chelsea Harvey, *Scientists have a new way to calculate what global warming costs. Trump's team isn't going to like It*, The Washington Post (Jan. 2017), *available at* https://www.washingtonpost.com/news/energy-environment/wp/2017/01/12/scientists-have-a-new-way-to-calculate-what-global-warming-costs-trumps-team-isnt-going-to-like-it.

10 William D. Nordhaus, *Revisting the Social Cost of Carbon*, 514 Proc. Natl. Acad. Sci. U.S.A. 7 (2017).

11 EPA, The Social Cost of Carbon: Estimating the Benefits of Reducing Greenhouse Gas Emissions, *available at* https://perma.cc/94LF-5M7D.

12 Peter Howard, Cost Of Carbon Project, Omitted Damages: What's Missing From The Social Cost Of Carbon (2014), *available at* http://costofcarbon.org/files/Omitted_Damages_Whats_Missing_From_the_Social_Cost_of_Carbon.pdf [hereinafter Omitted Damages].

13 Many other nations also use the SCC or similar concepts in making regulatory decisions, including France, Germany, Norway, and the United Kingdom. Canada and Mexico have harmonized their SCC estimates with the U.S. federal estimates, while many other countries estimate their own SCC; Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations, SOR/2012-167, 146 Can. Gazette pt. II, 1951, 2000, 2044 (Can.), *available at* http://www.gazette.gc.ca/rp-pr/p2/2012/2012-09-12/html/sor-dors167-eng.html.

14 *See* Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, New York Public Service Commission Case No. 14-M-0101, Institute for Policy Integrity Comments on Staff White Paper on Benefit-Cost

Analysis in the Reforming Energy Vision Proceeding, Filing No. 447, at 22 (Aug. 21, 2015).

[15] These companies include Microsoft, General Electric, Walt Disney, ConAgra Foods, Wells Fargo, DuPont, Duke Energy, Google, Delta Air Lines, Walmart, and PG&E. The Exxon Mobil Corporation uses $80 for a metric ton of CO_2 emissions in 2040 (http://www.eenews.net/climatewire/2016/12/16/stories/1060047318); this exceeds the central U.S. SCC estimate for 2040.

[16] 2010 TSD *supra* note 4; Interagency Working Group On The Social Cost Of Carbon, Technical Support Document: Technical Update Of The Social Cost Of Carbon For Regulatory Impact Analysis Under Executive Order 12866 (2013); Interagency Working Group on the Social Cost of Carbon, Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866 (2015); 2016 TSD *supra* note 8.

[17] If offered $1 now or $1 in a year, almost everyone would choose to receive the $1 now. Most individuals would only wait until next year if they were offered more money in the future. The discount rate is how much more you would have to receive to wait until next year.

[18] The IWG correctly excluded a 7% discount rate, a standard private sector rate of return on capital, in its SCC calculations for two main reasons. First, typical financial decisions, such as how much to save in a bank account, focus on private decisions and use private rates of return. However, in the context of climate change, analysts are concerned with social discount rates because emissions mitigation is a public good, where individual emissions choices affect public well-being broadly. Second, climate change is expected to primarily affect consumption, not traditional capital investments.

[19] *See* Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Natural Resources Defense Council, and Union of Concerned Scientists. Comments on Proposed Exception to the Colorado Roadless Rule (RIN 0596-AD26) and Supplemental Draft Environmental Impact Statement (November 2015) to Forest Service; Council on Environmental Quality; Office of Information and Regulatory Affairs to describe importance of 95th percentile value.

[20] *See, e.g.*, Energy Conservation Program: Energy Conservation Standards for Miscellaneous Refrigeration Products, 81 Fed. Reg. 75,194 (Oct. 26, 2016); Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, 81 Fed. Reg. 74,504 (Oct. 26, 2016).

[21] *See, e.g.*, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Establishing the Benefit Cost Analysis Framework, New York Public Service Comm'n Case No. 14-M-0101 (Jan. 21, 2016).

[22] According to the 2010 TSD, the 3% discount rate estimate is considered the central estimate because it uses the central (i.e., middle) discount rate and is based on an average, rather than worse-than-expected, climate outcome; the average climate outcome is the standard assumption made by the IWG 2010 TSD, *supra* 4 note.

[23] *See* Martin L. Weitzman, *Gamma Discounting*, 91 Am. Econ. Rev. 260, 270 (2001); Kenneth J. Arrow et al., *Determining Benefits and Costs for Future Generations*, 341 Science 349 (2013); Kenneth J. Arrow et al., *Should Governments Use a Declining Discount Rate in Project Analysis?*, 8 Rev Envtl. Econ. & Policy 1 (2014); Maureen L. Cropper et al., *Declining Discount Rates*, 104 Am. Econ. Rev. 538 (2014); Christian Gollier & Martin L. Weitzman, *How Should the Distant Future Be Discounted When Discount Rates Are Uncertain?* 107 Economics Letters 3 (2010). Policy Integrity further explores the use of declining discount rates in its recent comments to the National Academies of Sciences. *See* Institute for Policy Integrity at NYU School of Law. Recommendations for Changes to the Final Phase 1 Report on the Social Cost of Carbon; Recommendations in Anticipation of the Phase 2 Report on the Social Cost of Carbon to the National Academies of Sciences (April 29, 2016).

[24] National Academies of Sciences, Engineering and Medicine, *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide*, National Academies Press (January 2017) [hereinafter *Valuing Climate Damages*].

[25] *See* Omitted Damages, *supra* note 12; Richard L. Revesz et al., *Global Warming: Improve Economic Models of Climate Change*, 508 Nature 173 (2014) (co-authored with Nobel laureate Kenneth Arrow).

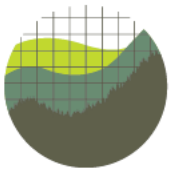
[26] Ted Gayer & W. Kip Viscusi, *Determining the Proper Scope of Climate Change Benefits* (Vanderbilt Law and Economics Working Paper 14-20, 2015).

[27] E.g., Peter Howard and Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon* (Institute for Policy Integrity at NYU School of Law Working Paper, 2016).

[28] *Valuing Climate Damages*, *supra* note 24 at 12-13.

[29] *See* OMITTED DAMAGES, *supra* note 11.

[30] Marten, A.L., E.A. Kopits, C.W. Griffiths, S.C. Newbold and A. Wolverton, *Incremental CH4 and N2O Mitigation Benefits Consistent with the U.S. Government's SCC Estimates*, CLIMATE POLICY (2014), DOI: 10.1080/14693062.2014.912981; Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Natural Resources Defense Council, and Union of Concerned Scientists Comments on EERE-2015-BT-STD-0016, Energy Conservation Standards for WICF Refrigeration System and EERE-2014-BT-STD-0031, Energy Conservation Standards for Residential Furnaces (November 7, 2016).



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With participation by

Council of Economic Advisers
Council on Environmental Quality
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Executive Summary

Under Executive Order 12866, agencies are required, to the extent permitted by law, "to assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." The purpose of the "social cost of carbon" (SCC) estimates presented here is to allow agencies to incorporate the social benefits of reducing carbon dioxide (CO_2) emissions into cost-benefit analyses of regulatory actions that have small, or "marginal," impacts on cumulative global emissions. The estimates are presented with an acknowledgement of the many uncertainties involved and with a clear understanding that they should be updated over time to reflect increasing knowledge of the science and economics of climate impacts.

The SCC is an estimate of the monetized damages associated with an incremental increase in carbon emissions in a given year. It is intended to include (but is not limited to) changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change.

This document presents a summary of the interagency process that developed these SCC estimates. Technical experts from numerous agencies met on a regular basis to consider public comments, explore the technical literature in relevant fields, and discuss key model inputs and assumptions. The main objective of this process was to develop a range of SCC values using a defensible set of input assumptions grounded in the existing scientific and economic literatures. In this way, key uncertainties and model differences transparently and consistently inform the range of SCC estimates used in the rulemaking process.

The interagency group selected four SCC values for use in regulatory analyses. Three values are based on the average SCC from three integrated assessment models, at discount rates of 2.5, 3, and 5 percent. The fourth value, which represents the 95th percentile SCC estimate across all three models at a 3 percent discount rate, is included to represent higher-than-expected impacts from temperature change further out in the tails of the SCC distribution.

Social Cost of CO_2, 2010 – 2050 (in 2007 dollars)

Discount Rate	5%	3%	2.5%	3%
Year	Avg	Avg	Avg	95th
2010	4.7	21.4	35.1	64.9
2015	5.7	23.8	38.4	72.8
2020	6.8	26.3	41.7	80.7
2025	8.2	29.6	45.9	90.4
2030	9.7	32.8	50.0	100.0
2035	11.2	36.0	54.2	109.7
2040	12.7	39.2	58.4	119.3
2045	14.2	42.1	61.7	127.8
2050	15.7	44.9	65.0	136.2

I. Monetizing Carbon Dioxide Emissions

The "social cost of carbon" (SCC) is an estimate of the monetized damages associated with an incremental increase in carbon emissions in a given year. It is intended to include (but is not limited to) changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services. We report estimates of the social cost of carbon in dollars per metric ton of carbon dioxide throughout this document.[1]

When attempting to assess the incremental economic impacts of carbon dioxide emissions, the analyst faces a number of serious challenges. A recent report from the National Academies of Science (NRC 2009) points out that any assessment will suffer from uncertainty, speculation, and lack of information about (1) future emissions of greenhouse gases, (2) the effects of past and future emissions on the climate system, (3) the impact of changes in climate on the physical and biological environment, and (4) the translation of these environmental impacts into economic damages. As a result, any effort to quantify and monetize the harms associated with climate change will raise serious questions of science, economics, and ethics and should be viewed as provisional.

Despite the serious limits of both quantification and monetization, SCC estimates can be useful in estimating the social benefits of reducing carbon dioxide emissions. Under Executive Order 12866, agencies are required, to the extent permitted by law, "to assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." The purpose of the SCC estimates presented here is to make it possible for agencies to incorporate the social benefits from reducing carbon dioxide emissions into cost-benefit analyses of regulatory actions that have small, or "marginal," impacts on cumulative global emissions. Most federal regulatory actions can be expected to have marginal impacts on global emissions.

For such policies, the benefits from reduced (or costs from increased) emissions in any future year can be estimated by multiplying the change in emissions in that year by the SCC value appropriate for that year. The net present value of the benefits can then be calculated by multiplying each of these future benefits by an appropriate discount factor and summing across all affected years. This approach assumes that the marginal damages from increased emissions are constant for small departures from the baseline emissions path, an approximation that is reasonable for policies that have effects on emissions that are small relative to cumulative global carbon dioxide emissions. For policies that have a large (non-marginal) impact on global cumulative emissions, there is a separate question of whether the SCC is an appropriate tool for calculating the benefits of reduced emissions; we do not attempt to answer that question here.

An interagency group convened on a regular basis to consider public comments, explore the technical literature in relevant fields, and discuss key inputs and assumptions in order to generate SCC estimates. Agencies that actively participated in the interagency process include the Environmental Protection

[1] In this document, we present all values of the SCC as the cost per metric ton of CO_2 emissions. Alternatively, one could report the SCC as the cost per metric ton of carbon emissions. The multiplier for translating between mass of CO_2 and the mass of carbon is 3.67 (the molecular weight of CO_2 divided by the molecular weight of carbon = 44/12 = 3.67).

Agency, and the Departments of Agriculture, Commerce, Energy, Transportation, and Treasury. This process was convened by the Council of Economic Advisers and the Office of Management and Budget, with active participation and regular input from the Council on Environmental Quality, National Economic Council, Office of Energy and Climate Change, and Office of Science and Technology Policy. The main objective of this process was to develop a range of SCC values using a defensible set of input assumptions that are grounded in the existing literature. In this way, key uncertainties and model differences can more transparently and consistently inform the range of SCC estimates used in the rulemaking process.

The interagency group selected four SCC estimates for use in regulatory analyses. For 2010, these estimates are $5, $21, $35, and $65 (in 2007 dollars). The first three estimates are based on the average SCC across models and socio-economic and emissions scenarios at the 5, 3, and 2.5 percent discount rates, respectively. The fourth value is included to represent the higher-than-expected impacts from temperature change further out in the tails of the SCC distribution. For this purpose, we use the SCC value for the 95th percentile at a 3 percent discount rate. The central value is the average SCC across models at the 3 percent discount rate. For purposes of capturing the uncertainties involved in regulatory impact analysis, we emphasize the importance and value of considering the full range. These SCC estimates also grow over time. For instance, the central value increases to $24 per ton of CO_2 in 2015 and $26 per ton of CO_2 in 2020. See Appendix A for the full range of annual SCC estimates from 2010 to 2050.

It is important to emphasize that the interagency process is committed to updating these estimates as the science and economic understanding of climate change and its impacts on society improves over time. Specifically, we have set a preliminary goal of revisiting the SCC values within two years or at such time as substantially updated models become available, and to continue to support research in this area. In the meantime, we will continue to explore the issues raised in this document and consider public comments as part of the ongoing interagency process.

II. Social Cost of Carbon Values Used in Past Regulatory Analyses

To date, economic analyses for Federal regulations have used a wide range of values to estimate the benefits associated with reducing carbon dioxide emissions. In the final model year 2011 CAFE rule, the Department of Transportation (DOT) used both a "domestic" SCC value of $2 per ton of CO_2 and a "global" SCC value of $33 per ton of CO_2 for 2007 emission reductions (in 2007 dollars), increasing both values at 2.4 percent per year. It also included a sensitivity analysis at $80 per ton of CO_2. A domestic SCC value is meant to reflect the value of damages in the United States resulting from a unit change in carbon dioxide emissions, while a global SCC value is meant to reflect the value of damages worldwide.

A 2008 regulation proposed by DOT assumed a domestic SCC value of $7 per ton CO_2 (in 2006 dollars) for 2011 emission reductions (with a range of $0-$14 for sensitivity analysis), also increasing at 2.4 percent per year. A regulation finalized by DOE in October of 2008 used a domestic SCC range of $0 to $20 per ton CO_2 for 2007 emission reductions (in 2007 dollars). In addition, EPA's 2008 Advance Notice of Proposed Rulemaking for Greenhouse Gases identified what it described as "very preliminary" SCC estimates subject to revision. EPA's global mean values were $68 and $40 per ton CO_2 for discount rates of approximately 2 percent and 3 percent, respectively (in 2006 dollars for 2007 emissions).

In 2009, an interagency process was initiated to offer a preliminary assessment of how best to quantify the benefits from reducing carbon dioxide emissions. To ensure consistency in how benefits are evaluated across agencies, the Administration sought to develop a transparent and defensible method, specifically designed for the rulemaking process, to quantify avoided climate change damages from reduced CO_2 emissions. The interagency group did not undertake any original analysis. Instead, it combined SCC estimates from the existing literature to use as interim values until a more comprehensive analysis could be conducted.

The outcome of the preliminary assessment by the interagency group was a set of five interim values: global SCC estimates for 2007 (in 2006 dollars) of $55, $33, $19, $10, and $5 per ton of CO_2. The $33 and $5 values represented model-weighted means of the published estimates produced from the most recently available versions of three integrated assessment models—DICE, PAGE, and FUND—at approximately 3 and 5 percent discount rates. The $55 and $10 values were derived by adjusting the published estimates for uncertainty in the discount rate (using factors developed by Newell and Pizer (2003)) at 3 and 5 percent discount rates, respectively. The $19 value was chosen as a central value between the $5 and $33 per ton estimates. All of these values were assumed to increase at 3 percent annually to represent growth in incremental damages over time as the magnitude of climate change increases.

These interim values represent the first sustained interagency effort within the U.S. government to develop an SCC for use in regulatory analysis. The results of this preliminary effort were presented in several proposed and final rules and were offered for public comment in connection with proposed rules, including the joint EPA-DOT fuel economy and CO_2 tailpipe emission proposed rules.

III. Approach and Key Assumptions

Since the release of the interim values, interagency group has reconvened on a regular basis to generate improved SCC estimates. Specifically, the group has considered public comments and further explored the technical literature in relevant fields. This section details the several choices and assumptions that underlie the resulting estimates of the SCC.

It is important to recognize that a number of key uncertainties remain, and that current SCC estimates should be treated as provisional and revisable since they will evolve with improved scientific and economic understanding. The interagency group also recognizes that the existing models are imperfect and incomplete. The National Academy of Science (2009) points out that there is tension between the goal of producing quantified estimates of the economic damages from an incremental ton of carbon and the limits of existing efforts to model these effects. Throughout this document, we highlight a number of concerns and problems that should be addressed by the research community, including research programs housed in many of the agencies participating in the interagency process to estimate the SCC.

The U.S. Government will periodically review and reconsider estimates of the SCC used for cost-benefit analyses to reflect increasing knowledge of the science and economics of climate impacts, as well as improvements in modeling. In this context, statements recognizing the limitations of the analysis and calling for further research take on exceptional significance. The interagency group offers the new SCC values with all due humility about the uncertainties embedded in them and with a sincere promise to continue work to improve them.

A. Integrated Assessment Models

We rely on three integrated assessment models (IAMs) commonly used to estimate the SCC: the FUND, DICE, and PAGE models.[2] These models are frequently cited in the peer-reviewed literature and used in the IPCC assessment. Each model is given equal weight in the SCC values developed through this process, bearing in mind their different limitations (discussed below).

These models are useful because they combine climate processes, economic growth, and feedbacks between the climate and the global economy into a single modeling framework. At the same time, they gain this advantage at the expense of a more detailed representation of the underlying climatic and economic systems. DICE, PAGE, and FUND all take stylized, reduced-form approaches (see NRC 2009 for a more detailed discussion; see Nordhaus 2008 on the possible advantages of this approach). Other IAMs may better reflect the complexity of the science in their modeling frameworks but do not link physical impacts to economic damages. There is currently a limited amount of research linking climate impacts to economic damages, which makes this exercise even more difficult. Underlying the three IAMs selected for this exercise are a number of simplifying assumptions and judgments reflecting the various modelers' best attempts to synthesize the available scientific and economic research characterizing these relationships.

The three IAMs translate emissions into changes in atmospheric greenhouse concentrations, atmospheric concentrations into changes in temperature, and changes in temperature into economic damages. The emissions projections used in the models are based on specified socio-economic (GDP and population) pathways. These emissions are translated into concentrations using the carbon cycle built into each model, and concentrations are translated into warming based on each model's simplified representation of the climate and a key parameter, climate sensitivity. Each model uses a different approach to translate warming into damages. Finally, transforming the stream of economic damages over time into a single value requires judgments about how to discount them.

Each model takes a slightly different approach to model how changes in emissions result in changes in economic damages. In PAGE, for example, the consumption-equivalent damages in each period are calculated as a fraction of GDP, depending on the temperature in that period relative to the pre-industrial average temperature in each region. In FUND, damages in each period also depend on the rate of temperature change from the prior period. In DICE, temperature affects both consumption and investment. We describe each model in greater detail here. In a later section, we discuss key gaps in how the models account for various scientific and economic processes (e.g. the probability of catastrophe, and the ability to adapt to climate change and the physical changes it causes).

[2] The DICE (Dynamic Integrated Climate and Economy) model by William Nordhaus evolved from a series of energy models and was first presented in 1990 (Nordhaus and Boyer 2000, Nordhaus 2008). The PAGE (Policy Analysis of the Greenhouse Effect) model was developed by Chris Hope in 1991 for use by European decision-makers in assessing the marginal impact of carbon emissions (Hope 2006, Hope 2008). The FUND (Climate Framework for Uncertainty, Negotiation, and Distribution) model, developed by Richard Tol in the early 1990s, originally to study international capital transfers in climate policy. is now widely used to study climate impacts (e.g., Tol 2002a, Tol 2002b, Anthoff et al. 2009, Tol 2009).

The parameters and assumptions embedded in the three models vary widely. A key objective of the interagency process was to enable a consistent exploration of the three models while respecting the different approaches to quantifying damages taken by the key modelers in the field. An extensive review of the literature was conducted to select three sets of input parameters for these models: climate sensitivity, socio-economic and emissions trajectories, and discount rates. A probability distribution for climate sensitivity was specified as an input into all three models. In addition, the interagency group used a range of scenarios for the socio-economic parameters and a range of values for the discount rate. All other model features were left unchanged, relying on the model developers' best estimates and judgments. In DICE, these parameters are handled deterministically and represented by fixed constants; in PAGE, most parameters are represented by probability distributions. FUND was also run in a mode in which parameters were treated probabilistically.

The sensitivity of the results to other aspects of the models (e.g. the carbon cycle or damage function) is also important to explore in the context of future revisions to the SCC but has not been incorporated into these estimates. Areas for future research are highlighted at the end of this document.

The DICE Model

The DICE model is an optimal growth model based on a global production function with an extra stock variable (atmospheric carbon dioxide concentrations). Emission reductions are treated as analogous to investment in "natural capital." By investing in natural capital today through reductions in emissions—implying reduced consumption—harmful effects of climate change can be avoided and future consumption thereby increased.

For purposes of estimating the SCC, carbon dioxide emissions are a function of global GDP and the carbon intensity of economic output, with the latter declining over time due to technological progress. The DICE damage function links global average temperature to the overall impact on the world economy. It varies quadratically with temperature change to capture the more rapid increase in damages expected to occur under more extreme climate change, and is calibrated to include the effects of warming on the production of market and nonmarket goods and services. It incorporates impacts on agriculture, coastal areas (due to sea level rise), "other vulnerable market sectors" (based primarily on changes in energy use), human health (based on climate-related diseases, such as malaria and dengue fever, and pollution), non-market amenities (based on outdoor recreation), and human settlements and ecosystems. The DICE damage function also includes the expected value of damages associated with low probability, high impact "catastrophic" climate change. This last component is calibrated based on a survey of experts (Nordhaus 1994). The expected value of these impacts is then added to the other market and non-market impacts mentioned above.

No structural components of the DICE model represent adaptation explicitly, though it is included implicitly through the choice of studies used to calibrate the aggregate damage function. For example, its agricultural impact estimates assume that farmers can adjust land use decisions in response to changing climate conditions, and its health impact estimates assume improvements in healthcare over time. In addition, the small impacts on forestry, water systems, construction, fisheries, and outdoor recreation imply optimistic and costless adaptation in these sectors (Nordhaus and Boyer, 2000; Warren

et al., 2006). Costs of resettlement due to sea level rise are incorporated into damage estimates, but their magnitude is not clearly reported. Mastrandrea's (2009) review concludes that "in general, DICE assumes very effective adaptation, and largely ignores adaptation costs."

Note that the damage function in DICE has a somewhat different meaning from the damage functions in FUND and PAGE. Because GDP is endogenous in DICE and because damages in a given year reduce investment in that year, damages propagate forward in time and reduce GDP in future years. In contrast, GDP is exogenous in FUND and PAGE, so damages in any given year do not propagate forward.[3]

The PAGE Model

PAGE2002 (version 1.4epm) treats GDP growth as exogenous. It divides impacts into economic, non-economic, and catastrophic categories and calculates these impacts separately for eight geographic regions. Damages in each region are expressed as a fraction of output, where the fraction lost depends on the temperature change in each region. Damages are expressed as power functions of temperature change. The exponents of the damage function are the same in all regions but are treated as uncertain, with values ranging from 1 to 3 (instead of being fixed at 2 as in DICE).

PAGE2002 includes the consequences of catastrophic events in a separate damage sub-function. Unlike DICE, PAGE2002 models these events probabilistically. The probability of a "discontinuity" (i.e., a catastrophic event) is assumed to increase with temperature above a specified threshold. The threshold temperature, the rate at which the probability of experiencing a discontinuity increases above the threshold, and the magnitude of the resulting catastrophe are all modeled probabilistically.

Adaptation is explicitly included in PAGE. Impacts are assumed to occur for temperature increases above some tolerable level (2°C for developed countries and 0°C for developing countries for economic impacts, and 0°C for all regions for non-economic impacts), but adaptation is assumed to reduce these impacts. Default values in PAGE2002 assume that the developed countries can ultimately eliminate up to 90 percent of all economic impacts beyond the tolerable 2°C increase and that developing countries can eventually eliminate 50 percent of their economic impacts. All regions are assumed to be able to mitigate 25 percent of the non-economic impacts through adaptation (Hope 2006).

The FUND Model

Like PAGE, the FUND model treats GDP growth as exogenous. It includes separately calibrated damage functions for eight market and nonmarket sectors: agriculture, forestry, water, energy (based on heating and cooling demand), sea level rise (based on the value of land lost and the cost of protection),

[3] Using the default assumptions in DICE 2007, this effect generates an approximately 25 percent increase in the SCC relative to damages calculated by fixing GDP. In DICE2007, the time path of GDP is endogenous. Specifically, the path of GDP depends on the rate of saving and level of abatement in each period chosen by the optimizing representative agent in the model. We made two modifications to DICE to make it consistent with EMF GDP trajectories (see next section): we assumed a fixed rate of savings of 20%, and we re-calibrated the exogenous path of total factor productivity so that DICE would produce GDP projections in the absence of warming that exactly matched the EMF scenarios.

ecosystems, human health (diarrhea, vector-borne diseases, and cardiovascular and respiratory mortality), and extreme weather. Each impact sector has a different functional form, and is calculated separately for sixteen geographic regions. In some impact sectors, the fraction of output lost or gained due to climate change depends not only on the absolute temperature change but also on the rate of temperature change and level of regional income.[4] In the forestry and agricultural sectors, economic damages also depend on CO_2 concentrations.

Tol (2009) discusses impacts not included in FUND, noting that many are likely to have a relatively small effect on damage estimates (both positive and negative). However, he characterizes several omitted impacts as "big unknowns": for instance, extreme climate scenarios, biodiversity loss, and effects on economic development and political violence. With regard to potentially catastrophic events, he notes, "Exactly what would cause these sorts of changes or what effects they would have are not well-understood, although the chance of any one of them happening seems low. But they do have the potential to happen relatively quickly, and if they did, the costs could be substantial. Only a few studies of climate change have examined these issues."

Adaptation is included both implicitly and explicitly in FUND. Explicit adaptation is seen in the agriculture and sea level rise sectors. Implicit adaptation is included in sectors such as energy and human health, where wealthier populations are assumed to be less vulnerable to climate impacts. For example, the damages to agriculture are the sum of three effects: (1) those due to the rate of temperature change (damages are always positive); (2) those due to the level of temperature change (damages can be positive or negative depending on region and temperature); and (3) those from CO_2 fertilization (damages are generally negative but diminishing to zero).

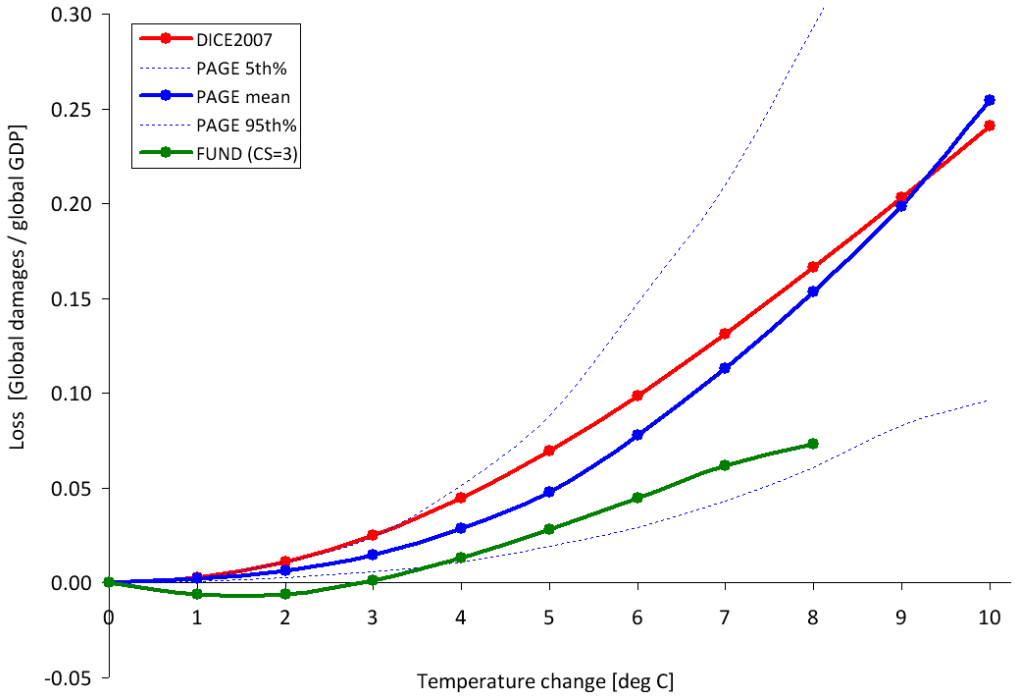
Adaptation is incorporated into FUND by allowing damages to be smaller if climate change happens more slowly. The combined effect of CO_2 fertilization in the agricultural sector, positive impacts to some regions from higher temperatures, and sufficiently slow increases in temperature across these sectors can result in negative economic damages from climate change.

Damage Functions

To generate revised SCC values, we rely on the IAM modelers' current best judgments of how to represent the effects of climate change (represented by the increase in global-average surface temperature) on the consumption-equivalent value of both market and non-market goods (represented as a fraction of global GDP). We recognize that these representations are incomplete and highly uncertain. But given the paucity of data linking the physical impacts to economic damages, we were not able to identify a better way to translate changes in climate into net economic damages, short of launching our own research program.

[4] In the deterministic version of FUND, the majority of damages are attributable to increased air conditioning demand, while reduced cold stress in Europe, North America, and Central and East Asia results in health benefits in those regions at low to moderate levels of warming (Warren et al., 2006).

Figure 1A: Annual Consumption Loss as a Fraction of Global GDP in 2100 Due to an Increase in Annual - Global Temperature in the DICE, FUND, and PAGE models[5]



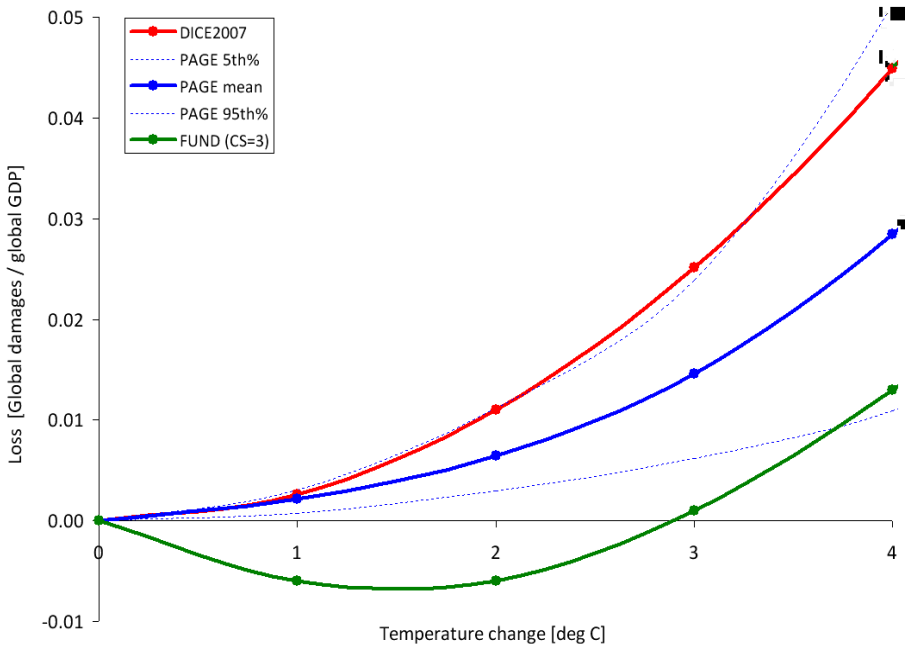
The damage functions for the three IAMs are presented in Figures 1A and 1B, using the modeler's default scenarios and mean input assumptions. There are significant differences between the three models both at lower (figure 1B) and higher (figure 1A) increases in global-average temperature.

The lack of agreement among the models at lower temperature increases is underscored by the fact that the damages from FUND are well below the 5th percentile estimated by PAGE, while the damages estimated by DICE are roughly equal to the 95th percentile estimated by PAGE. This is significant because at higher discount rates we expect that a greater proportion of the SCC value is due to damages in years with lower temperature increases. For example, when the discount rate is 2.5 percent, about 45 percent of the 2010 SCC value in DICE is due to damages that occur in years when the temperature is less than or equal to 3 °C. This increases to approximately 55 percent and 80 percent at discount rates of 3 and 5 percent, respectively.

These differences underscore the need for a thorough review of damage functions—in particular, how the models incorporate adaptation, technological change, and catastrophic damages. Gaps in the literature make modifying these aspects of the models challenging, which highlights the need for additional research. As knowledge improves, the Federal government is committed to exploring how these (and other) models can be modified to incorporate more accurate estimates of damages.

[5] The x-axis represents increases in annual, rather than equilibrium, temperature, while the y-axis represents the annual stream of benefits as a share of global GDP. Each specific combination of climate sensitivity, socio-economic, and emissions parameters will produce a different realization of damages for each IAM. The damage functions represented in Figures 1A and 1B are the outcome of default assumptions. For instance, under alternate assumptions, the damages from FUND may cross from negative to positive at less than or greater than 3 °C.

Figure 1B: Annual Consumption Loss for Lower Temperature Changes in DICE, FUND, and PAGE -



B. Global versus Domestic Measures of SCC

Because of the distinctive nature of the climate change problem, we center our current attention on a global measure of SCC. This approach is the same as that taken for the interim values, but it otherwise represents a departure from past practices, which tended to put greater emphasis on a domestic measure of SCC (limited to impacts of climate change experienced within U.S. borders). As a matter of law, consideration of both global and domestic values is generally permissible; the relevant statutory provisions are usually ambiguous and allow selection of either measure.[6]

Global SCC

Under current OMB guidance contained in Circular A-4, analysis of economically significant proposed and final regulations from the domestic perspective is required, while analysis from the international perspective is optional. However, the climate change problem is highly unusual in at least two respects. First, it involves a global externality: emissions of most greenhouse gases contribute to damages around the world even when they are emitted in the United States. Consequently, to address the global nature of the problem, the SCC must incorporate the full (global) damages caused by GHG emissions. Second, climate change presents a problem that the United States alone cannot solve. Even if the United States were to reduce its greenhouse gas emissions to zero, that step would be far from enough to avoid substantial climate change. Other countries would also need to take action to reduce emissions if

[6] It is true that federal statutes are presumed not to have extraterritorial effect, in part to ensure that the laws of the United States respect the interests of foreign sovereigns. But use of a global measure for the SCC does not give extraterritorial effect to federal law and hence does not intrude on such interests.

significant changes in the global climate are to be avoided. Emphasizing the need for a global solution to a global problem, the United States has been actively involved in seeking international agreements to reduce emissions and in encouraging other nations, including emerging major economies, to take significant steps to reduce emissions. When these considerations are taken as a whole, the interagency group concluded that a global measure of the benefits from reducing U.S. emissions is preferable.

When quantifying the damages associated with a change in emissions, a number of analysts (e.g., Anthoff, et al. 2009a) employ "equity weighting" to aggregate changes in consumption across regions. This weighting takes into account the relative reductions in wealth in different regions of the world. A per-capita loss of $500 in GDP, for instance, is weighted more heavily in a country with a per-capita GDP of $2,000 than in one with a per-capita GDP of $40,000. The main argument for this approach is that a loss of $500 in a poor country causes a greater reduction in utility or welfare than does the same loss in a wealthy nation. Notwithstanding the theoretical claims on behalf of equity weighting, the interagency group concluded that this approach would not be appropriate for estimating a SCC value used in domestic regulatory analysis.[7] For this reason, the group concluded that using the global (rather than domestic) value, without equity weighting, is the appropriate approach.

Domestic SCC

As an empirical matter, the development of a domestic SCC is greatly complicated by the relatively few region- or country-specific estimates of the SCC in the literature. One potential source of estimates comes from the FUND model. The resulting estimates suggest that the ratio of domestic to global benefits of emission reductions varies with key parameter assumptions. For example, with a 2.5 or 3 percent discount rate, the U.S. benefit is about 7-10 percent of the global benefit, on average, across the scenarios analyzed. Alternatively, if the fraction of GDP lost due to climate change is assumed to be similar across countries, the domestic benefit would be proportional to the U.S. share of global GDP, which is currently about 23 percent.[8]

On the basis of this evidence, the interagency workgroup determined that a range of values from 7 to 23 percent should be used to adjust the global SCC to calculate domestic effects. Reported domestic values should use this range. It is recognized that these values are approximate, provisional, and highly speculative. There is no a priori reason why domestic benefits should be a constant fraction of net global damages over time. Further, FUND does not account for how damages in other regions could affect the United States (e.g., global migration, economic and political destabilization). If more accurate methods for calculating the domestic SCC become available, the Federal government will examine these to determine whether to update its approach.

[7] It is plausible that a loss of $X inflicts more serious harm on a poor nation than on a wealthy one, but development of the appropriate "equity weight" is challenging. Emissions reductions also impose costs, and hence a full account would have to consider that a given cost of emissions reductions imposes a greater utility or welfare loss on a poor nation than on a wealthy one. Even if equity weighting—for both the costs and benefits of emissions reductions—is appropriate when considering the utility or welfare effects of international action, the interagency group concluded that it should not be used in developing an SCC for use in regulatory policy at this time.

[8] Based on 2008 GDP (in current US dollars) from the *World Bank Development Indicators Report*.

C. Valuing Non-CO_2 Emissions

While CO_2 is the most prevalent greenhouse gas emitted into the atmosphere, the U.S. included five other greenhouse gases in its recent endangerment finding: methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The climate impact of these gases is commonly discussed in terms of their 100-year global warming potential (GWP). GWP measures the ability of different gases to trap heat in the atmosphere (i.e., radiative forcing per unit of mass) over a particular timeframe relative to CO_2. However, because these gases differ in both radiative forcing and atmospheric lifetimes, their relative damages are not constant over time. For example, because methane has a short lifetime, its impacts occur primarily in the near term and thus are not discounted as heavily as those caused by longer-lived gases. Impacts other than temperature change also vary across gases in ways that are not captured by GWP. For instance, CO_2 emissions, unlike methane and other greenhouse gases, contribute to ocean acidification. Likewise, damages from methane emissions are not offset by the positive effect of CO_2 fertilization. Thus, transforming gases into CO_2-equivalents using GWP, and then multiplying the carbon-equivalents by the SCC, would not result in accurate estimates of the social costs of non-CO_2 gases.

In light of these limitations, and the significant contributions of non-CO_2 emissions to climate change, further research is required to link non-CO_2 emissions to economic impacts. Such work would feed into efforts to develop a monetized value of reductions in non-CO_2 greenhouse gas emissions. As part of ongoing work to further improve the SCC estimates, the interagency group hopes to develop methods to value these other greenhouse gases. The goal is to develop these estimates by the time we issue revised SCC estimates for carbon dioxide emissions.

D. Equilibrium Climate Sensitivity

Equilibrium climate sensitivity (ECS) is a key input parameter for the DICE, PAGE, and FUND models.[9] It is defined as the long-term increase in the annual global-average surface temperature from a doubling of atmospheric CO_2 concentration relative to pre-industrial levels (or stabilization at a concentration of approximately 550 parts per million (ppm)). Uncertainties in this important parameter have received substantial attention in the peer-reviewed literature.

The most authoritative statement about equilibrium climate sensitivity appears in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC):

> *Basing our assessment on a combination of several independent lines of evidence…including observed climate change and the strength of known feedbacks simulated in [global climate models], we conclude that the global mean equilibrium warming for doubling CO_2, or 'equilibrium climate*

[9] The equilibrium climate sensitivity includes the response of the climate system to increased greenhouse gas concentrations over the short to medium term (up to 100-200 years), but it does not include long-term feedback effects due to possible large-scale changes in ice sheets or the biosphere, which occur on a time scale of many hundreds to thousands of years (e.g. Hansen et al. 2007).

sensitivity', is likely to lie in the range 2 °C to 4.5 °C, with a most likely value of about 3 °C. Equilibrium climate sensitivity is very likely larger than 1.5 °C. [10]

For fundamental physical reasons as well as data limitations, values substantially higher than 4.5 °C still cannot be excluded, but agreement with observations and proxy data is generally worse for those high values than for values in the 2 °C to 4.5 °C range. (Meehl et al., 2007, p 799)

After consulting with several lead authors of this chapter of the IPCC report, the interagency workgroup selected four candidate probability distributions and calibrated them to be consistent with the above statement: Roe and Baker (2007), log-normal, gamma, and Weibull. Table 1 included below gives summary statistics for the four calibrated distributions.

Table 1: Summary Statistics for Four Calibrated Climate Sensitivity Distributions

	Roe & Baker	Log-normal	Gamma	Weibull
Pr(ECS < 1.5°C)	0.013	0.050	0.070	0.102
Pr(2°C < ECS < 4.5°C)	0.667	0.667	0.667	0.667
5th percentile	1.72	1.49	1.37	1.13
10th percentile	1.91	1.74	1.65	1.48
Mode	2.34	2.52	2.65	2.90
Median (50th percentile)	3.00	3.00	3.00	3.00
Mean	3.50	3.28	3.19	3.07
90th percentile	5.86	5.14	4.93	4.69
95th percentile	7.14	5.97	5.59	5.17

Each distribution was calibrated by applying three constraints from the IPCC:

(1) a median equal to 3°C, to reflect the judgment of "a most likely value of about 3 °C";[11]
(2) two-thirds probability that the equilibrium climate sensitivity lies between 2 and 4.5 °C; and
(3) zero probability that it is less than 0°C or greater than 10°C (see Hegerl et al. 2006, p. 721).

We selected the calibrated Roe and Baker distribution from the four candidates for two reasons. First, the Roe and Baker distribution is the only one of the four that is based on a theoretical understanding of the response of the climate system to increased greenhouse gas concentrations (Roe and Baker 2007,

[10] This is in accord with the judgment that it "is likely to lie in the range 2 °C to 4.5 °C" and the IPCC definition of "likely" as greater than 66 percent probability (Le Treut et al.2007). "Very likely" indicates a greater than 90 percent probability.

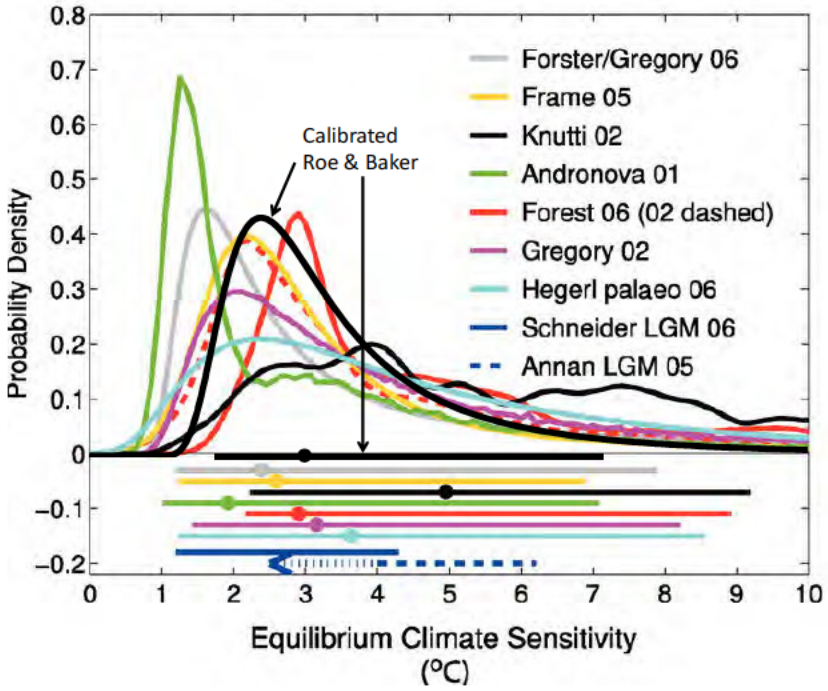
[11] Strictly speaking, "most likely" refers to the mode of a distribution rather than the median, but common usage would allow the mode, median, or mean to serve as candidates for the central or "most likely" value and the IPCC report is not specific on this point. For the distributions we considered, the median was between the mode and the mean. For the Roe and Baker distribution, setting the median equal to 3°C, rather than the mode or mean, gave a 95th percentile that is more consistent with IPCC judgments and the literature. For example, setting the mean and mode equal to 3°C produced 95th percentiles of 5.6 and 8.6 °C, respectively, which are in the lower and upper end of the range in the literature. Finally, the median is closer to 3°C than is the mode for the truncated distributions selected by the IPCC (Hegerl, et al., 2006); the average median is 3.1 °C and the average mode is 2.3 °C, which is most consistent with a Roe and Baker distribution with the median set equal to 3 °C.

Roe 2008). In contrast, the other three distributions are mathematical functions that are arbitrarily chosen based on simplicity, convenience, and general shape. The Roe and Baker distribution results from three assumptions about climate response: (1) absent feedback effects, the equilibrium climate sensitivity is equal to 1.2 °C; (2) feedback factors are proportional to the change in surface temperature; and (3) uncertainties in feedback factors are normally distributed. There is widespread agreement on the first point and the second and third points are common assumptions.

Second, the calibrated Roe and Baker distribution better reflects the IPCC judgment that "values substantially higher than 4.5°C still cannot be excluded." Although the IPCC made no quantitative judgment, the 95th percentile of the calibrated Roe & Baker distribution (7.1 °C) is much closer to the mean and the median (7.2 °C) of the 95th percentiles of 21 previous studies summarized by Newbold and Daigneault (2009). It is also closer to the mean (7.5 °C) and median (7.9 °C) of the nine truncated distributions examined by the IPCC (Hegerl, et al., 2006) than are the 95th percentiles of the three other calibrated distributions (5.2-6.0 °C).

Finally, we note the IPCC judgment that the equilibrium climate sensitivity "is very likely larger than 1.5°C." Although the calibrated Roe & Baker distribution, for which the probability of equilibrium climate sensitivity being greater than 1.5°C is almost 99 percent, is not inconsistent with the IPCC definition of "very likely" as "greater than 90 percent probability," it reflects a greater degree of certainty about very low values of ECS than was expressed by the IPCC.

Figure 2: Estimates of the Probability Density Function for Equilibrium Climate Sensitivity (°C)



To show how the calibrated Roe and Baker distribution compares to different estimates of the probability distribution function of equilibrium climate sensitivity in the empirical literature, Figure 2 (below) overlays it on Figure 9.20 from the IPCC Fourth Assessment Report. These functions are scaled

to integrate to unity between 0 °C and 10 °C. The horizontal bars show the respective 5 percent to 95 percent ranges; dots indicate the median estimate.[12]

E. Socio-Economic and Emissions Trajectories

Another key issue considered by the interagency group is how to select the set of socio-economic and emissions parameters for use in PAGE, DICE, and FUND. Socio-economic pathways are closely tied to climate damages because, all else equal, more and wealthier people tend to emit more greenhouse gases and also have a higher (absolute) willingness to pay to avoid climate disruptions. For this reason, we consider how to model several input parameters in tandem: GDP, population, CO_2 emissions, and non-CO_2 radiative forcing. A wide variety of scenarios have been developed and used for climate change policy simulations (e.g., SRES 2000, CCSP 2007, EMF 2009). In determining which scenarios are appropriate for inclusion, we aimed to select scenarios that span most of the plausible ranges of outcomes for these variables.

To accomplish this task in a transparent way, we decided to rely on the recent Stanford Energy Modeling Forum exercise, EMF-22. EMF-22 uses ten well-recognized models to evaluate substantial, coordinated global action to meet specific stabilization targets. A key advantage of relying on these data is that GDP, population, and emission trajectories are internally consistent for each model and scenario evaluated. The EMF-22 modeling effort also is preferable to the IPCC SRES due to their age (SRES were developed in 1997) and the fact that 3 of 4 of the SRES scenarios are now extreme outliers in one or more variables. Although the EMF-22 scenarios have not undergone the same level of scrutiny as the SRES scenarios, they are recent, peer-reviewed, published, and publicly available.

To estimate the SCC for use in evaluating domestic policies that will have a small effect on global cumulative emissions, we use socio-economic and emission trajectories that span a range of plausible scenarios. Five trajectories were selected from EMF-22 (see Table 2 below). Four of these represent potential business-as-usual (BAU) growth in population, wealth, and emissions and are associated with CO_2 (only) concentrations ranging from 612 to 889 ppm in 2100. One represents an emissions pathway that achieves stabilization at 550 ppm CO_2e (i.e., CO_2-only concentrations of 425 – 484 ppm or a radiative forcing of 3.7 W/m^2) in 2100, a lower-than-BAU trajectory.[13] Out of the 10 models included in the EMF-22 exercise, we selected the trajectories used by MiniCAM, MESSAGE, IMAGE, and the optimistic scenario from MERGE. For the BAU pathways, we used the GDP, population, and emission trajectories from each of these four models. For the 550 ppm CO_2e scenario, we averaged the GDP, population, and emission trajectories implied by these same four models.

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[12] The estimates based on instrumental data are from Andronova and Schlesinger (2001), Forest et al. (2002; dashed line, anthropogenic forcings only), Forest et al. (2006; solid line, anthropogenic and natural forcings), Gregory et al. (2002a), Knutti et al. (2002), Frame et al. (2005), and Forster and Gregory (2006). Hegerl et al. (2006) are based on multiple palaeoclimatic reconstructions of north hemisphere mean temperatures over the last 700 years. Also shown are the 5-95 percent approximate ranges for two estimates from the last glacial maximum (dashed, Annan et al. 2005; solid, Schneider von Deimling et al. 2006), which are based on models with different structural properties.

[13] Such an emissions path would be consistent with widespread action by countries to mitigate GHG emissions, though it could also result from technological advances. It was chosen because it represents the most stringent case analyzed by the EMF-22 where all the models converge: a 550 ppm, not to exceed, full participation scenario.

Table 2: Socioeconomic and Emissions Projections from Select EMF-22 Reference Scenarios -

Reference Fossil and Industrial CO_2 Emissions ($GtCO_2$/yr) -

EMF – 22 Based Scenarios	2000	2010	2020	2030	2050	2100
IMAGE	26.6	31.9	36.9	40.0	45.3	60.1
MERGE Optimistic	24.6	31.5	37.6	45.1	66.5	117.9
MESSAGE	26.8	29.2	37.6	42.1	43.5	42.7
MiniCAM	26.5	31.8	38.0	45.1	57.8	80.5
550 ppm average	26.2	31.1	33.2	32.4	20.0	12.8

Reference GDP (using market exchange rates in trillion 2005$)[14]

EMF – 22 Based Scenarios	2000	2010	2020	2030	2050	2100
IMAGE	38.6	53.0	73.5	97.2	156.3	396.6
MERGE Optimistic	36.3	45.9	59.7	76.8	122.7	268.0
MESSAGE	38.1	52.3	69.4	91.4	153.7	334.9
MiniCAM	36.1	47.4	60.8	78.9	125.7	369.5
550 ppm average	37.1	49.6	65.6	85.5	137.4	337.9

Global Population (billions)

EMF – 22 Based Scenarios	2000	2010	2020	2030	2050	2100
IMAGE	6.1	6.9	7.6	8.2	9.0	9.1
MERGE Optimistic	6.0	6.8	7.5	8.2	9.0	9.7
MESSAGE	6.1	6.9	7.7	8.4	9.4	10.4
MiniCAM	6.0	6.8	7.5	8.1	8.8	8.7
550 ppm average	6.1	6.8	7.6	8.2	8.7	9.1

We explore how sensitive the SCC is to various assumptions about how the future will evolve without prejudging what is likely to occur. The interagency group considered formally assigning probability weights to different states of the world, but this proved challenging to do in an analytically rigorous way given the dearth of information on the likelihood of a full range of future socio-economic pathways.

There are a number of caveats. First, EMF BAU scenarios represent the modelers' judgment of the most likely pathway absent mitigation policies to reduce greenhouse gas emissions, rather than the wider range of possible outcomes. Nevertheless, these views of the most likely outcome span a wide range,

[14] While the EMF-22 models used market exchange rates (MER) to calculate global GDP, it is also possible to use purchasing power parity (PPP). PPP takes into account the different price levels across countries, so it more accurately describes relative standards of living across countries. MERs tend to make low-income countries appear poorer than they actually are. Because many models assume convergence in per capita income over time, use of MER-adjusted GDP gives rise to projections of higher economic growth in low income countries. There is an ongoing debate about how much this will affect estimated climate impacts. Critics of the use of MER argue that it leads to overstated economic growth and hence a significant upward bias in projections of greenhouse gas emissions, and unrealistically high future temperatures (e.g., Castles and Henderson 2003). Others argue that convergence of the emissions-intensity gap across countries at least partially offset the overstated income gap so that differences in exchange rates have less of an effect on emissions (Holtsmark and Alfsen, 2005; Tol, 2006). Nordhaus (2007b) argues that the ideal approach is to use superlative PPP accounts (i.e., using cross-sectional PPP measures for relative incomes and outputs and national accounts price and quantity indexes for time-series extrapolations). However, he notes that it important to keep this debate in perspective; it is by no means clear that exchange-rate-conversion issues are as important as uncertainties about population, technological change, or the many geophysical uncertainties.

from the more optimistic (e.g. abundant low-cost, low-carbon energy) to more pessimistic (e.g. constraints on the availability of nuclear and renewables).[15] Second, the socio-economic trajectories associated with a 550 ppm CO_2e concentration scenario are not derived from an assessment of what policy is optimal from a benefit-cost standpoint. Rather, it is indicative of one possible future outcome. The emission trajectories underlying some BAU scenarios (e.g. MESSAGE's 612 ppm) also are consistent with some modest policy action to address climate change.[16] We chose not to include socio-economic trajectories that achieve even lower GHG concentrations at this time, given the difficulty many models had in converging to meet these targets.

For comparison purposes, the Energy Information Agency in its 2009 Annual Energy Outlook projected that global carbon dioxide emissions will grow to 30.8, 35.6, and 40.4 gigatons in 2010, 2020, and 2030, respectively, while world GDP is projected to be $51.8, $71.0 and $93.9 trillion (in 2005 dollars using market exchange rates) in 2010, 2020, and 2030, respectively. These projections are consistent with one or more EMF-22 scenarios. Likewise, the United Nations' 2008 Population Prospect projects population will grow from 6.1 billion people in 2000 to 9.1 billion people in 2050, which is close to the population trajectories for the IMAGE, MiniCAM, and MERGE models.

In addition to fossil and industrial CO_2 emissions, each EMF scenario provides projections of methane, nitrous oxide, fluorinated greenhouse gases, and net land use CO_2 emissions out to 2100. These assumptions also are used in the three models while retaining the default radiative forcings due to other factors (e.g. aerosols and other gases). See the Appendix for greater detail.

F. Discount Rate

The choice of a discount rate, especially over long periods of time, raises highly contested and exceedingly difficult questions of science, economics, philosophy, and law. Although it is well understood that the discount rate has a large influence on the current value of future damages, there is no consensus about what rates to use in this context. Because carbon dioxide emissions are long-lived, subsequent damages occur over many years. In calculating the SCC, we first estimate the future damages to agriculture, human health, and other market and non-market sectors from an additional unit of carbon dioxide emitted in a particular year in terms of reduced consumption (or consumption equivalents) due to the impacts of elevated temperatures, as represented in each of the three IAMs. Then we discount the stream of future damages to its present value in the year when the additional unit of emissions was released using the selected discount rate, which is intended to reflect society's marginal rate of substitution between consumption in different time periods.

For rules with both intra- and intergenerational effects, agencies traditionally employ constant discount rates of both 3 percent and 7 percent in accordance with OMB Circular A-4. As Circular A-4 acknowledges, however, the choice of discount rate for intergenerational problems raises distinctive

[15] For instance, in the MESSAGE model's reference case total primary energy production from nuclear, biomass, and non-biomass renewables is projected to increase from about 15 percent of total primary energy in 2000 to 54 percent in 2100. In comparison, the MiniCAM reference case shows 10 percent in 2000 and 21 percent in 2100.

[16] For example, MiniCAM projects if all non-US OECD countries reduce CO_2 emissions to 83 percent below 2005 levels by 2050 (per the G-8 agreement) but all other countries continue along a BAU path CO_2 concentrations in 2100 would drop from 794 ppmv in its reference case to 762 ppmv.

problems and presents considerable challenges. After reviewing those challenges, Circular A-4 states, "If your rule will have important intergenerational benefits or costs you might consider a further sensitivity analysis using a lower but positive discount rate in addition to calculating net benefits using discount rates of 3 and 7 percent." For the specific purpose of developing the SCC, we adapt and revise that approach here.

Arrow et al. (1996) outlined two main approaches to determine the discount rate for climate change analysis, which they labeled "descriptive" and "prescriptive." The descriptive approach reflects a positive (non-normative) perspective based on observations of people's actual choices—e.g., savings versus consumption decisions over time, and allocations of savings among more and less risky investments. Advocates of this approach generally call for inferring the discount rate from market rates of return "because of a lack of justification for choosing a social welfare function that is any different than what decision makers [individuals] actually use" (Arrow et al. 1996).

One theoretical foundation for the cost-benefit analyses in which the social cost of carbon will be used—the Kaldor-Hicks potential-compensation test—also suggests that market rates should be used to discount future benefits and costs, because it is the market interest rate that would govern the returns potentially set aside today to compensate future individuals for climate damages that they bear (e.g., Just et al. 2004). As some have noted, the word "potentially" is an important qualification; there is no assurance that such returns will actually be set aside to provide compensation, and the very idea of compensation is difficult to define in the intergenerational context. On the other hand, societies provide compensation to future generations through investments in human capital and the resulting increase in knowledge, as well as infrastructure and other physical capital.

The prescriptive approach specifies a social welfare function that formalizes the normative judgments that the decision-maker wants explicitly to incorporate into the policy evaluation—e.g., how inter-personal comparisons of utility should be made, and how the welfare of future generations should be weighed against that of the present generation. Ramsey (1928), for example, has argued that it is "ethically indefensible" to apply a positive pure rate of time preference to discount values across generations, and many agree with this view.

Other concerns also motivate making adjustments to descriptive discount rates. In particular, it has been noted that the preferences of future generations with regard to consumption versus environmental amenities may not be the same as those today, making the current market rate on consumption an inappropriate metric by which to discount future climate-related damages. Others argue that the discount rate should be below market rates to correct for market distortions and uncertainties or inefficiencies in intergenerational transfers of wealth, which in the Kaldor-Hicks logic are presumed to compensate future generations for damage (a potentially controversial assumption, as noted above) (Arrow et al. 1996, Weitzman 1999).

Further, a legitimate concern about both descriptive and prescriptive approaches is that they tend to obscure important heterogeneity in the population. The utility function that underlies the prescriptive approach assumes a representative agent with perfect foresight and no credit constraints. This is an artificial rendering of the real world that misses many of the frictions that characterize individuals' lives

and indeed the available descriptive evidence supports this. For instance, many individuals smooth consumption by borrowing with credit cards that have relatively high rates. Some are unable to access traditional credit markets and rely on payday lending operations or other high cost forms of smoothing consumption. Whether one puts greater weight on the prescriptive or descriptive approach, the high interest rates that credit-constrained individuals accept suggest that some account should be given to the discount rates revealed by their behavior.

We draw on both approaches but rely primarily on the descriptive approach to inform the choice of discount rate. With recognition of its limitations, we find this approach to be the most defensible and transparent given its consistency with the standard contemporary theoretical foundations of benefit-cost analysis and with the approach required by OMB's existing guidance. The logic of this framework also suggests that market rates should be used for discounting future consumption-equivalent damages. Regardless of the theoretical approach used to derive the appropriate discount rate(s), we note the inherent conceptual and practical difficulties of adequately capturing consumption trade-offs over many decades or even centuries. While relying primarily on the descriptive approach in selecting specific discount rates, the interagency group has been keenly aware of the deeply normative dimensions of both the debate over discounting in the intergenerational context and the consequences of selecting one discount rate over another.

Historically Observed Interest Rates

In a market with no distortions, the return to savings would equal the private return on investment, and the market rate of interest would be the appropriate choice for the social discount rate. In the real world risk, taxes, and other market imperfections drive a wedge between the risk-free rate of return on capital and the consumption rate of interest. Thus, the literature recognizes two conceptual discount concepts—the consumption rate of interest and the opportunity cost of capital.

According to OMB's Circular A-4, it is appropriate to use the rate of return on capital when a regulation is expected to displace or alter the use of capital in the private sector. In this case, OMB recommends Agencies use a discount rate of 7 percent. When regulation is expected to primarily affect private consumption—for instance, via higher prices for goods and services—a lower discount rate of 3 percent is appropriate to reflect how private individuals trade-off current and future consumption.

The interagency group examined the economics literature and concluded that the consumption rate of interest is the correct concept to use in evaluating the benefits and costs of a marginal change in carbon emissions (see Lind 1990, Arrow et al 1996, and Arrow 2000). The consumption rate of interest also is appropriate when the impacts of a regulation are measured in consumption (-equivalent) units, as is done in the three integrated assessment models used for estimating the SCC.

Individuals use a variety of savings instruments that vary with risk level, time horizon, and tax characteristics. The standard analytic framework used to develop intuition about the discount rate typically assumes a representative agent with perfect foresight and no credit constraints. The risk-free rate is appropriate for discounting certain future benefits or costs, but the benefits calculated by IAMs are uncertain. To use the risk-free rate to discount uncertain benefits, these benefits first must be

transformed into "certainty equivalents," that is the maximum certain amount that we would exchange for the uncertain amount. However, the calculation of the certainty-equivalent requires first estimating the correlation between the benefits of the policy and baseline consumption.

If the IAM projections of future impacts represent expected values (not certainty-equivalent values), then the appropriate discount rate generally does not equal the risk-free rate. If the benefits of the policy tend to be high in those states of the world in which consumption is low, then the certainty-equivalent benefits will be higher than the expected benefits (and vice versa). Since many (though not necessarily all) of the important impacts of climate change will flow through market sectors such as agriculture and energy, and since willingness to pay for environmental protections typically increases with income, we might expect a positive (though not necessarily perfect) correlation between the net benefits from climate policies and market returns. This line of reasoning suggests that the proper discount rate would exceed the riskless rate. Alternatively, a negative correlation between the returns to climate policies and market returns would imply that a discount rate below the riskless rate is appropriate.

This discussion suggests that both the post-tax riskless and risky rates can be used to capture individuals' consumption-equivalent interest rate. As a measure of the post-tax riskless rate, we calculate the average real return from Treasury notes over the longest time period available (those from Newell and Pizer 2003) and adjust for Federal taxes (the average marginal rate from tax years 2003 through 2006 is around 27 percent).[17] This calculation produces a real interest rate of about 2.7 percent, which is roughly consistent with Circular A-4's recommendation to use 3 percent to represent the consumption rate of interest.[18] A measure of the post-tax risky rate for investments whose returns are positively correlated with overall equity market returns can be obtained by adjusting pre-tax rates of household returns to risky investments (approximately 7 percent) for taxes yields a real rate of roughly 5 percent.[19]

The Ramsey Equation

Ramsey discounting also provides a useful framework to inform the choice of a discount rate. Under this approach, the analyst applies either positive or normative judgments in selecting values for the key parameters of the Ramsey equation: η (coefficient of relative risk aversion or elasticity of the marginal utility of consumption) and ρ (pure rate of time preference).[20] These are then combined with g (growth

[17] The literature argues for a risk-free rate on government bonds as an appropriate measure of the consumption rate of interest. Arrow (2000) suggests that it is roughly 3-4 percent. OMB cites evidence of a 3.1 percent pre-tax rate for 10-year Treasury notes in the A-4 guidance. Newell and Pizer (2003) find real interest rates between 3.5 and 4 percent for 30-year Treasury securities.

[18] The positive approach reflects how individuals make allocation choices across time, but it is important to keep in mind that we wish to reflect preferences for society as a whole, which generally has a longer planning horizon.

[19] Cambell et al (2001) estimates that the annual real return from stocks for 1900-1995 was about 7 percent. The annual real rate of return for the S&P 500 from 1950 – 2008 was about 6.8 percent. In the absence of a better way to population-weight the tax rates, we use the middle of the 20 – 40 percent range to derive a post-tax interest rate (Kotlikoff and Rapson 2006).

[20] The parameter ρ measures the *pure rate of time preference*: people's behavior reveals a preference for an increase in utility today versus the future. Consequently, it is standard to place a lower weight on utility in the future. The parameter η captures *diminishing marginal utility*: consumption in the future is likely to be higher than consumption today, so diminishing marginal utility of consumption implies that the same monetary damage will

rate of per-capita consumption) to equal the interest rate at which future monetized damages are discounted: $\rho + \eta \cdot g$.[21] In the simplest version of the Ramsey model, with an optimizing representative agent with perfect foresight, what we are calling the "Ramsey discount rate," $\rho + \eta \cdot g$, will be equal to the rate of return to capital, i.e., the market interest rate.

A review of the literature provides some guidance on reasonable parameter values for the Ramsey discounting equation, based on both prescriptive and descriptive approaches.

- η. Most papers in the climate change literature adopt values for η in the range of 0.5 to 3 (Weitzman cites plausible values as those ranging from 1 to 4), although not all authors articulate whether their choice is based on prescriptive or descriptive reasoning.[22] Dasgupta (2008) argues that η should be greater than 1 and may be as high as 3, since η equal to 1 suggests savings rates that do not conform to observed behavior.

- ρ. With respect to the pure rate of time preference, most papers in the climate change literature adopt values for ρ in the range of 0 to 3 percent per year. The very low rates tend to follow from moral judgments involving intergenerational neutrality. Some have argued that to use any value other than $\rho = 0$ would unjustly discriminate against future generations (e.g., Arrow et al. 1996, Stern et al. 2006). However, even in an inter-generational setting, it may make sense to use a small positive pure rate of time preference because of the small probability of unforeseen cataclysmic events (Stern et al. 2006).

- g. A commonly accepted approximation is around 2 percent per year. For the socio-economic scenarios used for this exercise, the EMF models assume that g is about 1.5-2 percent to 2100.

Some economists and non-economists have argued for constant discount rates below 2 percent based on the prescriptive approach. When grounded in the Ramsey framework, proponents of this approach have argued that a ρ of zero avoids giving preferential treatment to one generation over another. The choice of η has also been posed as an ethical choice linked to the value of an additional dollar in poorer

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cause a smaller reduction of utility for wealthier individuals, either in the future or in current generations. If $\eta = 0$, then a one dollar increase in income is equally valuable regardless of level of income; if $\eta = 1$, then a one percent increase in income is equally valuable no matter the level of income; and if $\eta > 1$, then a one percent increase in income is less valuable to wealthier individuals.

[21] In this case, g could be taken from the selected EMF socioeconomic scenarios or alternative assumptions about the rate of consumption growth.

[22] Empirical estimates of η span a wide range of values. A benchmark value of 2 is near the middle of the range of values estimated or used by Szpiro (1986), Hall and Jones (2007), Arrow (2007), Dasgupta (2006, 2008), Weitzman (2007, 2009), and Nordhaus (2008). However, Chetty (2006) developed a method of estimating η using data on labor supply behavior. He shows that existing evidence of the effects of wage changes on labor supply imposes a tight upper bound on the curvature of utility over wealth (CRRA < 2) with the mean implied value of 0.71 and concludes that the standard expected utility model cannot generate high levels of risk aversion without contradicting established facts about labor supply. Recent work has jointly estimated the components of the Ramsey equation. Evans and Sezer (2005) estimate $\eta = 1.49$ for 22 OECD countries. They also estimate $\rho = 1.08$ percent per year using data on mortality rates. Anthoff, et al. (2009b) estimate $\eta = 1.18$, and $\rho = 1.4$ percent. When they multiply the bivariate probability distributions from their work and Evans and Sezer (2005) together, they find $\eta = 1.47$, and $\rho = 1.07$.

countries compared to wealthier ones. Stern et al. (2006) applies this perspective through his choice of ρ = 0.1 percent per year, η = 1 and g = 1.3 percent per year, which yields an annual discount rate of 1.4 percent. In the context of permanent income savings behavior, however, Stern's assumptions suggest that individuals would save 93 percent of their income.[23]

Recently, Stern (2008) revisited the values used in Stern et al. (2006), stating that there is a case to be made for raising η due to the amount of weight lower values place on damages far in the future (over 90 percent of expected damages occur after 2200 with η = 1). Using Stern's assumption that ρ = 0.1 percent, combined with a η of 1.5 to 2 and his original growth rate, yields a discount rate greater 2 percent.

We conclude that arguments made under the prescriptive approach can be used to justify discount rates between roughly 1.4 and 3.1 percent. In light of concerns about the most appropriate value for η, we find it difficult to justify rates at the lower end of this range under the Ramsey framework.

Accounting for Uncertainty in the Discount Rate

While the consumption rate of interest is an important driver of the benefits estimate, it is uncertain over time. Ideally, we would formally model this uncertainty, just as we do for climate sensitivity. Weitzman (1998, 2001) showed theoretically and Newell and Pizer (2003) and Groom et al. (2006) confirm empirically that discount rate uncertainty can have a large effect on net present values. A main result from these studies is that if there is a persistent element to the uncertainty in the discount rate (e.g., the rate follows a random walk), then it will result in an effective (or certainty-equivalent) discount rate that declines over time. Consequently, lower discount rates tend to dominate over the very long term (see Weitzman 1998, 1999, 2001; Newell and Pizer 2003; Groom et al. 2006; Gollier 2008; Summers and Zeckhauser 2008; and Gollier and Weitzman 2009).

The proper way to model discount rate uncertainty remains an active area of research. Newell and Pizer (2003) employ a model of how long-term interest rates change over time to forecast future discount rates. Their model incorporates some of the basic features of how interest rates move over time, and its parameters are estimated based on historical observations of long-term rates. Subsequent work on this topic, most notably Groom et al. (2006), uses more general models of interest rate dynamics to allow for better forecasts. Specifically, the volatility of interest rates depends on whether rates are currently low or high and variation in the level of persistence over time.

While Newell and Pizer (2003) and Groom et al (2006) attempt formally to model uncertainty in the discount rate, others argue for a declining scale of discount rates applied over time (e.g., Weitzman 2001, and the UK's "Green Book" for regulatory analysis). This approach uses a higher discount rate

[23] Stern (2008) argues that building in a positive rate of exogenous technical change over time reduces the implied savings rate and that η at or above 2 are inconsistent with observed behavior with regard to equity. (At the same time, adding exogenous technical change—all else equal—would increase g as well.)

initially, but applies a graduated scale of lower discount rates further out in time.[24] A key question that has emerged with regard to both of these approaches is the trade-off between potential time inconsistency and giving greater weight to far future outcomes (see the EPA Science Advisory Board's recent comments on this topic as part of its review of their *Guidelines for Economic Analysis*).[25]

The Discount Rates Selected for Estimating SCC

In light of disagreement in the literature on the appropriate market interest rate to use in this context and uncertainty about how interest rates may change over time, we use three discount rates to span a plausible range of certainty-equivalent constant discount rates: 2.5, 3, and 5 percent per year. Based on the review in the previous sections, the interagency workgroup determined that these three rates reflect reasonable judgments under both descriptive and prescriptive approaches.

The central value, 3 percent, is consistent with estimates provided in the economics literature and OMB's Circular A-4 guidance for the consumption rate of interest. As previously mentioned, the consumption rate of interest is the correct discounting concept to use when future damages from elevated temperatures are estimated in consumption-equivalent units. Further, 3 percent roughly corresponds to the after-tax riskless interest rate. The upper value of 5 percent is included to represent the possibility that climate damages are positively correlated with market returns. Additionally, this discount rate may be justified by the high interest rates that many consumers use to smooth consumption across periods.

The low value, 2.5 percent, is included to incorporate the concern that interest rates are highly uncertain over time. It represents the average certainty-equivalent rate using the mean-reverting and random walk approaches from Newell and Pizer (2003) starting at a discount rate of 3 percent. Using this approach, the certainty equivalent is about 2.2 percent using the random walk model and 2.8 percent using the mean reverting approach.[26] Without giving preference to a particular model, the average of the two rates is 2.5 percent. Further, a rate below the riskless rate would be justified if climate investments are negatively correlated with the overall market rate of return. Use of this lower value also responds to certain judgments using the prescriptive or normative approach and to ethical objections that have been raised about rates of 3 percent or higher.

[24] For instance, the UK applies a discount rate of 3.5 percent to the first 30 years; 3 percent for years 31 - 75; 2.5 percent for years 76 - 125; 2 percent for years 126 - 200; 1.5 percent for years 201 - 300; and 1 percent after 300 years. As a sensitivity, it recommends a discount rate of 3 percent for the first 30 years, also decreasing over time.

[25] Uncertainty in future damages is distinct from uncertainty in the discount rate. Weitzman (2008) argues that Stern's choice of a low discount rate was "right for the wrong reasons." He demonstrates how the damages from a low probability, catastrophic event far in the future dominate the effect of the discount rate in a present value calculation and result in an infinite willingness-to-pay for mitigation today. Newbold and Daigneault, (2009) and Nordhaus (2009) find that Weitzman's result is sensitive to the functional forms chosen for climate sensitivity, utility, and consumption. Summers and Zeckhauser (2008) argue that uncertainty in future damages can also work in the other direction by increasing the benefits of waiting to learn the appropriate level of mitigation required.

[26] Calculations done by Pizer et al. using the original simulation program from Newell and Pizer (2003).

IV. Revised SCC Estimates

Our general approach to estimating SCC values is to run the three integrated assessment models (FUND, DICE, and PAGE) using the following inputs agreed upon by the interagency group:

- A Roe and Baker distribution for the climate sensitivity parameter bounded between 0 and 10 with a median of 3 °C and a cumulative probability between 2 and 4.5 °C of two-thirds.
- Five sets of GDP, population and carbon emissions trajectories based on EMF-22.
- Constant annual discount rates of 2.5, 3, and 5 percent.

Because the climate sensitivity parameter is modeled probabilistically, and because PAGE and FUND incorporate uncertainty in other model parameters, the final output from each model run is a distribution over the SCC in year *t*.

For each of the IAMS, the basic computational steps for calculating the SCC in a particular year *t* are:

1. Input the path of emissions, GDP, and population from the selected EMF-22 scenarios, and the extrapolations based on these scenarios for post-2100 years.

2. Calculate the temperature effects and (consumption-equivalent) damages in each year resulting from the baseline path of emissions.

    a. In PAGE, the consumption-equivalent damages in each period are calculated as a fraction of the EMF GDP forecast, depending on the temperature in that period relative to the pre-industrial average temperature in each region.
    b. In FUND, damages in each period depend on both the level and the rate of temperature change in that period.
    c. In DICE, temperature affects both consumption and investment, so we first adjust the EMF GDP paths as follows: Using the Cobb-Douglas production function with the DICE2007 parameters, we extract the path of exogenous technical change implied by the EMF GDP and population paths, then we recalculate the baseline GDP path taking into account climate damages resulting from the baseline emissions path.

3. Add an additional unit of carbon emissions in year *t.* (The exact unit varies by model.)

4. Recalculate the temperature effects and damages expected in all years beyond *t* resulting from this adjusted path of emissions, as in step 2.

5. Subtract the damages computed in step 2 from those in step 4 in each year. (DICE is run in 10 year time steps, FUND in annual time steps, while the time steps in PAGE vary.)

6. Discount the resulting path of marginal damages back to the year of emissions using the agreed upon fixed discount rates.

7. Calculate the SCC as the net present value of the discounted path of damages computed in step 6, divided by the unit of carbon emissions used to shock the models in step 3.

8. Multiply by 12/44 to convert from dollars per ton of carbon to dollars per ton of CO_2 (2007 dollars) in DICE and FUND. (All calculations are done in tons of CO_2 in PAGE).

The steps above were repeated in each model for multiple future years to cover the time horizons anticipated for upcoming rulemaking analysis. To maintain consistency across the three IAMs, climate damages are calculated as lost consumption in each future year.

It is important to note that each of the three models has a different default end year. The default time horizon is 2200 for PAGE, 2595 for DICE, and 3000 for the latest version of FUND. This is an issue for the multi-model approach because differences in SCC estimates may arise simply due to the model time horizon. Many consider 2200 too short a time horizon because it could miss a significant fraction of damages under certain assumptions about the growth of marginal damages and discounting, so each model is run here through 2300. This step required a small adjustment in the PAGE model only. This step also required assumptions about GDP, population, and greenhouse gas emission trajectories after 2100, the last year for which these data are available from the EMF-22 models. (A more detailed discussion of these assumptions is included in the Appendix.)

This exercise produces 45 separate distributions of the SCC for a given year, the product of 3 models, 3 discount rates, and 5 socioeconomic scenarios. This is clearly too many separate distributions for consideration in a regulatory impact analysis.

To produce a range of plausible estimates that still reflects the uncertainty in the estimation exercise, the distributions from each of the models and scenarios are equally weighed and combined to produce three separate probability distributions for SCC in a given year, one for each assumed discount rate. These distributions are then used to define a range of point estimates for the global SCC. In this way, no integrated assessment model or socioeconomic scenario is given greater weight than another. Because the literature shows that the SCC is quite sensitive to assumptions about the discount rate, and because no consensus exists on the appropriate rate to use in an intergenerational context, we present SCCs based on the average values across models and socioeconomic scenarios for each discount rate.

The interagency group selected four SCC values for use in regulatory analyses. Three values are based on the average SCC across models and socio-economic and emissions scenarios at the 2.5, 3, and 5 percent discount rates. The fourth value is included to represent the higher-than-expected economic impacts from climate change further out in the tails of the SCC distribution. For this purpose, we use the SCC value for the 95th percentile at a 3 percent discount rate. (The full set of distributions by model and scenario combination is included in the Appendix.) As noted above, the 3 percent discount rate is the central value, and so the central value that emerges is the average SCC across models at the 3 percent discount rate. For purposes of capturing the uncertainties involved in regulatory impact analysis, we emphasize the importance and value of considering the full range.

As previously discussed, low probability, high impact events are incorporated into the SCC values through explicit consideration of their effects in two of the three models as well as the use of a probability density function for equilibrium climate sensitivity. Treating climate sensitivity probabilistically results in more high temperature outcomes, which in turn lead to higher projections of damages. Although FUND does not include catastrophic damages (in contrast to the other two models), its probabilistic treatment of the equilibrium climate sensitivity parameter will directly affect the non-catastrophic damages that are a function of the rate of temperature change.

In Table 3, we begin by presenting SCC estimates for 2010 by model, scenario, and discount rate to illustrate the variability in the SCC across each of these input parameters. As expected, higher discount rates consistently result in lower SCC values, while lower discount rates result in higher SCC values for each socioeconomic trajectory. It is also evident that there are differences in the SCC estimated across the three main models. For these estimates, FUND produces the lowest estimates, while PAGE generally produces the highest estimates.

Table 3: Disaggregated Social Cost of CO_2 Values by Model, Socio-Economic Trajectory, and Discount Rate for 2010 (in 2007 dollars)

	Discount rate:	**5%**	**3%**	**2.5%**	**3%**
Model	*Scenario*	Avg	Avg	Avg	95th
DICE	IMAGE	10.8	35.8	54.2	70.8
	MERGE	7.5	22.0	31.6	42.1
	Message	9.8	29.8	43.5	58.6
	MiniCAM	8.6	28.8	44.4	57.9
	550 Average	8.2	24.9	37.4	50.8
PAGE	IMAGE	8.3	39.5	65.5	142.4
	MERGE	5.2	22.3	34.6	82.4
	Message	7.2	30.3	49.2	115.6
	MiniCAM	6.4	31.8	54.7	115.4
	550 Average	5.5	25.4	42.9	104.7
FUND	IMAGE	-1.3	8.2	19.3	39.7
	MERGE	-0.3	8.0	14.8	41.3
	Message	-1.9	3.6	8.8	32.1
	MiniCAM	-0.6	10.2	22.2	42.6
	550 Average	-2.7	-0.2	3.0	19.4

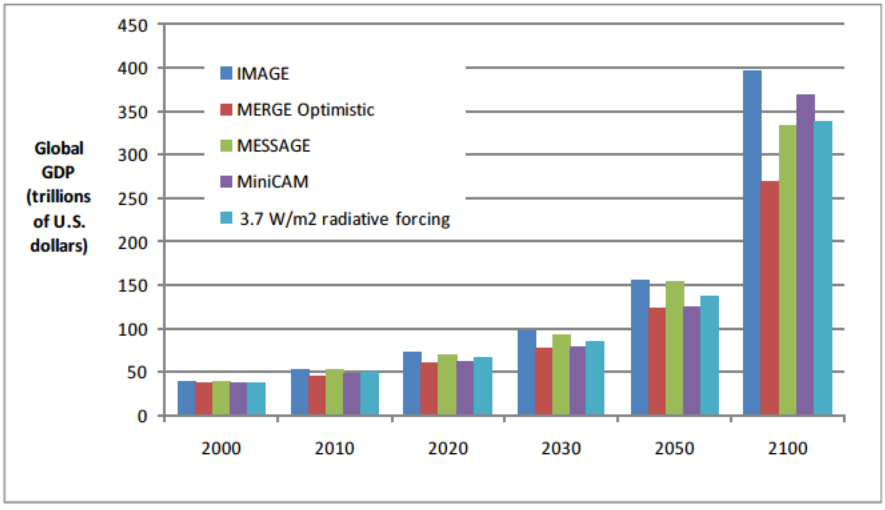
These results are not surprising when compared to the estimates in the literature for the latest versions of each model. For example, adjusting the values from the literature that were used to develop interim

SCC values to 2007 dollars for the year 2010 (assuming, as we did for the interim process, that SCC grows at 3 percent per year), FUND yields SCC estimates at or near zero for a 5 percent discount rate and around $9 per ton for a 3 percent discount rate. There are far fewer estimates using the latest versions of DICE and PAGE in the literature: Using similar adjustments to generate 2010 estimates, we calculate a SCC from DICE (based on Nordhaus 2008) of around $9 per ton for a 5 percent discount rate, and a SCC from PAGE (based on Hope 2006, 2008) close to $8 per ton for a 4 percent discount rate. Note that these comparisons are only approximate since the literature generally relies on Ramsey discounting, while we have assumed constant discount rates.[27]

The SCC estimates from FUND are sensitive to differences in emissions paths but relatively insensitive to differences in GDP paths across scenarios, while the reverse is true for DICE and PAGE. This likely occurs because of several structural differences among the models. Specifically in DICE and PAGE, the fraction of economic output lost due to climate damages increases with the level of temperature alone, whereas in FUND the fractional loss also increases with the rate of temperature change. Furthermore, in FUND increases in income over time decrease vulnerability to climate change (a form of adaptation), whereas this does not occur in DICE and PAGE. These structural differences among the models make FUND more sensitive to the path of emissions and less sensitive to GDP compared to DICE and PAGE.

Figure 3 shows that IMAGE has the highest GDP in 2100 while MERGE Optimistic has the lowest. The ordering of global GDP levels in 2100 directly corresponds to the rank ordering of SCC for PAGE and DICE. For FUND, the correspondence is less clear, a result that is to be expected given its less direct relationship between its damage function and GDP.

Figure 3: Level of Global GDP across EMF Scenarios



[27] Nordhaus (2008) runs DICE2007 with ρ = 1.5 and η = 2. The default approach in PAGE2002 (version 1.4epm) treats ρ and η as random parameters, specified using a triangular distribution such that the min, mode, and max = 0.1, 1, and 2 for ρ, and 0.5, 1, and 2 for η, respectively. The FUND default value for η is 1, and Tol generates SCC estimates for values of ρ = 0, 1, and 3 in many recent papers (e.g. Anthoff et al. 2009). The path of per-capita consumption growth, g, varies over time but is treated deterministically in two of the three models. In DICE, g is endogenous. Under Ramsey discounting, as economic growth slows in the future, the large damages from climate change that occur far out in the future are discounted at a lower rate than impacts that occur in the nearer term.

Table 4 shows the four selected SCC values in five year increments from 2010 to 2050. Values for 2010, 2020, 2040, and 2050 are calculated by first combining all outputs (10,000 estimates per model run) from all scenarios and models for a given discount rate. Values for the years in between are calculated using a simple linear interpolation.

Table 4: Social Cost of CO_2, 2010 – 2050 (in 2007 dollars)

Discount Rate	5%	3%	2.5%	3%
Year	Avg	Avg	Avg	95th
2010	4.7	21.4	35.1	64.9
2015	5.7	23.8	38.4	72.8
2020	6.8	26.3	41.7	80.7
2025	8.2	29.6	45.9	90.4
2030	9.7	32.8	50.0	100.0
2035	11.2	36.0	54.2	109.7
2040	12.7	39.2	58.4	119.3
2045	14.2	42.1	61.7	127.8
2050	15.7	44.9	65.0	136.2

The SCC increases over time because future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed in response to greater climatic change. Note that this approach allows us to estimate the growth rate of the SCC directly using DICE, PAGE, and FUND rather than assuming a constant annual growth rate as was done for the interim estimates (using 3 percent). This helps to ensure that the estimates are internally consistent with other modeling assumptions. Table 5 illustrates how the growth rate for these four SCC estimates varies over time. The full set of annual SCC estimates between 2010 and 2050 is reported in the Appendix.

Table 5: Changes in the Average Annual Growth Rates of SCC Estimates between 2010 and 2050

Average Annual Growth	**5%**	**3%**	**2.5%**	**3.0%**
Rate (%)	Avg	Avg	Avg	95th
2010-2020	3.6%	2.1%	1.7%	2.2%
2020-2030	3.7%	2.2%	1.8%	2.2%
2030-2040	2.7%	1.8%	1.6%	1.8%
2040-2050	2.1%	1.4%	1.1%	1.3%

While the SCC estimate grows over time, the future monetized value of emissions reductions in each year (the SCC in year *t* multiplied by the change in emissions in year *t*) must be discounted to the present to determine its total net present value for use in regulatory analysis. Damages from future emissions should be discounted at the same rate as that used to calculate the SCC estimates themselves to ensure internal consistency—i.e., future damages from climate change, whether they result from emissions today or emissions in a later year, should be discounted using the same rate. For example,

climate damages in the year 2020 that are calculated using a SCC based on a 5 percent discount rate also should be discounted back to the analysis year using a 5 percent discount rate.[28]

V. Limitations of the Analysis

As noted, any estimate of the SCC must be taken as provisional and subject to further refinement (and possibly significant change) in accordance with evolving scientific, economic, and ethical understandings. During the course of our modeling, it became apparent that there are several areas in particular need of additional exploration and research. These caveats, and additional observations in the following section, are necessary to consider when interpreting and applying the SCC estimates.

Incomplete treatment of non-catastrophic damages. The impacts of climate change are expected to be widespread, diverse, and heterogeneous. In addition, the exact magnitude of these impacts is uncertain because of the inherent complexity of climate processes, the economic behavior of current and future populations, and our inability to accurately forecast technological change and adaptation. Current IAMs do not assign value to all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature (some of which are discussed above) because of lack of precise information on the nature of damages and because the science incorporated into these models understandably lags behind the most recent research. Our ability to quantify and monetize impacts will undoubtedly improve with time. But it is also likely that even in future applications, a number of potentially significant damage categories will remain non-monetized. (Ocean acidification is one example of a potentially large damage from CO_2 emissions not quantified by any of the three models. Species and wildlife loss is another example that is exceedingly difficult to monetize.)

Incomplete treatment of potential catastrophic damages. There has been considerable recent discussion of the risk of catastrophic impacts and how best to account for extreme scenarios, such as the collapse of the Atlantic Meridional Overturning Circulation or the West Antarctic Ice Sheet, or large releases of methane from melting permafrost and warming oceans. Weitzman (2009) suggests that catastrophic damages are extremely large—so large, in fact, that the damages from a low probability, catastrophic event far in the future dominate the effect of the discount rate in a present value calculation and result in an infinite willingness-to-pay for mitigation today. However, Nordhaus (2009) concluded that the conditions under which Weitzman's results hold "are limited and do not apply to a wide range of potential uncertain scenarios."

Using a simplified IAM, Newbold and Daigneault (2009) confirmed the potential for large catastrophe risk premiums but also showed that the aggregate benefit estimates can be highly sensitive to the shapes of both the climate sensitivity distribution and the damage function at high temperature changes. Pindyck (2009) also used a simplified IAM to examine high-impact low-probability risks, using a right-skewed gamma distribution for climate sensitivity as well as an uncertain damage coefficient, but in most cases found only a modest risk premium. Given this difference in opinion, further research in this area is needed before its practical significance can be fully understood and a reasonable approach developed to account for such risks in regulatory analysis. (The next section discusses the scientific evidence on catastrophic impacts in greater detail.)

[28] However, it is possible that other benefits or costs of proposed regulations unrelated to CO_2 emissions will be discounted at rates that differ from those used to develop the SCC estimates.

Uncertainty in extrapolation of damages to high temperatures: The damage functions in these IAMs are typically calibrated by estimating damages at moderate temperature increases (e.g., DICE was calibrated at 2.5 °C) and extrapolated to far higher temperatures by assuming that damages increase as some power of the temperature change. Hence, estimated damages are far more uncertain under more extreme climate change scenarios.

Incomplete treatment of adaptation and technological change: Each of the three integrated assessment models used here assumes a certain degree of low- or no-cost adaptation. For instance, Tol assumes a great deal of adaptation in FUND, including widespread reliance on air conditioning ; so much so, that the largest single benefit category in FUND is the reduced electricity costs from not having to run air conditioning as intensively (NRC 2009).

Climate change also will increase returns on investment to develop technologies that allow individuals to cope with adverse climate conditions, and IAMs to do not adequately account for this directed technological change.[29] For example, scientists may develop crops that are better able to withstand higher and more variable temperatures. Although DICE and FUND have both calibrated their agricultural sectors under the assumption that farmers will change land use practices in response to climate change (Mastrandrea, 2009), they do not take into account technological changes that lower the cost of this adaptation over time. On the other hand, the calibrations do not account for increases in climate variability, pests, or diseases, which could make adaptation more difficult than assumed by the IAMs for a given temperature change. Hence, models do not adequately account for potential adaptation or technical change that might alter the emissions pathway and resulting damages. In this respect, it is difficult to determine whether the incomplete treatment of adaptation and technological change in these IAMs under or overstate the likely damages.

Risk aversion: A key question unanswered during this interagency process is what to assume about relative risk aversion with regard to high-impact outcomes. These calculations do not take into account the possibility that individuals may have a higher willingness to pay to reduce the likelihood of low-probability, high-impact damages than they do to reduce the likelihood of higher-probability but lower-impact damages with the same expected cost. (The inclusion of the 95th percentile estimate in the final set of SCC values was largely motivated by this concern.) If individuals do show such a higher willingness to pay, a further question is whether that fact should be taken into account for regulatory policy. Even if individuals are not risk-averse for such scenarios, it is possible that regulatory policy should include a degree of risk-aversion.

Assuming a risk-neutral representative agent is consistent with OMB's Circular A-4, which advises that the estimates of benefits and costs used in regulatory analysis are usually based on the average or the expected value and that "emphasis on these expected values is appropriate as long as society is 'risk neutral' with respect to the regulatory alternatives. While this may not always be the case, [analysts] should in general assume 'risk neutrality' in [their] analysis."

Nordhaus (2008) points to the need to explore the relationship between risk and income in the context of climate change across models and to explore the role of uncertainty regarding various parameters in

[29] However these research dollars will be diverted from whatever their next best use would have been in the absence of climate change (so productivity/GDP would have been still higher).

the results. Using FUND, Anthoff et al (2009) explored the sensitivity of the SCC to Ramsey equation parameter assumptions based on observed behavior. They conclude that "the assumed rate of risk aversion is at least as important as the assumed rate of time preference in determining the social cost of carbon." Since Circular A-4 allows for a different assumption on risk preference in regulatory analysis if it is adequately justified, we plan to continue investigating this issue.

V. A Further Discussion of Catastrophic Impacts and Damage Functions

As noted above, the damage functions underlying the three IAMs used to estimate the SCC may not capture the economic effects of all possible adverse consequences of climate change and may therefore lead to underestimates of the SCC (Mastrandrea 2009). In particular, the models' functional forms may not adequately capture: (1) potentially discontinuous "tipping point" behavior in Earth systems, (2) inter-sectoral and inter-regional interactions, including global security impacts of high-end warming, and (3) limited near-term substitutability between damage to natural systems and increased consumption.

It is the hope of the interagency group that over time researchers and modelers will work to fill these gaps and that the SCC estimates used for regulatory analysis by the Federal government will continue to evolve with improvements in modeling. In the meantime, we discuss some of the available evidence.

Extrapolation of climate damages to high levels of warming

The damage functions in the models are calibrated at moderate levels of warming and should therefore be viewed cautiously when extrapolated to the high temperatures found in the upper end of the distribution. Recent science suggests that there are a number of potential climatic "tipping points" at which the Earth system may exhibit discontinuous behavior with potentially severe social and economic consequences (e.g., Lenton et al, 2008, Kriegler et al., 2009). These tipping points include the disruption of the Indian Summer Monsoon, dieback of the Amazon Rainforest and boreal forests, collapse of the Greenland Ice Sheet and the West Antarctic Ice Sheet, reorganization of the Atlantic Meridional Overturning Circulation, strengthening of El Niño-Southern Oscillation, and the release of methane from melting permafrost. Many of these tipping points are estimated to have thresholds between about 3 °C and 5 °C (Lenton et al., 2008). Probabilities of several of these tipping points were assessed through expert elicitation in 2005–2006 by Kriegler et al. (2009); results from this study are highlighted in Table 6. Ranges of probability are averaged across core experts on each topic.

As previously mentioned, FUND does not include potentially catastrophic effects. DICE assumes a small probability of catastrophic damages that increases with increased warming, but the damages from these risks are incorporated as expected values (i.e., ignoring potential risk aversion). PAGE models catastrophic impacts in a probabilistic framework (see Figure 1), so the high-end output from PAGE potentially offers the best insight into the SCC if the world were to experience catastrophic climate change. For instance, at the 95th percentile and a 3 percent discount rate, the SCC estimated by PAGE across the five socio-economic and emission trajectories of $113 per ton of CO_2 is almost double the value estimated by DICE, $58 per ton in 2010. We cannot evaluate how well the three models account for catastrophic or non-catastrophic impacts, but this estimate highlights the sensitivity of SCC values in the tails of the distribution to the assumptions made about catastrophic impacts.

Table 6: Probabilities of Various Tipping Points from Expert Elicitation -

Possible Tipping Points	Duration before effect is fully realized (in years)	Additional Warming by 2100		
		0.5-1.5 C	1.5-3.0 C	3-5 C
Reorganization of Atlantic Meridional Overturning Circulation	about 100	0-18%	6-39%	18-67%
Greenland Ice Sheet collapse	at least 300	8-39%	33-73%	67-96%
West Antarctic Ice Sheet collapse	at least 300	5-41%	10-63%	33-88%
Dieback of Amazon rainforest	about 50	2-46%	14-84%	41-94%
Strengthening of El Niño-Southern Oscillation	about 100	1-13%	6-32%	19-49%
Dieback of boreal forests	about 50	13-43%	20-81%	34-91%
Shift in Indian Summer Monsoon	about 1	Not formally assessed		
Release of methane from melting permafrost	Less than 100	Not formally assessed.		

PAGE treats the possibility of a catastrophic event probabilistically, while DICE treats it deterministically (that is, by adding the expected value of the damage from a catastrophe to the aggregate damage function). In part, this results in different probabilities being assigned to a catastrophic event across the two models. For instance, PAGE places a probability near zero on a catastrophe at 2.5 °C warming, while DICE assumes a 4 percent probability of a catastrophe at 2.5 °C. By comparison, Kriegler et al. (2009) estimate a probability of at least 16-36 percent of crossing at least one of their primary climatic tipping points in a scenario with temperatures about 2-4 °C warmer than pre-Industrial levels in 2100.

It is important to note that crossing a climatic tipping point will not necessarily lead to an economic catastrophe in the sense used in the IAMs. A tipping point is a critical threshold across which some aspect of the Earth system starts to shifts into a qualitatively different state (for instance, one with dramatically reduced ice sheet volumes and higher sea levels). In the IAMs, a catastrophe is a low-probability environmental change with high economic impact.

Failure to incorporate inter-sectoral and inter-regional interactions

The damage functions do not fully incorporate either inter-sectoral or inter-regional interactions. For instance, while damages to the agricultural sector are incorporated, the effects of changes in food supply on human health are not fully captured and depend on the modeler's choice of studies used to calibrate the IAM. Likewise, the effects of climate damages in one region of the world on another region are not included in some of the models (FUND includes the effects of migration from sea level rise). These inter-regional interactions, though difficult to quantify, are the basis for climate-induced national and economic security concerns (e.g., Campbell et al., 2007; U.S. Department of Defense 2010) and are particularly worrisome at higher levels of warming. High-end warming scenarios, for instance, project water scarcity affecting 4.3-6.9 billion people by 2050, food scarcity affecting about 120 million

additional people by 2080, and the creation of millions of climate refugees (Easterling et al., 2007; Campbell et al., 2007).

Imperfect substitutability of environmental amenities

Data from the geological record of past climate changes suggests that 6 °C of warming may have severe consequences for natural systems. For instance, during the Paleocene-Eocene Thermal Maximum about 55.5 million years ago, when the Earth experienced a geologically rapid release of carbon associated with an approximately 5 °C increase in global mean temperatures, the effects included shifts of about 400-900 miles in the range of plants (Wing et al., 2005), and dwarfing of both land mammals (Gingerich, 2006) and soil fauna (Smith et al., 2009).

The three IAMs used here assume that it is possible to compensate for the economic consequences of damages to natural systems through increased consumption of non-climate goods, a common assumption in many economic models. In the context of climate change, however, it is possible that the damages to natural systems could become so great that no increase in consumption of non-climate goods would provide complete compensation (Levy et al., 2005). For instance, as water supplies become scarcer or ecosystems become more fragile and less bio-diverse, the services they provide may become increasingly more costly to replace. Uncalibrated attempts to incorporate the imperfect substitutability of such amenities into IAMs (Sterner and Persson, 2008) indicate that the optimal degree of emissions abatement can be considerably greater than is commonly recognized.

VI. Conclusion

The interagency group selected four SCC estimates for use in regulatory analyses. For 2010, these estimates are $5, $21, $35, and $65 (in 2007 dollars). The first three estimates are based on the average SCC across models and socio-economic and emissions scenarios at the 5, 3, and 2.5 percent discount rates, respectively. The fourth value is included to represent the higher-than-expected impacts from temperature change further out in the tails of the SCC distribution. For this purpose, we use the SCC value for the 95th percentile at a 3 percent discount rate. The central value is the average SCC across models at the 3 percent discount rate. For purposes of capturing the uncertainties involved in regulatory impact analysis, we emphasize the importance and value of considering the full range. These SCC estimates also grow over time. For instance, the central value increases to $24 per ton of CO_2 in 2015 and $26 per ton of CO_2 in 2020.

We noted a number of limitations to this analysis, including the incomplete way in which the integrated assessment models capture catastrophic and non-catastrophic impacts, their incomplete treatment of adaptation and technological change, uncertainty in the extrapolation of damages to high temperatures, and assumptions regarding risk aversion. The limited amount of research linking climate impacts to economic damages makes this modeling exercise even more difficult. It is the hope of the interagency group that over time researchers and modelers will work to fill these gaps and that the SCC estimates used for regulatory analysis by the Federal government will continue to evolve with improvements in modeling.

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Appendix

Table A1: Annual SCC Values: 2010–2050 (in 2007 dollars)

Discount Rate	5%	3%	2.5%	3%
Year	Avg	Avg	Avg	95th
2010	4.7	21.4	35.1	64.9
2011	4.9	21.9	35.7	66.5
2012	5.1	22.4	36.4	68.1
2013	5.3	22.8	37.0	69.6
2014	5.5	23.3	37.7	71.2
2015	5.7	23.8	38.4	72.8
2016	5.9	24.3	39.0	74.4
2017	6.1	24.8	39.7	76.0
2018	6.3	25.3	40.4	77.5
2019	6.5	25.8	41.0	79.1
2020	6.8	26.3	41.7	80.7
2021	7.1	27.0	42.5	82.6
2022	7.4	27.6	43.4	84.6
2023	7.7	28.3	44.2	86.5
2024	7.9	28.9	45.0	88.4
2025	8.2	29.6	45.9	90.4
2026	8.5	30.2	46.7	92.3
2027	8.8	30.9	47.5	94.2
2028	9.1	31.5	48.4	96.2
2029	9.4	32.1	49.2	98.1
2030	9.7	32.8	50.0	100.0
2031	10.0	33.4	50.9	102.0
2032	10.3	34.1	51.7	103.9
2033	10.6	34.7	52.5	105.8
2034	10.9	35.4	53.4	107.8
2035	11.2	36.0	54.2	109.7
2036	11.5	36.7	55.0	111.6
2037	11.8	37.3	55.9	113.6
2038	12.1	37.9	56.7	115.5
2039	12.4	38.6	57.5	117.4
2040	12.7	39.2	58.4	119.3
2041	13.0	39.8	59.0	121.0
2042	13.3	40.4	59.7	122.7
2043	13.6	40.9	60.4	124.4
2044	13.9	41.5	61.0	126.1
2045	14.2	42.1	61.7	127.8
2046	14.5	42.6	62.4	129.4
2047	14.8	43.2	63.0	131.1
2048	15.1	43.8	63.7	132.8
2049	15.4	44.4	64.4	134.5
2050	15.7	44.9	65.0	136.2

This Appendix also provides additional technical information about the non-CO_2 emission projections used in the modeling and the method for extrapolating emissions forecasts through 2300, and shows the full distribution of 2010 SCC estimates by model and scenario combination.

1. Other (non-CO_2) gases

In addition to fossil and industrial CO_2 emissions, each EMF scenario provides projections of methane (CH_4), nitrous oxide (N_2O), fluorinated gases, and net land use CO_2 emissions to 2100. These assumptions are used in all three IAMs while retaining each model's default radiative forcings (RF) due to other factors (e.g., aerosols and other gases). Specifically, to obtain the RF associated with the non-CO_2 EMF emissions only, we calculated the RF associated with the EMF atmospheric CO_2 concentrations and subtracted them from the EMF total RF.[30] This approach respects the EMF scenarios as much as possible and at the same time takes account of those components not included in the EMF projections. Since each model treats non-CO_2 gases differently (e.g., DICE lumps all other gases into one composite exogenous input), this approach was applied slightly differently in each of the models.

FUND: Rather than relying on RF for these gases, the actual emissions from each scenario were used in FUND. The model default trajectories for CH_4, N_20, SF_6, and the CO_2 emissions from land were replaced with the EMF values.

PAGE: PAGE models CO_2, CH_4, sulfur hexafluoride (SF_6), and aerosols and contains an "excess forcing" vector that includes the RF for everything else. To include the EMF values, we removed the default CH_4 and SF_6 factors[31], decomposed the excess forcing vector, and constructed a new excess forcing vector that includes the EMF RF for CH_4, N_20, and fluorinated gases, as well as the model default values for aerosols and other factors. Net land use CO_2 emissions were added to the fossil and industrial CO_2 emissions pathway.

DICE: DICE presents the greatest challenge because all forcing due to factors other than industrial CO_2 emissions is embedded in an exogenous non-CO_2 RF vector. To decompose this exogenous forcing path into EMF non-CO_2 gases and other gases, we relied on the references in DICE2007 to the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (AR4) and the discussion of aerosol forecasts in the IPCC's Third Assessment Report (TAR) and in AR4, as explained below. In DICE2007, Nordhaus assumes that exogenous forcing from all non-CO_2 sources is -0.06 W/m^2 in 2005, as reported in AR4, and increases linearly to 0.3 W/m^2 in 2105, based on GISS projections, and then stays constant after that time.

[30] Note EMF did not provide CO_2 concentrations for the IMAGE reference scenario. Thus, for this scenario, we fed the fossil, industrial and land CO_2 emissions into MAGICC (considered a "neutral arbiter" model, which is tuned to emulate the major global climate models) and the resulting CO_2 concentrations were used. Note also that MERGE assumes a neutral biosphere so net land CO_2 emissions are set to zero for all years for the MERGE Optimistic reference scenario, and for the MERGE component of the average 550 scenario (i.e., we add up the land use emissions from the other three models and divide by 4).

[31] Both the model default CH_4 emissions and the initial atmospheric CH_4 is set to zero to avoid double counting the effect of past CH_4 emissions.

According to AR4, the RF in 2005 from CH_4, N_20, and halocarbons (approximately similar to the F-gases in the EMF-22 scenarios) was 0.48 + 0.16 + 0.34 = 0.98 W/m^2 and RF from total aerosols was -1.2 W/m^2. Thus, the -.06 W/m^2 non-CO_2 forcing in DICE can be decomposed into: 0.98 W/m^2 due to the EMF non-CO_2 gases, -1.2 W/m^2 due to aerosols, and the remainder, 0.16 W/m^2, due to other residual forcing.

For subsequent years, we calculated the DICE default RF from aerosols and other non-CO_2 gases based on the following two assumptions:

(1) RF from aerosols declines linearly from 2005 to 2100 at the rate projected by the TAR and then stays constant thereafter, and
(2) With respect to RF from non-CO_2 gases not included in the EMF-22 scenarios, the share of non-aerosol RF matches the share implicit in the AR4 summary statistics cited above and remains constant over time.

Assumption (1) means that the RF from aerosols in 2100 equals 66 percent of that in 2000, which is the fraction of the TAR projection of total RF from aerosols (including sulfates, black carbon, and organic carbon) in 2100 vs. 2000 under the A1B SRES emissions scenario. Since the SRES marker scenarios were not updated for the AR4, the TAR provides the most recent IPCC projection of aerosol forcing. We rely on the A1B projection from the TAR because it provides one of the lower aerosol forecasts among the SRES marker scenarios and is more consistent with the AR4 discussion of the post-SRES literature on aerosols:

Aerosols have a net cooling effect and the representation of aerosol and aerosol precursor emissions, including sulphur dioxide, black carbon and organic carbon, has improved in the post-SRES scenarios. Generally, these emissions are projected to be lower than reported in SRES. {WGIII 3.2, TS.3, SPM}.[32]

Assuming a simple linear decline in aerosols from 2000 to 2100 also is more consistent with the recent literature on these emissions. For example, Figure A1 shows that the sulfur dioxide emissions peak over the short-term of some SRES scenarios above the upper bound estimates of the more recent scenarios.[33] Recent scenarios project sulfur emissions to peak earlier and at lower levels compared to the SRES in part because of new information about present and planned sulfur legislation in some developing countries, such as India and China.[34] The lower bound projections of the recent literature have also shifted downward slightly compared to the SRES scenario (IPCC 2007).

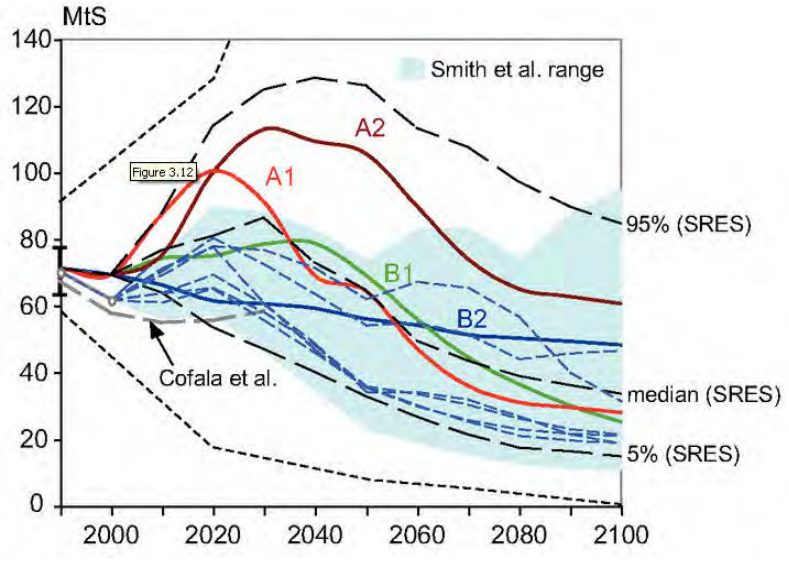
[32] AR4 Synthesis Report, p. 44, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf

[33] See Smith, S.J., R. Andres, E. Conception, and J. Lurz, 2004: Historical sulfur dioxide emissions, 1850-2000: methods and results. Joint Global Research Institute, College Park, 14 pp.

[34] See Carmichael, G., D. Streets, G. Calori, M. Amann, M. Jacobson, J. Hansen, and H. Ueda, 2002: Changing trends in sulphur emissions in Asia: implications for acid deposition, air pollution, and climate. Environmental Science and Technology, 36(22):4707- 4713; Streets, D., K. Jiang, X. Hu, J. Sinton, X.-Q. Zhang, D. Xu, M. Jacobson, and J. Hansen, 2001: Recent reductions in China's greenhouse gas emissions. Science, 294(5548): 1835-1837.

With these assumptions, the DICE aerosol forcing changes from -1.2 in 2005 to -0.792 in 2105 W/m^2; forcing due to other non-CO_2 gases not included in the EMF scenarios declines from 0.160 to 0.153 W/m^2.

Figure A1: Sulphur Dioxide Emission Scenarios -



Notes: Thick colored lines depict the four SRES marker scenarios and black dashed lines show the median, 5th and 95th percentile of the frequency distribution for the full ensemble of 40 SRES scenarios. The blue area (and the thin dashed lines in blue) illustrates individual scenarios and the range of Smith et al. (2004). Dotted lines indicate the minimum and maximum of SO_2 emissions scenarios developed pre-SRES.
Source: IPCC (2007), AR4 WGIII 3.2, http://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch3-ens3-2-2-4.html.

Although other approaches to decomposing the DICE exogenous forcing vector are possible, initial sensitivity analysis suggests that the differences among reasonable alternative approaches are likely to be minor. For example, adjusting the TAR aerosol projection above to assume that aerosols will be maintained at 2000 levels through 2100 reduces average SCC values (for 2010) by approximately 3 percent (or less than $2); assuming all aerosols are phased out by 2100 increases average 2010 SCC values by 6-7 percent (or $0.50-$3)–depending on the discount rate. These differences increase slightly for SCC values in later years but are still well within 10 percent of each other as far out as 2050.

Finally, as in PAGE, the EMF net land use CO_2 emissions are added to the fossil and industrial CO_2 emissions pathway.

2. - Extrapolating Emissions Projections to 2300

To run each model through 2300 requires assumptions about GDP, population, greenhouse gas emissions, and radiative forcing trajectories after 2100, the last year for which these projections are available from the EMF-22 models. These inputs were extrapolated from 2100 to 2300 as follows:

1. Population growth rate declines linearly, reaching zero in the year 2200.
2. GDP/ per capita growth rate declines linearly, reaching zero in the year 2300.
3. The decline in the fossil and industrial carbon intensity (CO_2/GDP) growth rate over 2090-2100 is maintained from 2100 through 2300.
4. Net land use CO_2 emissions decline linearly, reaching zero in the year 2200.
5. Non-CO_2 radiative forcing remains constant after 2100.

Long run stabilization of GDP per capita was viewed as a more realistic simplifying assumption than a linear or exponential extrapolation of the pre-2100 economic growth rate of each EMF scenario. This is based on the idea that increasing scarcity of natural resources and the degradation of environmental sinks available for assimilating pollution from economic production activities may eventually overtake the rate of technological progress. Thus, the overall rate of economic growth may slow over the very long run. The interagency group also considered allowing an exponential decline in the growth rate of GDP per capita. However, since this would require an additional assumption about how close to zero the growth rate would get by 2300, the group opted for the simpler and more transparent linear extrapolation to zero by 2300.

The population growth rate is also assumed to decline linearly, reaching zero by 2200. This assumption is reasonably consistent with the United Nations long run population forecast, which estimates global population to be fairly stable after 2150 in the medium scenario (UN 2004).[35] The resulting range of EMF population trajectories (Figure A2) also encompass the UN medium scenario forecasts through 2300 – global population of 8.5 billion by 2200, and 9 billion by 2300.

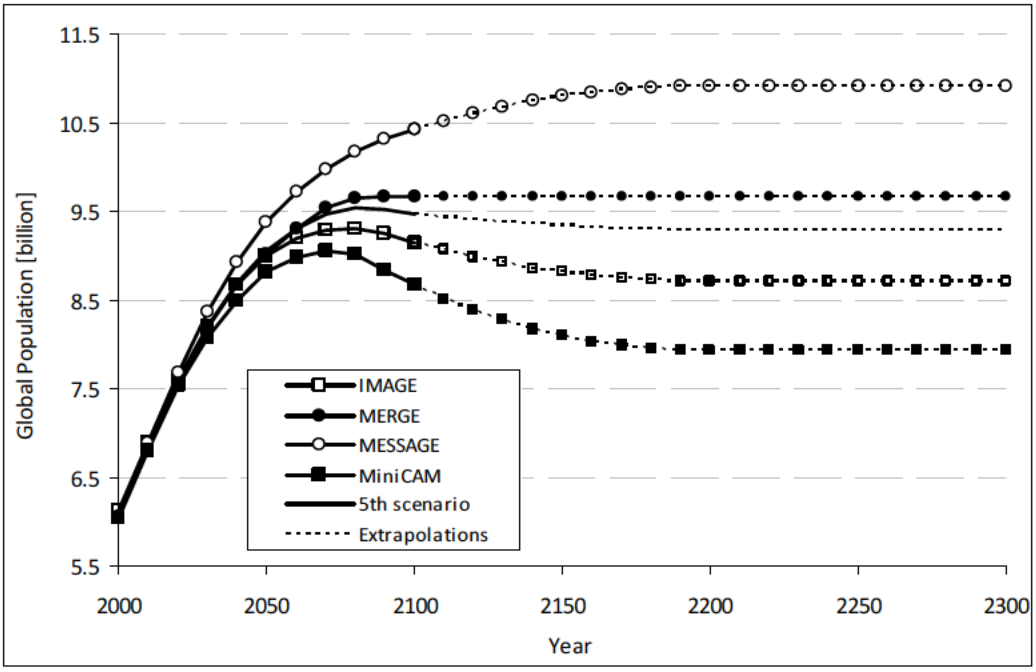
Maintaining the decline in the 2090-2100 carbon intensity growth rate (i.e., CO_2 per dollar of GDP) through 2300 assumes that technological improvements and innovations in the areas of energy efficiency and other carbon reducing technologies (possibly including currently unavailable methods) will continue to proceed at roughly the same pace that is projected to occur towards the end of the forecast period for each EMF scenario. This assumption implies that total cumulative emissions in 2300 will be between 5,000 and 12,000 GtC, which is within the range of the total potential global carbon stock estimated in the literature.

Net land use CO_2 emissions are expected to stabilize in the long run, so in the absence of any post 2100 projections, the group assumed a linear decline to zero by 2200. Given no a priori reasons for assuming a long run increase or decline in non-CO_2 radiative forcing, it is assumed to remain at the 2100 levels for each EMF scenario through 2300.

Figures A2-A7 show the paths of global population, GDP, fossil and industrial CO_2 emissions, net land CO_2 emissions, non-CO_2 radiative forcing, and CO_2 intensity (fossil and industrial CO_2 emissions/GDP) resulting from these assumptions.

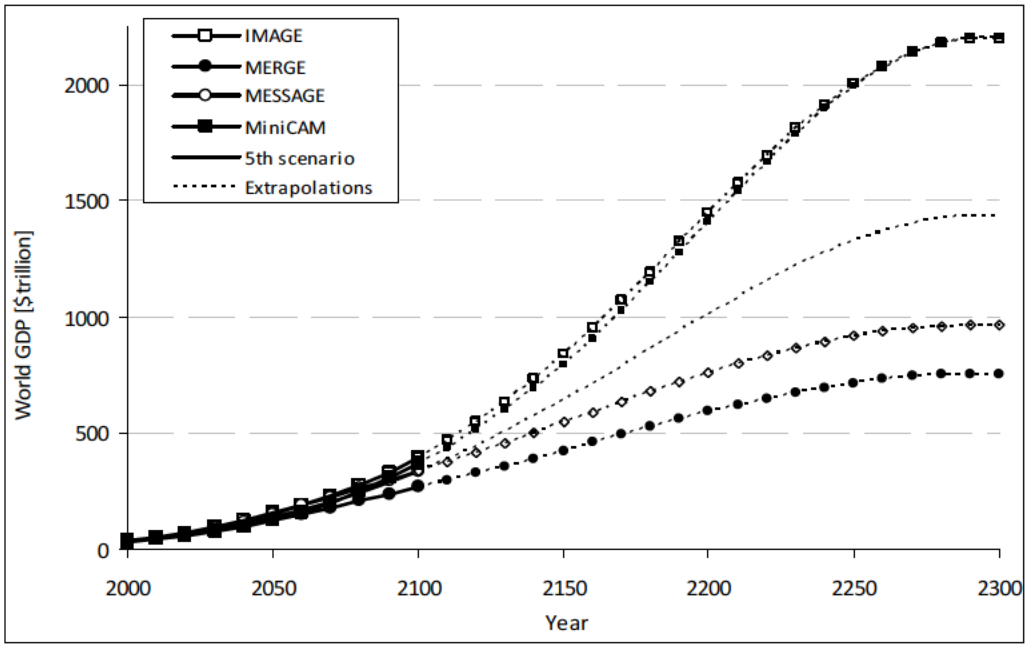
[35] United Nations. 2004. *World Population to 2300*.
http://www.un.org/esa/population/publications/longrange2/worldpop2300final.pdf

Figure A2. Global Population, 2000-2300 (Post-2100 extrapolations assume the population growth - rate changes linearly to reach a zero growth rate by 2200.) -



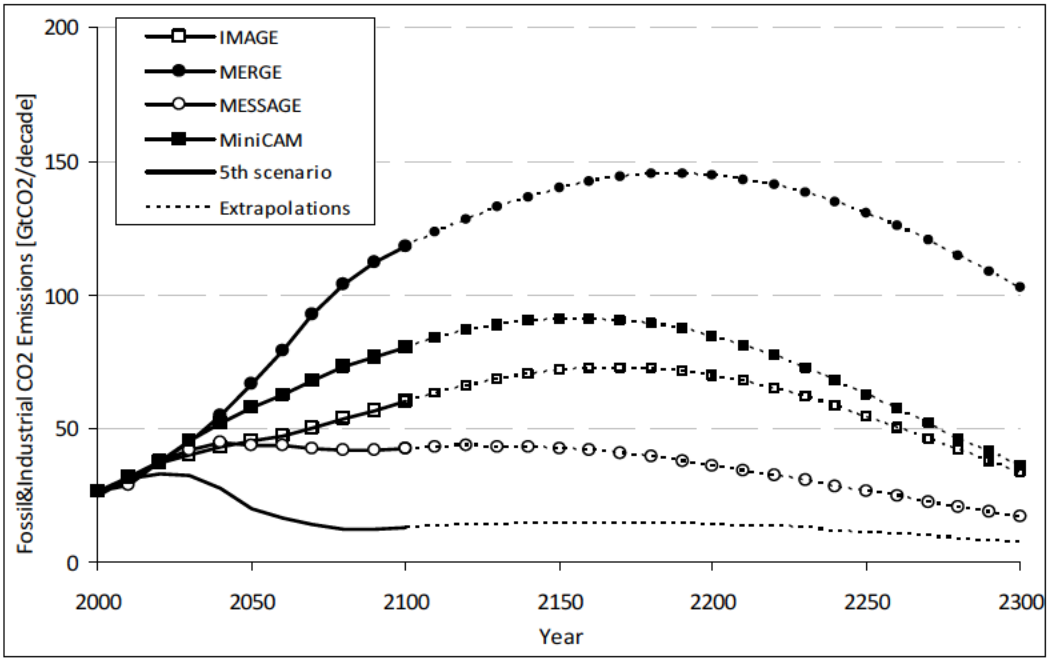
Note: In the fifth scenario, 2000-2100 population is equal to the average of the population under the 550 ppm CO_2e, full-participation, not-to-exceed scenarios considered by each of the four models.

Figure A3. World GDP, 2000-2300 (Post-2100 extrapolations assume GDP per capita growth declines linearly, reaching zero in the year 2300)



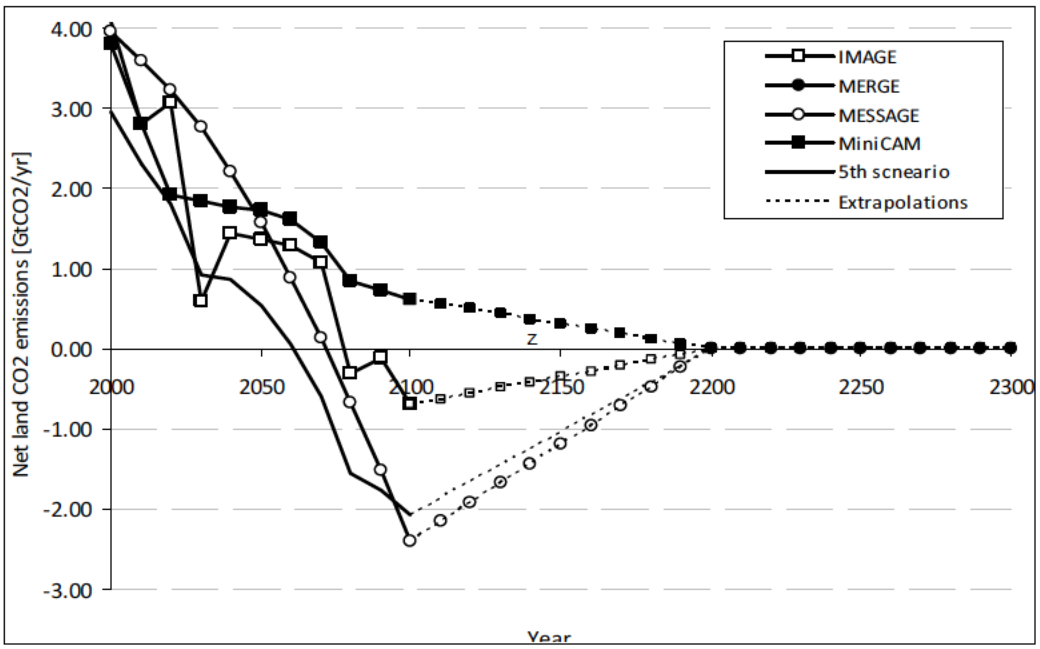
Note: In the fifth scenario, 2000-2100 GDP is equal to the average of the GDP under the 550 ppm CO_2e, full-participation, not-to-exceed scenarios considered by each of the four models.

Figure A4. Global Fossil and Industrial CO_2 Emissions, 2000-2300 (Post-2100 extrapolations assume growth rate of CO_2 intensity (CO_2/GDP) over 2090-2100 is maintained through 2300.)



Note: In the fifth scenario, 2000-2100 emissions are equal to the average of the emissions under the 550 ppm CO2e, full-participation, not-to-exceed scenarios considered by each of the four models.

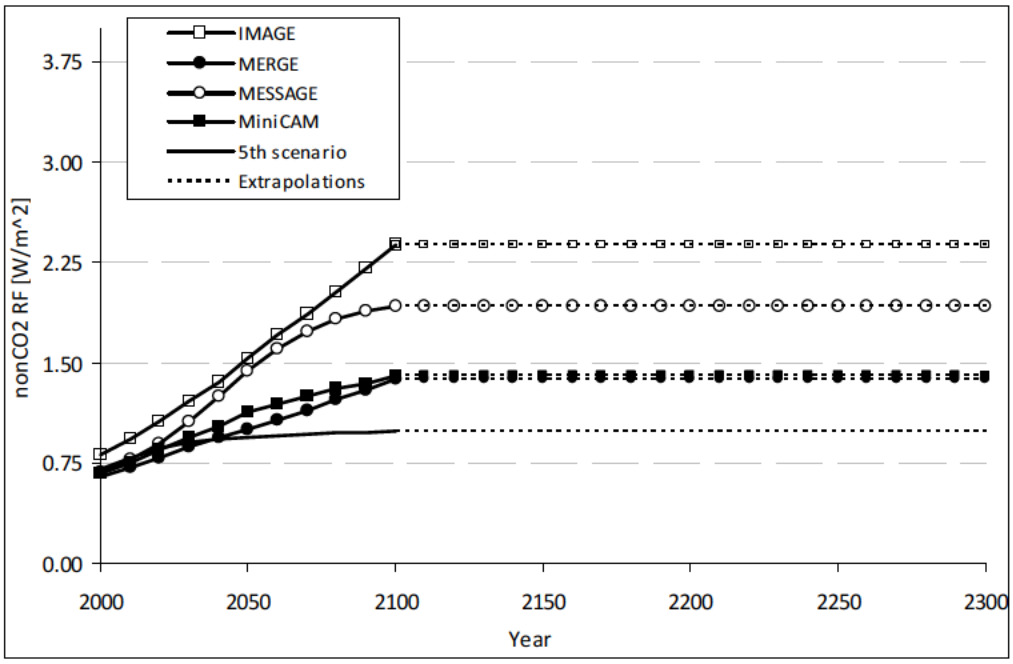
Figure A5. Global Net Land Use CO_2 Emissions, 2000-2300 (Post-2100 extrapolations assume emissions decline linearly, reaching zero in the year 2200)[36]



Note: In the fifth scenario, 2000-2100 emissions are equal to the average of the emissions under the 550 ppm CO2e, full-participation, not-to-exceed scenarios considered by each of the four models.

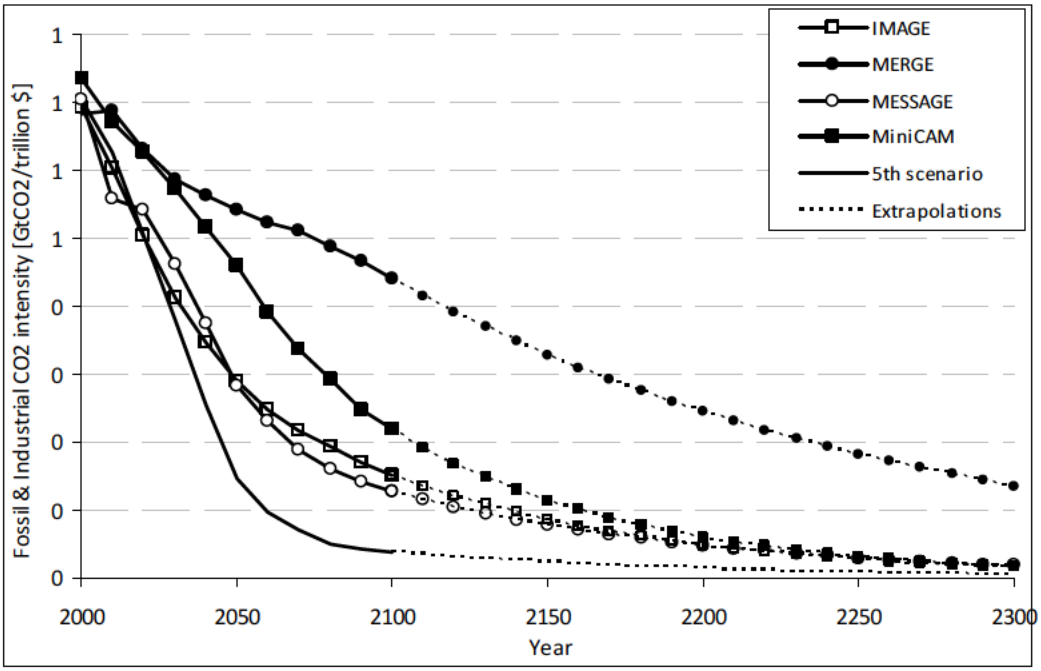
[36] MERGE assumes a neutral biosphere so net land CO_2 emissions are set to zero for all years for the MERGE Optimistic reference scenario, and for the MERGE component of the average 550 scenario (i.e., we add up the land use emissions from the other three models and divide by 4).

Figure A6. Global Non-CO_2 Radiative Forcing, 2000-2300 (Post-2100 extrapolations assume constant non-CO_2 radiative forcing after 2100.)



Note: In the fifth scenario, 2000-2100 emissions are equal to the average of the emissions under the 550 ppm CO2e, full-participation, not-to-exceed scenarios considered by each of the four models.

Figure A7. Global CO_2 Intensity (fossil & industrial CO_2 emissions/GDP), 2000-2300 (Post-2100 extrapolations assume decline in CO_2/GDP growth rate over 2090-2100 is maintained through 2300.)



Note: In the fifth scenario, 2000-2100 emissions are equal to the average of the emissions under the 550 ppm CO_2e, full-participation, not-to-exceed scenarios considered by each of the four models.

Table A2. 2010 Global SCC Estimates at 2.5 Percent Discount Rate (2007$/ton CO_2)

Percentile	1st	5th	10th	25th	50th	Avg	75th	90th	95th	99th
Scenario						**PAGE**				
IMAGE	3.3	5.9	8.1	13.9	28.8	65.5	68.2	147.9	239.6	563.8
MERGE optimistic	1.9	3.2	4.3	7.2	14.6	34.6	36.2	79.8	124.8	288.3
Message	2.4	4.3	5.8	9.8	20.3	49.2	50.7	114.9	181.7	428.4
MiniCAM base	2.7	4.6	6.4	11.2	22.8	54.7	55.7	120.5	195.3	482.3
5th scenario	2.0	3.5	4.7	8.1	16.3	42.9	41.5	103.9	176.3	371.9
Scenario						**DICE**				
IMAGE	16.4	21.4	25	33.3	46.8	54.2	69.7	96.3	111.1	130.0
MERGE optimistic	9.7	12.6	14.9	19.7	27.9	31.6	40.7	54.5	63.5	73.3
Message	13.5	17.2	20.1	27	38.5	43.5	55.1	75.8	87.9	103.0
MiniCAM base	13.1	16.7	19.8	26.7	38.6	44.4	56.8	79.5	92.8	109.3
5th scenario	10.8	14	16.7	22.2	32	37.4	47.7	67.8	80.2	96.8
Scenario						**FUND**				
IMAGE	-33.1	-18.9	-13.3	-5.5	4.1	19.3	18.7	43.5	67.1	150.7
MERGE optimistic	-33.1	-14.8	-10	-3	5.9	14.8	20.4	43.9	65.4	132.9
Message	-32.5	-19.8	-14.6	-7.2	1.5	8.8	13.8	33.7	52.3	119.2
MiniCAM base	-31.0	-15.9	-10.7	-3.4	6	22.2	21	46.4	70.4	152.9
5th scenario	-32.2	-21.6	-16.7	-9.7	-2.3	3	6.7	20.5	34.2	96.8

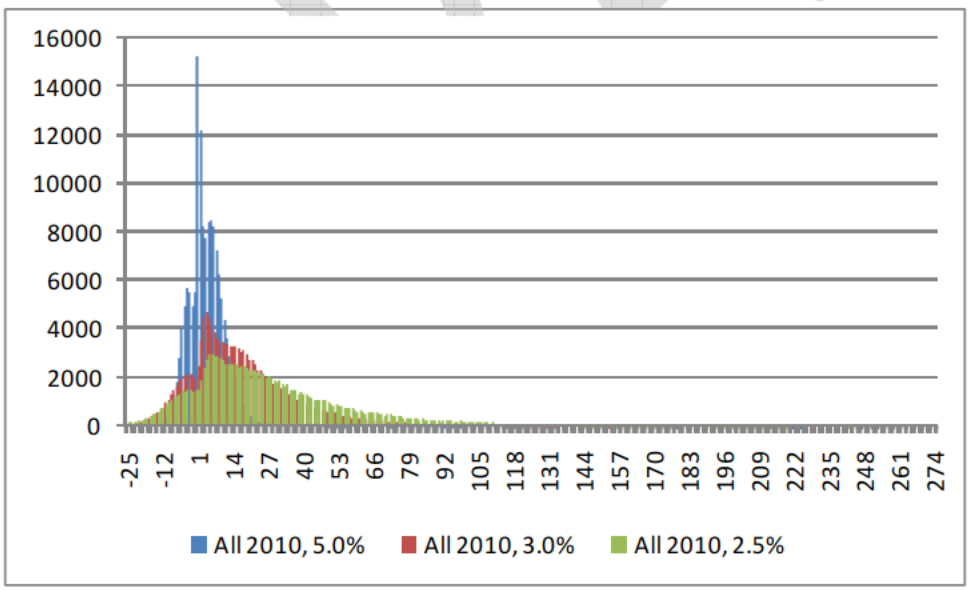
Table A3. 2010 Global SCC Estimates at 3 Percent Discount Rate (2007$/ton CO_2)

Percentile	1st	5th	10th	25th	50th	Avg	75th	90th	95th	99th
Scenario						**PAGE**				
IMAGE	2.0	3.5	4.8	8.1	16.5	39.5	41.6	90.3	142.4	327.4
MERGE optimistic	1.2	2.1	2.8	4.6	9.3	22.3	22.8	51.3	82.4	190.0
Message	1.6	2.7	3.6	6.2	12.5	30.3	31	71.4	115.6	263.0
MiniCAM base	1.7	2.8	3.8	6.5	13.2	31.8	32.4	72.6	115.4	287.0
5th scenario	1.3	2.3	3.1	5	9.6	25.4	23.6	62.1	104.7	222.5
Scenario						**DICE**				
IMAGE	11.0	14.5	17.2	22.8	31.6	35.8	45.4	61.9	70.8	82.1
MERGE optimistic	7.1	9.2	10.8	14.3	19.9	22	27.9	36.9	42.1	48.8
Message	9.7	12.5	14.7	19	26.6	29.8	37.8	51.1	58.6	67.4
MiniCAM base	8.8	11.5	13.6	18	25.2	28.8	36.9	50.4	57.9	67.8
5th scenario	7.9	10.1	11.8	15.6	21.6	24.9	31.8	43.7	50.8	60.6
Scenario						**FUND**				
IMAGE	-25.2	-15.3	-11.2	-5.6	0.9	8.2	10.4	25.4	39.7	90.3
MERGE optimistic	-24.0	-12.4	-8.7	-3.6	2.6	8	12.2	27	41.3	85.3
Message	-25.3	-16.2	-12.2	-6.8	-0.5	3.6	7.7	20.1	32.1	72.5
MiniCAM base	-23.1	-12.9	-9.3	-4	2.4	10.2	12.2	27.7	42.6	93.0
5th scenario	-24.1	-16.6	-13.2	-8.3	-3	-0.2	2.9	11.2	19.4	53.6

Table A4. 2010 Global SCC Estimates at 5 Percent Discount Rate (2007$/ton CO_2)

Percentile	1st	5th	10th	25th	50th	Avg	75th	90th	95th	99th
Scenario						**PAGE**				
IMAGE	0.5	0.8	1.1	1.8	3.5	8.3	8.5	19.5	31.4	67.2
MERGE optimistic	0.3	0.5	0.7	1.2	2.3	5.2	5.4	12.3	19.5	42.4
Message	0.4	0.7	0.9	1.6	3	7.2	7.2	17	28.2	60.8
MiniCAM base	0.3	0.6	0.8	1.4	2.7	6.4	6.6	15.9	24.9	52.6
5th scenario	0.3	0.6	0.8	1.3	2.3	5.5	5	12.9	22	48.7
Scenario						**DICE**				
IMAGE	4.2	5.4	6.2	7.6	10	10.8	13.4	16.8	18.7	21.1
MERGE optimistic	2.9	3.7	4.2	5.3	7	7.5	9.3	11.7	12.9	14.4
Message	3.9	4.9	5.5	7	9.2	9.8	12.2	15.4	17.1	18.8
MiniCAM base	3.4	4.2	4.7	6	7.9	8.6	10.7	13.5	15.1	16.9
5th scenario	3.2	4	4.6	5.7	7.6	8.2	10.2	12.8	14.3	16.0
Scenario						**FUND**				
IMAGE	-11.7	-8.4	-6.9	-4.6	-2.2	-1.3	0.7	4.1	7.4	17.4
MERGE optimistic	-10.6	-7.1	-5.6	-3.6	-1.3	-0.3	1.6	5.4	9.1	19.0
Message	-12.2	-8.9	-7.3	-4.9	-2.5	-1.9	0.3	3.5	6.5	15.6
MiniCAM base	-10.4	-7.2	-5.8	-3.8	-1.5	-0.6	1.3	4.8	8.2	18.0
5th scenario	-10.9	-8.3	-7	-5	-2.9	-2.7	-0.8	1.4	3.2	9.2

Figure A8. Histogram of Global SCC Estimates in 2010 (2007$/ton CO_2), by discount rate



* The distribution of SCC values ranges from -$5,192 to $66,116 but the X-axis has been truncated at approximately the 1st and 99th percentiles to better show the data.

Table A5. Additional Summary Statistics of 2010 Global SCC Estimates -

Discount rate:	5%				3%				2.5%			
Scenario	Mean	Variance	Skewness	Kurtosis	Mean	Variance	Skewness	Kurtosis	Mean	Variance	Skewness	Kurtosis
DICE	9.0	13.1	0.8	0.2	28.3	209.8	1.1	0.9	42.2	534.9	1.2	1.1
PAGE	6.5	136.0	6.3	72.4	29.8	3,383.7	8.6	151.0	49.3	9,546.0	8.7	143.8
FUND	-1.3	70.1	28.2	1,479.0	6.0	16,382.5	128.0	18,976.5	13.6	150,732.6	149.0	23,558.3

DRAFT

Technical Support Document: -
Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis -
Under Executive Order 12866 -

Interagency Working Group on Social Cost of Greenhouse Gases, United States Government

With participation by

Council of Economic Advisers
Council on Environmental Quality
Department of Agriculture
Department of Commerce
Department of Energy
Department of the Interior
Department of Transportation
Department of the Treasury
Environmental Protection Agency
National Economic Council
Office of Management and Budget
Office of Science and Technology Policy

August 2016

See Appendix B for Details on Revisions since May 2013

Preface

The Interagency Working Group on the Social Cost of Greenhouse Gases (formerly the Interagency Working Group on the Social Cost of Carbon) has a longstanding commitment to ensure that the social cost of carbon estimates continue to reflect the best available science and methodologies. Given this commitment and public comments on issues of a deeply technical nature received by the Office of Management and Budget and federal agencies, the Interagency Working Group is seeking independent expert advice on technical opportunities to update the social cost of carbon estimates. The Interagency Working Group asked the National Academies of Sciences, Engineering, and Medicine in 2015 to review the latest research on modeling the economic aspects of climate change to inform future revisions to the social cost of carbon estimates presented in this technical support document. In January 2016, the Academies' Committee on the Social Cost of Carbon issued an interim report that recommended against a near-term update to the social cost of carbon estimates, but included recommendations for enhancing the presentation and discussion of uncertainty around the current estimates. This revision to the TSD responds to these recommendations in the presentation of the current estimates. It does not revisit the interagency group's 2010 methodological decisions or update the schedule of social cost of carbon estimates presented in the July 2015 revision. The Academies' final report (expected in early 2017) will provide longer term recommendations for a more comprehensive update.

Executive Summary

Executive Order 12866 requires agencies, to the extent permitted by law, "to assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." The purpose of the social cost of carbon ($SC\text{-}CO_2$)[1] estimates presented here is to allow agencies to incorporate the social benefits of reducing carbon dioxide (CO_2) emissions into cost-benefit analyses of regulatory actions. The $SC\text{-}CO_2$ is the monetized damages associated with an incremental increase in carbon emissions in a given year. It is intended to include (but is not limited to) changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change.

The interagency process that developed the original U.S. government $SC\text{-}CO_2$ estimates is described in the 2010 Technical Support Document on the Social Cost of Carbon (TSD) (Interagency Working Group on Social Cost of Carbon 2010). Through that process the Interagency Working Group (IWG) selected $SC\text{-}CO_2$ values for use in regulatory analyses. For each emissions year, four values are recommended. Three of these values are based on the average $SC\text{-}CO_2$ from three integrated assessment models (IAMs), at discount rates of 2.5, 3, and 5 percent. In addition, as discussed in the 2010 TSD, there is extensive evidence in the scientific and economic literature on the potential for lower-probability, but higher-impact outcomes from climate change, which would be particularly harmful to society and thus relevant to the public and policymakers. The fourth value is thus included to represent the marginal damages associated with these lower-probability, higher-impact outcomes. Accordingly, this fourth value is selected from further out in the tail of the distribution of $SC\text{-}CO_2$ estimates; specifically, the fourth value corresponds to the 95th percentile of the frequency distribution of $SC\text{-}CO_2$ estimates based on a 3 percent discount rate. Because the present value of economic damages associated with CO_2 emissions change over time, a separate set of estimates is presented for each emissions year through 2050, which is sufficient to cover the time frame addressed in most current regulatory impact analyses.

In May of 2013, the IWG provided an update of the $SC\text{-}CO_2$ estimates based on new versions of each IAM (DICE, PAGE, and FUND). The 2013 update did not revisit other IWG modeling decisions (e.g., the discount rate, reference case socioeconomic and emission scenarios, or equilibrium climate sensitivity). Improvements in the way damages are modeled were confined to those that had been incorporated into the latest versions of the models by the developers themselves in the peer-reviewed literature. The IWG subsequently provided additional minor technical revisions in November of 2013 and July of 2015, as described in Appendix B.

The purpose of this 2016 revision to the TSD is to enhance the presentation and discussion of quantified uncertainty around the current $SC\text{-}CO_2$ estimates, as a response to recommendations in the interim report by the National Academies of Sciences, Engineering, and Medicine. Included herein are an expanded

[1] Throughout this Technical Support Document (TSD) we refer to the estimates as "$SC\text{-}CO_2$ estimates" rather than the more simplified "SCC" abbreviation used in previous versions of the TSD.

graphical presentation of the SC-CO_2 estimates highlighting a symmetric range of uncertainty around estimates for each discount rate, new sections that provide a unified discussion of the methodology used to incorporate sources of uncertainty, and a detailed explanation of the uncertain parameters in both the FUND and PAGE models.

The distributions of SC-CO_2 estimates reflect uncertainty in key model parameters chosen by the IWG such as the sensitivity of the climate to increases in carbon dioxide concentrations, as well as uncertainty in default parameters set by the original model developers. This TSD maintains the same approach to estimating the SC-CO_2 and selecting four values for each emissions year that was used in earlier versions of the TSD. Table ES-1 summarizes the SC-CO_2 estimates for the years 2010 through 2050. These estimates are identical to those reported in the previous version of the TSD, released in July 2015. As explained in previous TSDs, the central value is the average of SC-CO_2 estimates based on the 3 percent discount rate. For purposes of capturing uncertainty around the SC-CO_2 estimates in regulatory impact analysis, the IWG emphasizes the importance of considering all four SC-CO_2 values.

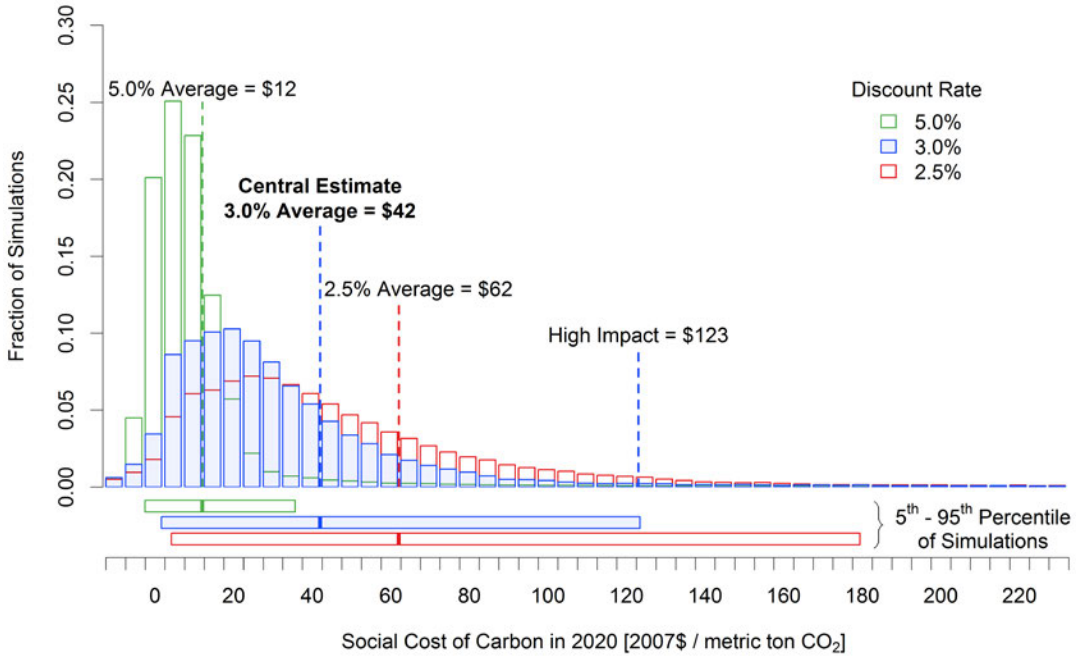
Table ES-1: Social Cost of CO_2, 2010 – 2050 (in 2007 dollars per metric ton of CO_2)

Year	5% Average	**3% Average**	2.5% Average	High Impact (95th Pct at 3%)
2010	10	**31**	50	86
2015	11	**36**	56	105
2020	12	**42**	62	123
2025	14	**46**	68	138
2030	16	**50**	73	152
2035	18	**55**	78	168
2040	21	**60**	84	183
2045	23	**64**	89	197
2050	26	**69**	95	212

While point estimates are important for providing analysts with a tractable approach for regulatory analysis, they do not fully quantify uncertainty associated with the SC-CO_2 estimates. Figure ES-1 presents the quantified sources of uncertainty in the form of frequency distributions for the SC-CO_2 estimates for emissions in 2020. To highlight the difference between the impact of the discount rate on the SC-CO_2 and other quantified sources of uncertainty, the bars below the frequency distributions provide a symmetric representation of quantified variability in the SC-CO_2 estimates for each discount rate. When an agency determines that it is appropriate to conduct additional quantitative uncertainty analysis, it should follow best practices for probabilistic analysis.[2] The full set of information that underlies the frequency distributions in Figure ES-1, which have previously been available upon request, are now available on Office of Management and Budget's (OMB) website for easy public access.

[2] See e.g. OMB Circular A-4, section on *Treatment of Uncertainty*. Available at: https://www.whitehouse.gov/omb/circulars_a004_a-4/#e.

Figure ES-1: Frequency Distribution of SC-CO_2 Estimates for 2020[3]



[3] Although the distributions in Figure ES-1 are based on the full set of model results (150,000 estimates for each discount rate), for display purposes the horizontal axis is truncated with 0.1 to 0.6 percent of the estimates lying below the lowest bin displayed and 0.2 to 3.7 percent of the estimates lying above the highest bin displayed, depending on the discount rate.

I. Purpose

The purpose of this document is to present the current schedule of social cost of carbon ($SC\text{-}CO_2$) estimates, along with an enhanced presentation and discussion of quantified sources of uncertainty around the estimates to respond to recommendations in the interim report of the National Academies of Sciences, Engineering, and Medicine (National Academies 2016).[4] Because the last substantive update to the $SC\text{-}CO_2$ estimates occurred in May 2013, this document maintains much of the earlier technical discussion from the May 2013 TSD. The $SC\text{-}CO_2$ estimates themselves remain unchanged since the July 2015 revision.

E.O. 13563 commits the Administration to regulatory decision making "based on the best available science."[5] Additionally, the IWG recommended in 2010 that the $SC\text{-}CO_2$ estimates be revisited on a regular basis or as model updates that reflect the growing body of scientific and economic knowledge become available.[6] By early 2013, new versions of the three integrated assessment models (IAMs) used by the U.S. government to estimate the $SC\text{-}CO_2$ (DICE, FUND, and PAGE) were available and had been published in the peer-reviewed literature. While acknowledging the continued limitations of the approach taken by the IWG in 2010 (documented in the original 2010 TSD), the May 2013 TSD provided an update of the $SC\text{-}CO_2$ estimates based on the latest peer-reviewed version of the models, replacing model versions that were developed up to ten years earlier in a rapidly evolving field. It did not revisit other assumptions with regard to the discount rate, reference case socioeconomic and emission scenarios, or equilibrium climate sensitivity. Improvements in the way damages are modeled were confined to those that had been incorporated into the latest versions of the models by the developers themselves in the peer-reviewed literature. The agencies participating in the IWG continue to investigate potential improvements to the way in which economic damages associated with changes in CO_2 emissions are quantified.

Section II summarizes the major features of the IAMs used in this TSD that were updated in 2013 relative to the versions of the models used in the 2010 TSD. Section III presents the $SC\text{-}CO_2$ estimates for 2010 – 2050 based on these versions of the models. Section IV discusses the treatment of uncertainty in the analysis. Section V provides a discussion of other model limitations and research gaps.

II. Summary of Model Updates

This section briefly reviews the features of the three IAMs used in this TSD (DICE 2010, FUND 3.8, and PAGE 2009) that were updated by the model developers relative to the versions of the models used by the IWG in 2010 (DICE 2007, FUND 3.5, and PAGE 2002). The focus here is on describing those model updates that are relevant to estimating the social cost of carbon, as summarized in Table 1. For example, both the DICE and PAGE models now include an explicit representation of sea level rise damages. Other

[4] In this document, we present all social cost estimates per metric ton of CO_2 emissions. Alternatively, one could report the social cost per metric ton of carbon emissions. The multiplier for translating between mass of CO_2 and the mass of carbon is 3.67 (the molecular weight of CO_2 divided by the molecular weight of carbon = 44/12 = 3.67).
[5] http://www.whitehouse.gov/sites/default/files/omb/inforeg/eo12866/eo13563_01182011.pdf
[6] See p. 1, 3, 4, 29, and 33 (Interagency Working Group on Social Cost of Carbon 2010).

revisions to PAGE include: updated adaptation assumptions, revisions to ensure damages are constrained by GDP, updated regional scaling of damages, and a revised treatment of potentially abrupt shifts in climate damages. The DICE model's simple carbon cycle has been updated to be more consistent with a more complex climate model. The FUND model includes updated damage functions for sea level rise impacts, the agricultural sector, and reduced space heating requirements, as well as changes to the transient response of temperature to the buildup of GHG concentrations and the inclusion of indirect effects of methane emissions. Changes made to parts of the models that are superseded by the IWG's modeling assumptions—regarding equilibrium climate sensitivity, discounting, and socioeconomic variables—are not discussed here but can be found in the references provided in each section below.

Table 1: Summary of Key Model Revisions Relevant to the IWG SC-CO_2 Estimates

IAM	Version used in 2010 IWG Analysis	Version Used since May 2013	Key changes relevant to IWG SC-CO_2
DICE	2007	2010	Updated calibration of the carbon cycle model and explicit representation of sea level rise (SLR) and associated damages.
FUND	3.5 (2009)	3.8 (2012)	Updated damage functions for space heating, SLR, agricultural impacts, changes to transient response of temperature to buildup of GHG concentrations, and inclusion of indirect climate effects of methane.
PAGE	2002	2009	Explicit representation of SLR damages, revisions to damage function to ensure damages do not exceed 100% of GDP, change in regional scaling of damages, revised treatment of potential abrupt damages, and updated adaptation assumptions.

A. DICE

DICE 2010 includes a number of changes over the previous 2007 version used in the 2010 TSD. The model changes that are relevant for the SC-CO_2 estimates developed by the IWG include: 1) updated parameter values for the carbon cycle model, 2) an explicit representation of sea level dynamics, and 3) a re-calibrated damage function that includes an explicit representation of economic damages from sea level rise. Changes were also made to other parts of the DICE model—including the equilibrium climate sensitivity parameter, the rate of change of total factor productivity, and the elasticity of the marginal utility of consumption—but these components of DICE are superseded by the IWG's assumptions and so will not be discussed here. More details on DICE2007 can be found in Nordhaus (2008) and on DICE2010 in Nordhaus (2010). The DICE2010 model and documentation is also available for download from the homepage of William Nordhaus.

Carbon Cycle Parameters

DICE uses a three-box model of carbon stocks and flows to represent the accumulation and transfer of carbon among the atmosphere, the shallow ocean and terrestrial biosphere, and the deep ocean. These

parameters are "calibrated to match the carbon cycle in the Model for the Assessment of Greenhouse Gas Induced Climate Change (MAGICC)" (Nordhaus 2008, p. 44).[7] Carbon cycle transfer coefficient values in DICE2010 are based on re-calibration of the model to match the newer 2009 version of MAGICC (Nordhaus 2010, p. 2). For example, in DICE2010, in each decade 12 percent of the carbon in the atmosphere is transferred to the shallow ocean, 4.7 percent of the carbon in the shallow ocean is transferred to the atmosphere, 94.8 percent remains in the shallow ocean, and 0.5 percent is transferred to the deep ocean. For comparison, in DICE 2007, 18.9 percent of the carbon in the atmosphere is transferred to the shallow ocean each decade, 9.7 percent of the carbon in the shallow ocean is transferred to the atmosphere, 85.3 percent remains in the shallow ocean, and 5 percent is transferred to the deep ocean.

The implication of these changes for DICE2010 is in general a weakening of the ocean as a carbon sink and therefore a higher concentration of carbon in the atmosphere than in DICE2007 for a given path of emissions. All else equal, these changes will generally increase the level of warming and therefore the SC-CO_2 estimates in DICE2010 relative to those from DICE2007.

Sea Level Dynamics

A new feature of DICE2010 is an explicit representation of the dynamics of the global average sea level anomaly to be used in the updated damage function (discussed below). This section contains a brief description of the sea level rise (SLR) module; a more detailed description can be found on the model developer's website.[8] The average global sea level anomaly is modeled as the sum of four terms that represent contributions from: 1) thermal expansion of the oceans, 2) melting of glaciers and small ice caps, 3) melting of the Greenland ice sheet, and 4) melting of the Antarctic ice sheet.

The parameters of the four components of the SLR module are calibrated to match consensus results from the IPCC's Fourth Assessment Report (AR4).[9] The rise in sea level from thermal expansion in each time period (decade) is 2 percent of the difference between the sea level in the previous period and the long run equilibrium sea level, which is 0.5 meters per degree Celsius (°C) above the average global temperature in 1900. The rise in sea level from the melting of glaciers and small ice caps occurs at a rate of 0.008 meters per decade per °C above the average global temperature in 1900.

The contribution to sea level rise from melting of the Greenland ice sheet is more complex. The equilibrium contribution to SLR is 0 meters for temperature anomalies less than 1 °C and increases linearly from 0 meters to a maximum of 7.3 meters for temperature anomalies between 1 °C and 3.5 °C. The contribution to SLR in each period is proportional to the difference between the previous period's sea

[7] MAGICC is a simple climate model initially developed by the U.S. National Center for Atmospheric Research that has been used heavily by the Intergovernmental Panel on Climate Change (IPCC) to emulate projections from more sophisticated state of the art earth system simulation models (Randall et al. 2007).

[8] Documentation on the new sea level rise module of DICE is available on William Nordhaus' website at: http://nordhaus.econ.yale.edu/documents/SLR_021910.pdf.

[9] For a review of post-IPCC AR4 research on sea level rise, see Nicholls et al. (2011) and NAS (2011).

level anomaly and the equilibrium sea level anomaly, where the constant of proportionality increases with the temperature anomaly in the current period.

The contribution to SLR from the melting of the Antarctic ice sheet is -0.001 meters per decade when the temperature anomaly is below 3 °C and increases linearly between 3 °C and 6 °C to a maximum rate of 0.025 meters per decade at a temperature anomaly of 6 °C.

Re-calibrated Damage Function

Economic damages from climate change in the DICE model are represented by a fractional loss of gross economic output in each period. A portion of the remaining economic output in each period (net of climate change damages) is consumed and the remainder is invested in the physical capital stock to support future economic production, so each period's climate damages will reduce consumption in that period and in all future periods due to the lost investment. The fraction of output in each period that is lost due to climate change impacts is represented as a sigmoid, or "S"-shaped, function of the temperature anomaly in the period.[10] The loss function in DICE2010 has been expanded by including a quadratic sub-function of SLR. In DICE2010 the temperature anomaly coefficients have been recalibrated to avoid double-counting damages from sea level rise that were implicitly included in these parameters in DICE2007.

The aggregate damages in DICE2010 are illustrated by Nordhaus (2010, p. 3), who notes that "…damages in the uncontrolled (baseline) [i.e., reference] case … in 2095 are $12 trillion, or 2.8 percent of global output, for a global temperature increase of 3.4 °C above 1900 levels." This compares to a loss of 3.2 percent of global output at 3.4 °C in DICE2007. However, in DICE2010, annual damages are lower in most of the early periods of the modeling horizon but higher in later periods than would be calculated using the DICE2007 damage function. Specifically, the percent difference between damages in the base run of DICE2010 and those that would be calculated using the DICE2007 damage function starts at +7 percent in 2005, decreases to a low of -14 percent in 2065, then continuously increases to +20 percent by 2300 (the end of the IWG analysis time horizon), and to +160 percent by the end of the model time horizon in 2595. The large increases in the far future years of the time horizon are due to the permanence associated with damages from sea level rise, along with the assumption that the sea level is projected to continue to rise long after the global average temperature begins to decrease. The changes to the loss function generally decrease the IWG SC-CO_2 estimates slightly given that relative increases in damages in later periods are discounted more heavily, all else equal.

B. FUND

FUND version 3.8 includes a number of changes over the previous version 3.5 (Narita et al. 2010) used in the 2010 TSD. Documentation supporting FUND and the model's source code for all versions of the model

[10] The model and documentation, including formulas, are available on the author's webpage at http://www.econ.yale.edu/~nordhaus/homepage/RICEmodels.htm.

is available from the model authors.[11] Notable changes, due to their impact on the SC-CO_2 estimates, are adjustments to the space heating, agriculture, and sea level rise damage functions in addition to changes to the temperature response function and the inclusion of indirect effects from methane emissions.[12] Each of these is discussed in turn.

Space Heating

In FUND, the damages associated with the change in energy needs for space heating are based on the estimated impact due to one degree of warming. These baseline damages are scaled based on the forecasted temperature anomaly's deviation from the one degree benchmark and adjusted for changes in vulnerability due to economic and energy efficiency growth. In FUND 3.5, the function that scales the base year damages adjusted for vulnerability allows for the possibility that in some simulations the benefits associated with reduced heating needs may be an unbounded convex function of the temperature anomaly. In FUND 3.8, the form of the scaling has been modified to ensure that the function is everywhere concave and that there will exist an upper bound on the benefits a region may receive from reduced space heating needs. The new formulation approaches a value of two in the limit of large temperature anomalies, or in other words, assuming no decrease in vulnerability, the reduced expenditures on space heating at any level of warming will not exceed two times the reductions experienced at one degree of warming. Since the reduced need for space heating represents a benefit of climate change in the model, or a negative damage, this change will increase the estimated SC-CO_2. This update accounts for a significant portion of the difference in the expected SC-CO_2 estimates reported by the two versions of the model when run probabilistically.

Sea Level Rise and Land Loss

The FUND model explicitly includes damages associated with the inundation of dry land due to sea level rise. The amount of land lost within a region depends on the proportion of the coastline being protected by adequate sea walls and the amount of sea level rise. In FUND 3.5 the function defining the potential land lost in a given year due to sea level rise is linear in the rate of sea level rise for that year. This assumption implicitly assumes that all regions are well represented by a homogeneous coastline in length and a constant uniform slope moving inland. In FUND 3.8 the function defining the potential land lost has been changed to be a convex function of sea level rise, thereby assuming that the slope of the shore line

[11] http://www.fund-model.org/. This report uses version 3.8 of the FUND model, which represents a modest update to the most recent version of the model to appear in the literature (version 3.7) (Anthoff and Tol, 2013a, 2013b). For the purpose of computing the SC-CO_2, the relevant changes (between 3.7 to 3.8) are associated with improving consistency with IPCC AR4 by adjusting the atmospheric lifetimes of CH_4 and N_2O and incorporating the indirect forcing effects of CH_4, along with making minor stability improvements in the sea wall construction algorithm.

[12] The other damage sectors (water resources, space cooling, land loss, migration, ecosystems, human health, and extreme weather) were not significantly updated.

increases moving inland. The effect of this change is to typically reduce the vulnerability of some regions to sea level rise based land loss, thereby lowering the expected SC-CO_2 estimate. [13]

[13] For stability purposes this report also uses an update to the model which assumes that regional coastal protection measures will be built to protect the most valuable land first, such that the marginal benefits of coastal protection is decreasing in the level of protection following Fankhauser (1995).

Agriculture

In FUND, the damages associated with the agricultural sector are measured as proportional to the sector's value. The fraction is bounded from above by one and is made up of three additive components that represent the effects from carbon fertilization, the rate of temperature change, and the level of the temperature anomaly. In both FUND 3.5 and FUND 3.8, the fraction of the sector's value lost due to the level of the temperature anomaly is modeled as a quadratic function with an intercept of zero. In FUND 3.5, the coefficients of this loss function are modeled as the ratio of two random normal variables. This specification had the potential for unintended extreme behavior as draws from the parameter in the denominator approached zero or went negative. In FUND 3.8, the coefficients are drawn directly from truncated normal distributions so that they remain in the range $[0,\infty)$ and $(-\infty,0]$, respectively, ensuring the correct sign and eliminating the potential for divide-by-zero errors. The means for the new distributions are set equal to the ratio of the means from the normal distributions used in the previous version. In general the impact of this change has been to decrease the range of the distribution while spreading out the distributions' mass over the remaining range relative to the previous version. The net effect of this change on the SC-CO_2 estimates is difficult to predict.

Transient Temperature Response

The temperature response model translates changes in global levels of radiative forcing into the current expected temperature anomaly. In FUND, a given year's increase in the temperature anomaly is based on a mean reverting function where the mean equals the equilibrium temperature anomaly that would eventually be reached if that year's level of radiative forcing were sustained. The rate of mean reversion defines the rate at which the transient temperature approaches the equilibrium. In FUND 3.5, the rate of temperature response is defined as a decreasing linear function of equilibrium climate sensitivity to capture the fact that the progressive heat uptake of the deep ocean causes the rate to slow at higher values of the equilibrium climate sensitivity. In FUND 3.8, the rate of temperature response has been updated to a quadratic function of the equilibrium climate sensitivity. This change reduces the sensitivity of the rate of temperature response to the level of the equilibrium climate sensitivity, a relationship first noted by Hansen et al. (1985) based on the heat uptake of the deep ocean. Therefore in FUND 3.8, the temperature response will typically be faster than in the previous version. The overall effect of this change is likely to increase estimates of the SC-CO_2 as higher temperatures are reached during the timeframe analyzed and as the same damages experienced in the previous version of the model are now experienced earlier and therefore discounted less.

Methane

The IPCC AR4 notes a series of indirect effects of methane emissions, and has developed methods for proxying such effects when computing the global warming potential of methane (Forster et al. 2007). FUND 3.8 now includes the same methods for incorporating the indirect effects of methane emissions. Specifically, the average atmospheric lifetime of methane has been set to 12 years to account for the feedback of methane emissions on its own lifetime. The radiative forcing associated with atmospheric methane has also been increased by 40% to account for its net impact on ozone production and

stratospheric water vapor. This update to the model is relevant for the SC-CO_2 because most of the damage functions are non-linear functions of the temperature anomaly, which represents the fact that as the climate system becomes more stressed an additional unit of warming will have a greater impact on damages. Accounting for the indirect effects of CH_4 emissions on temperature will therefore move the model further up the damage curves in the baseline, making a marginal change in emissions of CO_2 more impactful. All else equal, the effect of this increased radiative forcing will be to increase the estimated SC-CO_2 values, due to greater projected temperature anomaly.

C. PAGE

PAGE09 (Hope 2013) includes a number of changes from PAGE2002, the version used in the 2010 TSD. The changes that most directly affect the SC-CO_2 estimates include: explicitly modeling the impacts from sea level rise, revisions to the damage function to ensure damages are constrained by GDP, a change in the regional scaling of damages, a revised treatment for the probability of a discontinuity within the damage function, and revised assumptions on adaptation. The model also includes revisions to the carbon cycle feedback and the calculation of regional temperatures.[14] More details on PAGE09 can be found in Hope (2011a, 2011b, 2011c). A description of PAGE2002 can be found in Hope (2006).

Sea Level Rise

While PAGE2002 aggregates all damages into two categories—economic and non-economic impacts—PAGE09 adds a third explicit category: damages from sea level rise. In the previous version of the model, damages from sea level rise were subsumed by the other damage categories. In PAGE09 sea level damages increase less than linearly with sea level under the assumption that land, people, and GDP are more concentrated in low-lying shoreline areas. Damages from the economic and non-economic sectors were adjusted to account for the introduction of this new category.

Revised Damage Function to Account for Saturation

In PAGE09, small initial economic and non-economic benefits (negative damages) are modeled for small temperature increases, but all regions eventually experience economic damages from climate change, where damages are the sum of additively separable polynomial functions of temperature and sea level rise. Damages transition from this polynomial function to a logistic path once they exceed a certain proportion of remaining Gross Domestic Product (GDP) to ensure that damages do not exceed 100 percent of GDP. This differs from PAGE2002, which allowed Eastern Europe to potentially experience large benefits from temperature increases, and which also did not bound the possible damages that could be experienced.

[14] Because several changes in the PAGE model are structural (e.g., the addition of sea level rise and treatment of discontinuity), it is not possible to assess the direct impact of each change on the SC-CO_2 in isolation as done for the other two models above.

Regional Scaling Factors

As in the previous version of PAGE, the PAGE09 model calculates the damages for the European Union (EU) and then, assumes that damages for other regions are proportional based on a given scaling factor. The scaling factors in PAGE09 are based on the length of each region's coastline relative to the EU (Hope 2011b). Because of the long coastline in the EU, other regions are, on average, less vulnerable than the EU for the same sea level and temperature increase, but all regions have a positive scaling factor. PAGE2002 based its scaling factors on four studies reported in the IPCC's third assessment report, and allowed for benefits from temperature increases in Eastern Europe, smaller impacts in developed countries, and higher damages in developing countries.

Probability of a Discontinuity

In PAGE2002, the damages associated with a "discontinuity" (nonlinear extreme event) were modeled as an expected value. Specifically, a stochastic probability of a discontinuity was multiplied by the damages associated with a discontinuity to obtain an expected value, and this was added to the economic and non-economic impacts. That is, additional damages from an extreme event, such as extreme melting of the Greenland ice sheet, were multiplied by the probability of the event occurring and added to the damage estimate. In PAGE09, the probability of discontinuity is treated as a discrete event for each year in the model. The damages for each model run are estimated either with or without a discontinuity occurring, rather than as an expected value. A large-scale discontinuity becomes possible when the temperature rises beyond some threshold value between 2 and 4°C. The probability that a discontinuity will occur beyond this threshold then increases by between 10 and 30 percent for every 1°C rise in temperature beyond the threshold. If a discontinuity occurs, the EU loses an additional 5 to 25 percent of its GDP (drawn from a triangular distribution with a mean of 15 percent) in addition to other damages, and other regions lose an amount determined by their regional scaling factor. The threshold value for a possible discontinuity is lower than in PAGE2002, while the rate at which the probability of a discontinuity increases with the temperature anomaly and the damages that result from a discontinuity are both higher than in PAGE2002. The model assumes that only one discontinuity can occur and that the impact is phased in over a period of time, but once it occurs, its effect is permanent.

Adaptation

As in PAGE2002, adaptation is available to help mitigate any climate change impacts that occur. In PAGE this adaptation is the same regardless of the temperature change or sea level rise and is therefore akin to what is more commonly considered a reduction in vulnerability. It is modeled by reducing the damages by some percentage. PAGE09 assumes a smaller decrease in vulnerability than the previous version of the model and assumes that it will take longer for this change in vulnerability to be realized. In the aggregated economic sector, at the time of full implementation, this adaptation will mitigate all damages up to a temperature increase of 1°C, and for temperature anomalies between 1°C and 2°C, it will reduce damages by 15-30 percent (depending on the region). However, it takes 20 years to fully implement this adaptation. In PAGE2002, adaptation was assumed to reduce economic sector damages up to 2°C by 50-90 percent after 20 years. Beyond 2°C, no adaptation is assumed to be available to mitigate the impacts of climate

change. For the non-economic sector, in PAGE09 adaptation is available to reduce 15 percent of the damages due to a temperature increase between 0°C and 2°C and is assumed to take 40 years to fully implement, instead of 25 percent of the damages over 20 years assumed in PAGE2002. Similarly, adaptation is assumed to alleviate 25-50 percent of the damages from the first 0.20 to 0.25 meters of sea level rise but is assumed to be ineffective thereafter. Hope (2011c) estimates that the less optimistic assumptions regarding the ability to offset impacts of temperature and sea level rise via adaptation increase the SC-CO_2 by approximately 30 percent.

Other Noteworthy Changes

Two other changes in the model are worth noting. There is a change in the way the model accounts for decreased CO_2 absorption on land and in the ocean as temperature rises. PAGE09 introduces a linear feedback from global mean temperature to the percentage gain in the excess concentration of CO_2, capped at a maximum level. In PAGE2002, an additional amount was added to the CO_2 emissions each period to account for a decrease in ocean absorption and a loss of soil carbon. Also updated is the method by which the average global and annual temperature anomaly is downscaled to determine annual average regional temperature anomalies to be used in the regional damage functions. In PAGE2002, the scaling was determined solely based on regional difference in emissions of sulfate aerosols. In PAGE09, this regional temperature anomaly is further adjusted using an additive factor that is based on the average absolute latitude of a region relative to the area weighted average absolute latitude of the Earth's landmass, to capture relatively greater changes in temperature forecast to be experienced at higher latitudes.

III. SC-CO_2 Estimates

The three IAMs were run using the same methodology detailed in the 2010 TSD (Interagency Working Group on Social Cost of Carbon 2010). The approach, along with the inputs for the socioeconomic emissions scenarios, equilibrium climate sensitivity distribution, and discount rate remains the same. This includes the five reference scenarios based on the EMF-22 modeling exercise, the Roe and Baker equilibrium climate sensitivity distribution calibrated to the IPCC AR4, and three constant discount rates of 2.5, 3, and 5 percent.

As was previously the case, use of three models, three discount rates, and five scenarios produces 45 separate frequency distributions of SC-CO_2 estimates in a given year. The approach laid out in the 2010 TSD applied equal weight to each model and socioeconomic scenario in order to reduce the dimensionality down to three separate distributions, one for each of the three discount rates. The IWG selected four values from these distributions for use in regulatory analysis. Three values are based on the average SC-CO_2 across models and socioeconomic and emissions scenarios at the 2.5, 3, and 5 percent discount rates, respectively. The fourth value is included to provide information on the marginal damages associated with lower-probability, higher-impact outcomes that would be particularly harmful to society. As discussed in the 2010 TSD, there is extensive evidence in the scientific and economic literature of the potential for lower-probability, higher-impact outcomes from climate change, which would be particularly harmful to society and thus relevant to the public and policymakers. This points to the relevance of values above the

mean in right skewed distributions. Accordingly, this fourth value is selected from further out in the tails of the frequency distribution of SC-CO_2 estimates, and, in particular, is set to the 95th percentile of the frequency distribution of SC-CO_2 estimates based on a 3 percent discount rate. (A detailed set of percentiles by model and scenario combination and additional summary statistics for the 2020 values is available in Appendix A.) As noted in the 2010 TSD, "the 3 percent discount rate is the central value, and so the central value that emerges is the average SC-CO_2 across models at the 3 percent discount rate" (Interagency Working Group on Social Cost of Carbon 2010, p. 25). However, for purposes of capturing the uncertainties involved in regulatory impact analysis, the IWG emphasizes the importance and value of including all four SC-CO_2 values.

Table 2 shows the four selected SC-CO_2 estimates in five year increments from 2010 to 2050. Values for 2010, 2020, 2030, 2040, and 2050 are calculated by first combining all outputs (10,000 estimates per model run) from all scenarios and models for a given discount rate. Values for the years in between are calculated using linear interpolation. The full set of revised annual SC-CO_2 estimates between 2010 and 2050 is reported in the Appendix and the full set of model results are available on the OMB website.[15]

Table 2: Social Cost of CO_2, 2010 – 2050 (in 2007 dollars per metric ton of CO_2)

Year	5% Average	**3% Average**	2.5% Average	High Impact (95th Pct at 3%)
2010	10	**31**	50	86
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2025	14	**46**	68	138
2030	16	**50**	73	152
2035	18	**55**	78	168
2040	21	**60**	84	183
2045	23	**64**	89	197
2050	26	**69**	95	212

As was the case in the 2010 TSD, the SC-CO_2 increases over time because future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed in response to greater climatic change, and because GDP is growing over time and many damage categories are modeled as proportional to gross GDP. The approach taken by the IWG is to compute the cost of a marginal ton emitted in the future by running the models for a set of perturbation years out to 2050. Table 3 illustrates how the growth rate for these four SC-CO_2 estimates varies over time.

[15] https://www.whitehouse.gov/omb/oira/social-cost-of-carbon.

Table 3: Average Annual Growth Rates of SC-CO_2 Estimates between 2010 and 2050

Average Annual Growth Rate (%)	5.0% Avg	3.0% Avg	2.5% Avg	3.0% 95th
2010-2020	1.2%	3.2%	2.4%	4.4%
2020-2030	3.4%	2.1%	1.7%	2.3%
2030-2040	3.0%	1.9%	1.5%	2.0%
2040-2050	2.6%	1.6%	1.3%	1.6%

The future monetized value of emission reductions in each year (the SC-CO_2 in year *t* multiplied by the change in emissions in year *t*) must be discounted to the present to determine its total net present value for use in regulatory analysis. As previously discussed in the 2010 TSD, damages from future emissions should be discounted at the same rate as that used to calculate the SC-CO_2 estimates themselves to ensure internal consistency—i.e., future damages from climate change, whether they result from emissions today or emissions in a later year, should be discounted to the base year of the analysis using the same rate.

Current guidance contained in OMB Circular A-4 indicates that analysis of economically significant proposed and final regulations from the domestic perspective is required, while analysis from the international perspective is optional. However, the IWG (including OMB) determined that a modified approach is more appropriate in this case because the climate change problem is highly unusual in a number of respects. First, it involves a global externality: emissions of most greenhouse gases contribute to damages around the world even when they are emitted in the United States—and conversely, greenhouse gases emitted elsewhere contribute to damages in the United States. Consequently, to address the global nature of the problem, the SC-CO_2 must incorporate the full (global) damages caused by GHG emissions. Second, climate change presents a problem that the United States alone cannot solve. Other countries will also need to take action to reduce emissions if significant changes in the global climate are to be avoided. Emphasizing the need for a global solution to a global problem, the United States has been actively involved in seeking international agreements to reduce emissions. For example, the United States joined over 170 other nations and signed the Paris Agreement on April 22, 2016, signaling worldwide commitment to reduce GHG emissions. The United States has been active in encouraging other nations, including emerging major economies, to take significant steps to reduce emissions. Using a global estimate of damages in U.S. regulatory analyses sends a strong signal to other nations that they too should base their emissions reductions strategies on a global perspective, thus supporting a cooperative and mutually beneficial approach to achieving needed reduction. Thirteen prominent academics noted that these "are compelling reasons to focus on a global [SC-CO_2]" in a recent article on the SC-CO_2 (Pizer et al. 2014). In addition, adverse impacts on other countries can have spillover effects on the United States, particularly in the areas of national security, international trade, public health, and humanitarian concerns. When these considerations are taken as a whole, the IWG concluded that a global measure of the benefits from reducing U.S. emissions is appropriate. For additional discussion, see the 2010 TSD.

IV. Treatment of Uncertainty

Uncertainty about the value of the SC-CO_2 is in part inherent, as with any analysis that looks into the future, but it is also driven by current data gaps associated with the complex physical, economic, and behavioral processes that link GHG emissions to human health and well-being. Some sources of uncertainty pertain to aspects of the natural world, such as quantifying the physical effects of greenhouse gas emissions on Earth systems. Other sources of uncertainty are associated with current and future human behavior and well-being, such as population and economic growth, GHG emissions, the translation of Earth system changes to economic damages, and the role of adaptation. It is important to note that even in the presence of uncertainty, scientific and economic analysis can provide valuable information to the public and decision makers, though the uncertainty should be acknowledged and when possible taken into account in the analysis. This section summarizes the sources of uncertainty that the IWG was able to consider in a quantitative manner in estimating the SC-CO_2. Further discussion on sources of uncertainty that are active areas of research and have not yet been fully quantified in the SC-CO_2 estimates is provided in Section V and in the 2010 TSD.

In developing the SC-CO_2 estimates, the IWG considered various sources of uncertainty through a combination of a multi-model ensemble, probabilistic analysis, and scenario analysis. For example, the three IAMs used collectively span a wide range of Earth system and economic outcomes to help reflect the uncertainty in the literature and in the underlying dynamics being modeled. The use of an ensemble of three different models is also intended to, at least partially, address the fact that no single model includes all of the quantified economic damages. It also helps to reflect structural uncertainty across the models, which is uncertainty in the underlying relationships between GHG emissions, Earth systems, and economic damages that are included in the models. Bearing in mind the different limitations of each model (discussed in the 2010 TSD) and lacking an objective basis upon which to differentially weight the models, the three IAMs are given equal weight in the analysis.

The IWG used Monte Carlo techniques to run the IAMs a large number of times. In each simulation the uncertain parameters are represented by random draws from their defined probability distributions. In all three models the equilibrium climate sensitivity is treated probabilistically based on the probability distribution described in the 2010 TSD. The equilibrium climate sensitivity is a key parameter in this analysis because it helps define the strength of the climate response to increasing GHG concentrations in the atmosphere. In addition, the FUND and PAGE models define many of their parameters with probability distributions instead of point estimates. For these two models, the model developers' default probability distributions are maintained for all parameters other than those superseded by the IWG's harmonized inputs (i.e., equilibrium climate sensitivity, socioeconomic and emissions scenarios, and discount rates). More information on the uncertain parameters in PAGE and FUND is presented in Appendix C.

For the socioeconomic and emissions scenarios, uncertainty is included in the analysis by considering a range of scenarios, which are described in detail in the 2010 SC-CO_2 TSD. As noted in the 2010 TSD, while the IWG considered formally assigning probability weights to the different socioeconomic scenarios selected, it came to the conclusion that this could not be accomplished in an analytically rigorous way given the dearth of information on the likelihood of a full range of future socioeconomic pathways. Thus,

the IWG determined that, because no basis for assigning differential weights was available, the most transparent way to present a range of uncertainty was simply to weight each of the five scenarios equally for the consolidated estimates. To provide additional information as to how the results vary with the scenarios, summarized results for each scenario are presented separately in Appendix A. The results of each model run are available on the OMB website.

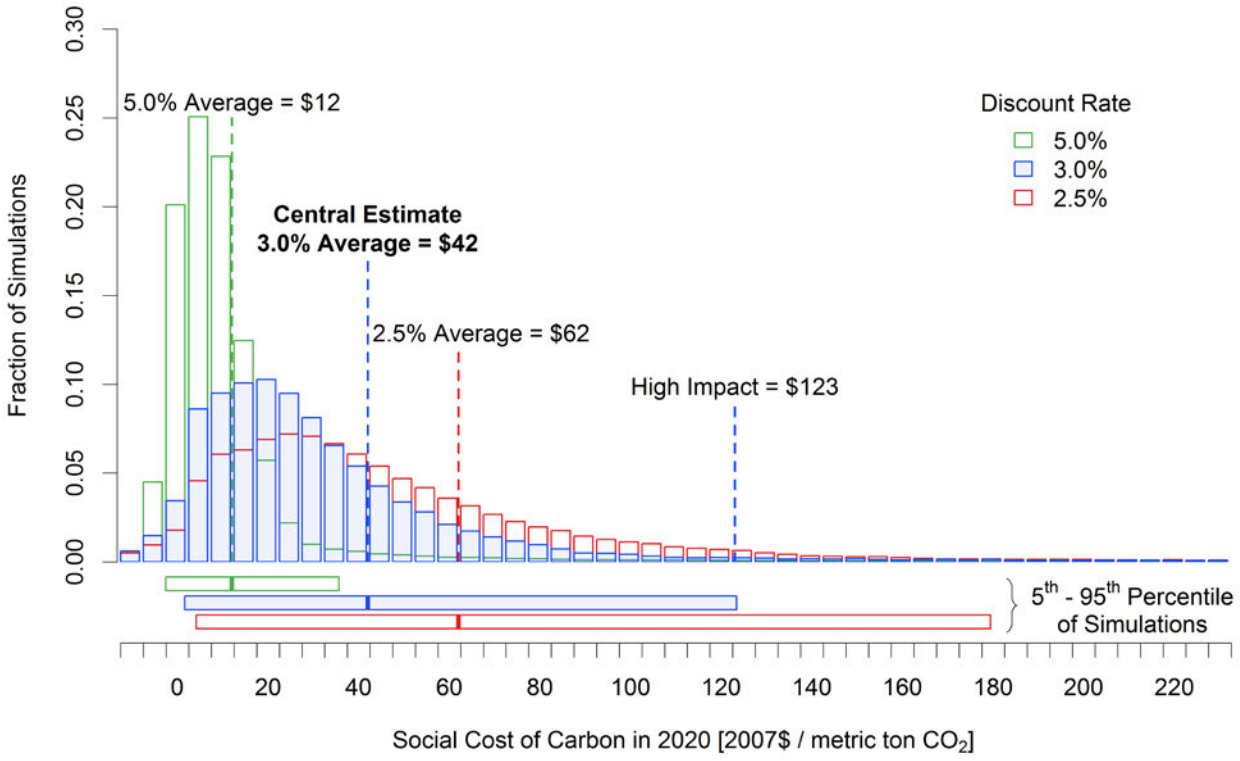
Finally, based on the review of the literature, the IWG chose discount rates that reflect reasonable judgements under both prescriptive and descriptive approaches to intergenerational discounting. As discussed in the 2010 TSD, in light of disagreement in the literature on the appropriate discount rate to use in this context and uncertainty about how rates may change over time, the IWG selected three certainty-equivalent constant discount rates to span a plausible range: 2.5, 3, and 5 percent per year. However, unlike the approach taken for consolidating results across models and socioeconomic and emissions scenarios, the SC-CO_2 estimates are not pooled across different discount rates because the range of discount rates reflects both uncertainty and, at least in part, different policy or value judgements.

The outcome of accounting for various sources of uncertainty using the approaches described above is a frequency distribution of the SC-CO_2 estimates for emissions occurring in a given year for each of the three discount rates. These frequency distributions reflect the uncertainty around the input parameters for which probability distributions were defined, as well as from the multi-model ensemble and socioeconomic and emissions scenarios where probabilities were implied by the equal weighting assumption. It is important to note that the set of SC-CO_2 estimates obtained from this analysis does not yield a probability distribution that fully characterizes uncertainty about the SC-CO_2 due to impact categories omitted from the models and sources of uncertainty that have not been fully characterized due to data limitations.

Figure 1 presents the frequency distribution of the SC-CO_2 estimates for emissions in 2020 for each of the three discount rates. Each of these distributions represents 150,000 estimates based on 10,000 simulations for each combination of the three models and five socioeconomic and emissions scenarios.[16] In general, the distributions are skewed to the right and have long right tails, which tend to be even longer for lower discount rates. To highlight the difference between the impact of the discount rate on the SC-CO_2 and other quantified sources of uncertainty, the bars below the frequency distributions provide a symmetric representation of quantified variability in the SC-CO_2 estimates conditioned on each discount rate. The full set of SC-CO_2 results through 2050 is available on OMB's website. This may be useful to analysts in situations that warrant additional quantitative uncertainty analysis (e.g., as recommended by OMB for rules that exceed $1 billion in annual benefits or costs). See OMB Circular A-4 for guidance and discussion of best practices in conducting uncertainty analysis in RIAs.

[16] Although the distributions in Figure 1 are based on the full set of model results (150,000 estimates for each discount rate), for display purposes the horizontal axis is truncated with 0.1 to 0.6 percent of the estimates lying below the lowest bin displayed and 0.2 to 3.7 percent of the estimates lying above the highest bin displayed, depending on the discount rate.

Figure 1: Frequency Distribution of SC-CO_2 Estimates for 2020 (in 2007$ per metric ton CO_2)



As previously described, the SC-CO_2 estimates produced by the IWG are based on a rigorous approach to accounting for quantifiable uncertainty using multiple analytical techniques. In addition, the scientific and economics literature has further explored known sources of uncertainty related to estimates of the SC-CO_2. For example, researchers have published papers that explore the sensitivity of IAMs and the resulting SC-CO_2 estimates to different assumptions embedded in the models (see, e.g., Hope (2013), Anthoff and Tol (2013a), and Nordhaus (2014)). However, there remain additional sources of uncertainty that have not been fully characterized and explored due to remaining data limitations. Additional research is needed in order to expand the quantification of various sources of uncertainty in estimates of the SC-CO_2 (e.g., developing explicit probability distributions for more inputs pertaining to climate impacts and their valuation). The IWG is actively following advances in the scientific and economic literature that could provide guidance on, or methodologies for, a more robust incorporation of uncertainty.

V. Other Model Limitations and Research Gaps

The 2010 SC-CO_2 TSD discusses a number of important limitations for which additional research is needed. In particular, the document highlights the need to improve the quantification of both non-catastrophic and catastrophic damages, the treatment of adaptation and technological change, and the way in which inter-regional and inter-sectoral linkages are modeled. While the more recent versions of the models discussed above offer some improvements in these areas, further research is still needed. Currently, IAMs do not include all of the important physical, ecological, and economic impacts of climate change

recognized in the climate change literature due to a lack of precise information on the nature of damages and because the science incorporated into these models understandably lags behind the most recent research.[17] These individual limitations do not all work in the same direction in terms of their influence on the SC-CO_2 estimates; however, it is the IWG's judgment that, taken together, these limitations suggest that the SC-CO_2 estimates are likely conservative. In particular, the IPCC Fourth Assessment Report (Meehl et al. 2007), which was the most current IPCC assessment available at the time of the IWG's 2009-2010 review, concluded that SC-CO_2 estimates "very likely…underestimate the damage costs" due to omitted impacts. Since then, the peer-reviewed literature has continued to support this conclusion, as noted in the IPCC Fifth Assessment report (Oppenheimer et al. 2014).

Another area of active research relates to intergenerational discounting, including the application of discount rates to regulations in which some costs and benefits accrue intra-generationally while others accrue inter-generationally. Some experts have argued that a declining discount rate would be appropriate to analyze impacts that occur far into the future (Arrow et al. 2013). However, additional research and analysis is still needed to develop a methodology for implementing a declining discount rate and to understand the implications of applying these theoretical lessons in practice.

The 2010 TSD also discusses the need to more carefully assess the implications of risk aversion for SC-CO_2 estimation as well as the substitution possibilities between climate and non-climate goods at higher temperature increases, both of which have implications for the discount rate used. EPA, DOE, and other agencies continue to engage in research on modeling and valuation of climate impacts that can potentially improve SC-CO_2 estimation in the future. See the 2010 SC-CO_2 TSD for the full discussion.

[17] See, for example, Howard (2014) and EPRI (2014) for recent discussions.

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Appendix A

Table A1: Annual SC-CO_2 Values: 2010-2050 (2007$/metric ton CO_2)

Year	5% Average	**3% Average**	2.5% Average	High Impact (95th Pct at 3%)
2010	10	**31**	50	86
2011	11	**32**	51	90
2012	11	**33**	53	93
2013	11	**34**	54	97
2014	11	**35**	55	101
2015	11	**36**	56	105
2016	11	**38**	57	108
2017	11	**39**	59	112
2018	12	**40**	60	116
2019	12	**41**	61	120
2020	12	**42**	62	123
2021	12	**42**	63	126
2022	13	**43**	64	129
2023	13	**44**	65	132
2024	13	**45**	66	135
2025	14	**46**	68	138
2026	14	**47**	69	141
2027	15	**48**	70	143
2028	15	**49**	71	146
2029	15	**49**	72	149
2030	16	**50**	73	152
2031	16	**51**	74	155
2032	17	**52**	75	158
2033	17	**53**	76	161
2034	18	**54**	77	164
2035	18	**55**	78	168
2036	19	**56**	79	171
2037	19	**57**	81	174
2038	20	**58**	82	177
2039	20	**59**	83	180
2040	21	**60**	84	183
2041	21	**61**	85	186
2042	22	**61**	86	189
2043	22	**62**	87	192
2044	23	**63**	88	194
2045	23	**64**	89	197
2046	24	**65**	90	200
2047	24	**66**	92	203
2048	25	**67**	93	206
2049	25	**68**	94	209
2050	26	**69**	95	212

Table A2: 2020 Global SC-CO_2 Estimates at 2.5 Percent Discount Rate (2007$/metric ton CO_2)

Percentile	1st	5th	10th	25th	50th	Avg	75th	90th	95th	99th
Scenario[18]	PAGE									
IMAGE	6	10	15	26	55	123	133	313	493	949
MERGE Optimistic	4	6	8	15	32	75	79	188	304	621
MESSAGE	4	7	10	19	41	104	103	266	463	879
MiniCAM Base	5	8	12	21	45	102	108	255	412	835
5th Scenario	2	4	6	11	24	81	66	192	371	915
Scenario	DICE									
IMAGE	25	31	37	47	64	72	92	123	139	161
MERGE Optimistic	14	18	20	26	36	40	50	65	74	85
MESSAGE	20	24	28	37	51	58	71	95	109	221
MiniCAM Base	20	25	29	38	53	61	76	102	117	135
5th Scenario	17	22	25	33	45	52	65	91	106	126
Scenario	FUND									
IMAGE	-14	-2	4	15	31	39	55	86	107	157
MERGE Optimistic	-6	1	6	14	27	35	46	70	87	141
MESSAGE	-16	-5	1	11	24	31	43	67	83	126
MiniCAM Base	-7	2	7	16	32	39	55	83	103	158
5th Scenario	-29	-13	-6	4	16	21	32	53	69	103

Table A3: 2020 Global SC-CO_2 Estimates at 3 Percent Discount Rate (2007$/metric ton CO_2)

Percentile	1st	5th	10th	25th	50th	Avg	75th	90th	95th	99th
Scenario	PAGE									
IMAGE	4	7	9	17	36	87	91	228	369	696
MERGE Optimistic	2	4	6	10	22	54	55	136	222	461
MESSAGE	3	5	7	13	28	72	71	188	316	614
MiniCAM Base	3	5	7	13	29	70	72	177	288	597
5th Scenario	1	3	4	7	16	55	46	130	252	632
Scenario	DICE									
IMAGE	16	21	24	32	43	48	60	79	90	102
MERGE Optimistic	10	13	15	19	25	28	35	44	50	58
MESSAGE	14	18	20	26	35	40	49	64	73	83
MiniCAM Base	13	17	20	26	35	39	49	65	73	85
5th Scenario	12	15	17	22	30	34	43	58	67	79
Scenario	FUND									
IMAGE	-13	-4	0	8	18	23	33	51	65	99
MERGE Optimistic	-7	-1	2	8	17	21	29	45	57	95
MESSAGE	-14	-6	-2	5	14	18	26	41	52	82
MiniCAM Base	-7	-1	3	9	19	23	33	50	63	101
5th Scenario	-22	-11	-6	1	8	11	18	31	40	62

[18] See 2010 TSD for a description of these scenarios.

Table A4: 2020 Global SC-CO_2 Estimates at 5 Percent Discount Rate (2007$/metric ton CO_2)

Percentile	1st	5th	10th	25th	50th	Avg	75th	90th	95th	99th
Scenario	PAGE									
IMAGE	1	2	2	4	10	27	26	68	118	234
MERGE Optimistic	1	1	2	3	6	17	17	43	72	146
MESSAGE	1	1	2	4	8	23	22	58	102	207
MiniCAM Base	1	1	2	3	8	20	20	52	90	182
5th Scenario	0	1	1	2	5	17	14	39	75	199
Scenario	DICE									
IMAGE	6	8	9	11	14	15	18	22	25	27
MERGE Optimistic	4	5	6	7	9	10	12	15	16	18
MESSAGE	6	7	8	10	12	13	16	20	22	25
MiniCAM Base	5	6	7	8	11	12	14	18	20	22
5th Scenario	5	6	6	8	10	11	14	17	19	21
Scenario	FUND									
IMAGE	-9	-5	-4	-1	2	3	6	10	14	24
MERGE Optimistic	-6	-4	-2	0	3	4	6	11	15	26
MESSAGE	-10	-6	-4	-1	1	2	5	9	12	21
MiniCAM Base	-7	-4	-2	0	3	4	6	11	14	25
5th Scenario	-11	-7	-5	-3	0	0	3	5	7	13

Table A5: Additional Summary Statistics of 2020 Global SC-CO_2 Estimates

Discount rate:	5.0%				3.0%				2.5%			
Statistic:	Mean	Variance	Skewness	Kurtosis	Mean	Variance	Skewness	Kurtosis	Mean	Variance	Skewness	Kurtosis
DICE	12	26	2	15	38	409	3	24	57	1097	3	30
PAGE	21	1481	5	32	68	13712	4	22	97	26878	4	23
FUND	3	41	5	179	19	1452	-42	8727	33	6154	-73	14931

Appendix B

The November 2013 revision of this TSD is based on two corrections to the runs based on the FUND model. First, the potential dry land loss in the algorithm that estimates regional coastal protections was misspecified in the model's computer code. This correction is covered in an erratum to Anthoff and Tol (2013a) published in the same journal (*Climatic Change*) in October 2013 (Anthoff and Tol (2013b)). Second, the equilibrium climate sensitivity distribution was inadvertently specified as a truncated Gamma distribution (the default in FUND) as opposed to the truncated Roe and Baker distribution as was intended. The truncated Gamma distribution used in the FUND runs had approximately the same mean and upper truncation point, but lower variance and faster decay of the upper tail, as compared to the intended specification based on the Roe and Baker distribution. The difference between the original estimates reported in the May 2013 version of this TSD and this revision are generally one dollar or less.

The July 2015 revision of this TSD is based on two corrections. First, the DICE model had been run up to 2300 rather than through 2300, as was intended, thereby leaving out the marginal damages in the last year of the time horizon. Second, due to an indexing error, the results from the PAGE model were in 2008 U.S. dollars rather than 2007 U.S. dollars, as was intended. In the current revision, all models have been run through 2300, and all estimates are in 2007 U.S. dollars. On average the revised SC-CO_2 estimates are one dollar less than the mean SC-CO_2 estimates reported in the November 2013 version of this TSD. The difference between the 95th percentile estimates with a 3% discount rate is slightly larger, as those estimates are heavily influenced by results from the PAGE model.

The July 2016 revision provides additional discussion of uncertainty in response to recommendations from the National Academy of Sciences, Engineering, and Medicine. It does not revisit the IWG's 2010 methodological decisions or update the schedule of SC-CO_2 estimates presented in the July 2015 revision. The IWG is currently seeking external expert advice from the National Academies on the technical merits and challenges of potential approaches to future updates of the SC-CO_2 estimates presented in this TSD. To date, the Academies' committee has issued an interim report that recommended against a near-term update to the SC-CO_2 estimates, but included recommendations for enhancing the presentation and discussion of uncertainty around the current estimates. This revision includes additional information that the IWG determined was appropriate to respond to these recommendations. Specifically, the executive summary presents more information about the range of quantified uncertainty in the SC-CO_2 estimates (including a graphical representation of symmetric high and low values from the frequency distribution of SC-CO_2 estimates conditional on each discount rate), and a new section has also been added that provides a unified discussion of the various sources of uncertainty and how they were handled in estimating the SC-CO_2. Efforts to make the sources of uncertainty clear have also been enhanced with the addition of a new appendix that describes in more detail the uncertain parameters in both the FUND and PAGE models (Appendix C). Furthermore, the full set of SC-CO_2 modeling results, which have previously been available upon request, are now provided on the OMB website for easy access. The Academies' final report (expected in early 2017) will provide longer term recommendations for a more comprehensive update. For more information on the status of the Academies' process, see: http://sites.nationalacademies.org/DBASSE/BECS/CurrentProjects/DBASSE_167526.

Appendix C

This appendix provides a general overview of the parameters that are treated probabilistically in each of the three integrated assessment models the IWG used to estimate the SC-CO_2. In the DICE model the only uncertain parameter considered was the equilibrium climate sensitivity as defined by the probability distribution harmonized across the three models. By default, all of the other parameters in the model are defined by point estimates and these definitions were maintained by the IWG. In the FUND and PAGE models many of the parameters, beyond the equilibrium climate sensitivity, are defined by probability distributions in the default versions of the models. The IWG maintained these default assumptions and allowed these parameters to vary in the Monte Carlo simulations conducted with the FUND and PAGE models.

Default Uncertainty Assumptions in FUND

In the version of the FUND model used by the IWG (version 3.8.1) over 90 of the over 150 parameters in the model are defined by probability distributions instead of point estimates, and for 30 of those parameters the values vary across the model's 16 regions. This includes parameters related to the physical and economic components of the model. The default assumptions in the model include parameters whose probability distributions are based on the normal, Gamma, and triangular distributions. In most cases the distributions are truncated from above or below. The choice of distributions and parameterizations are based on the model developers' assessment of the scientific and economic literature. Complete information on the exact probability distributions specified for each uncertain parameter is provided through the model's documentation, input data, and source code, available at: http://www.fund-model.org/home.

The physical components of the model map emissions to atmospheric concentrations, then map those concentrations to radiative forcing, which is then mapped to changes in global mean temperature. Changes in temperature are then used to estimate sea level rise. The parameters treated probabilistically in these relationships may be grouped into three main categories: atmospheric lifetimes, speed of temperature response, and sea level rise. First, atmospheric concentrations are determined by one box models, that capture a single representative sink, for each of the three non-CO_2 GHGs and a five box model for CO_2, that represents the multiple sinks in the carbon cycle that operate on different time frames. In each of these boxes, the lifetime of additions to the atmospheric concentration in the box are treated as uncertain. Second, parameters associated with speed at which the climate responds to changes in radiative forcing are treated as uncertain. In the FUND model radiative forcing, R_t, is mapped to changes in global mean temperature, T_t, through

$$T_t = T_{t-1} + \frac{1}{\theta_1 + \theta_2 ECS + \theta_3 ECS^2}\left(\frac{\psi ECS}{\ln(2)} R_t - T_{1-t}\right),$$

where the probability distribution for the equilibrium climate sensitivity, ECS, was harmonized across the models as discussed in the 2010 TSD. The parameters θ_i define the speed at which the temperature anomaly responds to changes in radiative forcing and are treated as uncertain in the model. Third, sea level rise is treated as a mean reverting function, where the mean is determined as proportional to the current global mean temperature anomaly. Both this proportionality parameter and the rate of mean reversion in this relationship are treated as uncertain in the model.

The economic components of the model map changes in the physical components to monetized damages. To place the uncertain parameters of the model associated with mapping physical endpoints to damages in context, it is useful to consider the general form of the damage functions in the model. Many of the damage functions in the model have forms that are roughly comparable to

$$D_{r,t} = \alpha_r Y_{r,t} \beta_{r,t} \left(\frac{y_{r,t}}{y_{r,b}} \right)^{\gamma} \left(\frac{N_{r,t}}{N_{r,b}} \right)^{\phi} T_t^{\delta}, \quad (1)$$

where α_r is the damage at a 1 °C global mean temperature increase as a fraction of regional GDP, $Y_{r,t}$. The model considers numerous changes that may reduce a region's benchmark vulnerability to climate change. For example, γ represents the elasticity of damages with respect to changes in the region's GDP per capita, $y_{r,t}$, relative to a benchmark value, $y_{r,b}$; ϕ represents the elasticity of damages with respect to changes in the region's population, $N_{r,t}$, relative to a benchmark value, $N_{r,b}$; and the projection $\beta_{r,t}$ provides for an exogenous reduction in vulnerability (e.g., forecast energy efficiency improvements the affect space cooling costs). Once the benchmark damages have been scaled due to changes in vulnerability they are adjusted based on a non-linear scaling of the level of climate change forecast, using a power function with the exponent, δ.

Some damage categories have damage function specifications that differ from the example in (1). For example, agriculture and forestry damages take atmospheric concentrations of CO_2 and the rate of climate change into account in different forms, though the method by which they calculate the monetized impact in these cases is similar with respect to accounting for GDP growth and changes in vulnerability. In other cases the process by which damages are estimated is more complex. For example, in estimating damages from sea level rise the model considers explicit regional decision makers that choose levels of coastal protection in a given year based on a benefit-cost test. In estimating the damages from changes in cardiovascular mortality risk the model considers forecast changes in the proportion of the population over the age of 65 and deemed most vulnerable by the model developers. Other damage categories may also have functional forms that differ slightly from (1), but in general this form provides a useful framework for discussing the parameters for which the model developers have defined probability distributions as opposed to point estimates.

In many damage categories (e.g., sea level rise, water resources, biodiversity loss, agriculture and forestry, and space conditioning) the benchmark damages, α_r, are treated as uncertain parameters in the model and in most case they are assumed to vary by region. The elasticity of damages with respect to changes in regional GDP per capita, γ, and the elasticity with respect to changes in regional population, ϕ, are also treated as uncertain parameters in most damage functions in the model, though they are not assumed to vary across regions. In most cases the exponent, δ, on the power function that scales damages based on the forecast level of climate change are also treated as uncertain parameters, though they are not assumed to vary across regions in most cases.

Figure C1 presents results of an analysis from the developers of the FUND model that examines the uncertain parameters that have the greatest influence on estimates of the SC-CO_2 based on the default version of the model. While some of the modeling inputs are different for the SC-CO_2 estimates calculated by the IWG these parameters are likely to remain highly influential in the FUND modeling results.

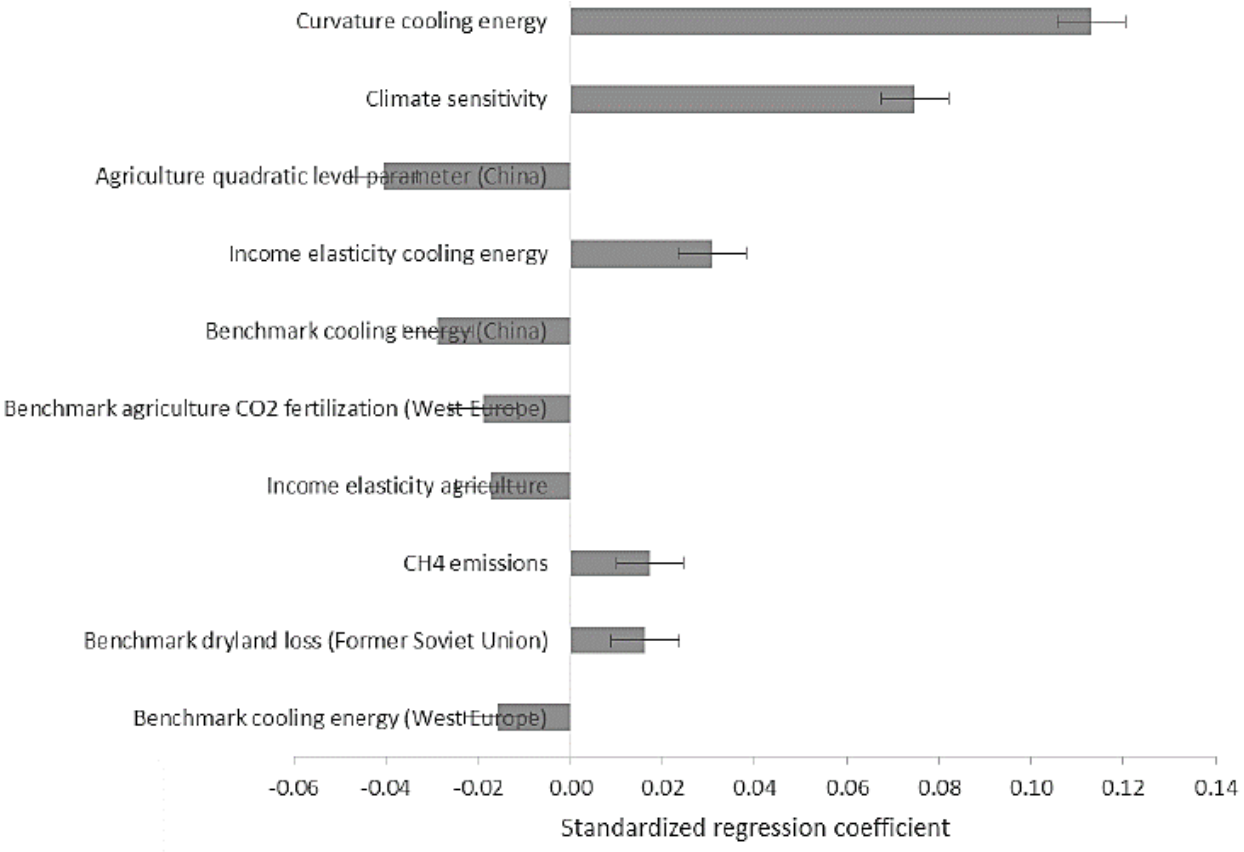

Figure C1: Influence of Key Uncertain Parameters in Default FUND Model (Anthoff and Tol 2013a)[19]

Default Uncertainty Assumptions in PAGE

In the version of the PAGE model used by the IWG (version PAGE09) there are over 40 parameters defined by probability distributions instead of point estimates.[20] The parameters can broadly be classified as related to climate science, damages, discontinuities, and adaptive and preventive costs. In the default version of the model, all of the parameters are modeled as triangular distributions except for the one variable related to the probability of a discontinuity occurring, with is represented by a uniform distribution. More detail on the model equations can be found in Hope (2006, 2011a) and the default minimum, mode, and maximum values for the parameters are provided in Appendix 2 of Hope (2011a). The calibration of these distributions is based on the developer's assessment of the IPCC's Fourth Assessment report and scientific articles referenced in Hope (2011a, 2011b, 2011c). The IWG added an uncertain parameter to the default model, specifically the equilibrium climate sensitivity parameter, which was harmonized across the models as discussed in the 2010 TSD.

In the climate component of the PAGE model, atmospheric CO_2 concentration is assumed to follow an initial rapid decay followed by an exponential decline to an equilibrium level. The parameters treated probabilistically in this decay are the proportion of the anthropogenic CO_2 emissions that enter the atmosphere, the half-life of the CO_2's atmospheric residence, and the fraction of cumulative emissions that ultimately remains in the atmosphere. A carbon cycle feedback is included to represent the impact of increasing temperatures on the role of the terrestrial biosphere and oceans in the carbon cycle. This feedback is modeled with probabilistic parameters representing the percentage increase in the CO_2 concentration anomaly and with an uncertain upper bound on this percentage.

The negative radiative forcing effect from sulfates is modeled with probabilistic parameters for the direct linear effect due to backscattering and the indirect logarithmic effect assumed for cloud interactions. The radiative forcing from CO_2, all other greenhouse gases, and sulfates are combined in a one box model to estimate the global mean temperature. Uncertainty in the global mean temperature response to change in radiative forcing is based on the uncertain equilibrium climate sensitivity parameter and uncertainty in the half-life of the global response to an increase in radiative forcing, which defines the inertia of the climate system in the model. Temperature anomalies in the model vary geographically, with larger increases over land and the poles. Probabilistic parameters are used for the ratios of the temperature anomaly over land relative to the ocean and the ratio of the temperature anomaly over the poles relative to the equator. The PAGE model also includes an explicit sea level component, modelled as a lagged function of the global mean temperature anomaly. The elements of this component that are treated

[19] Based on a coefficients of standardized regression of parameter draws on the SC-CO_2 using FUND 3.8.1 under Ramsey discounting with a pure rate of time preference of one percent and rate of relative risk aversion of 1.5. The 90 percent confidence intervals around the regression coefficients are presented as error bars.

[20] This appendix focuses on the parameters in the PAGE model related to estimating the climate impacts and principle calculation of the monetized damages. There are over 60 additional parameters in the model related to abatement and adaptation, which may be highly relevant for purposes other than estimating the SC-CO_2, but are not discussed here.

probabilistically include: sea level rise from preindustrial levels to levels in the year 2000, the asymptotic sea level rise expected with no temperature change, the predicted sea level rise experience with a temperature change, and the half-life of the sea level rise.

In the economic impacts module, damages are estimated for four categories: sea level rise, economic damages, non-economic damages, and damages from a discontinuity. Each damage category is calculated as a loss proportional to GDP. The model first calculates damages for a "focus region" (set to the European Union) assuming the region's base year GDP per capita. Damages for other regions are assumed to be proportional to the focus region's damage, represented by a regional weighting factor.

Economic damages, non-economic damages, and damages from sea level rise are modeled as polynomial functions of the temperature or sea level impact, which are defined as the regional temperature or sea level rise above a regional tolerable level. These functions are calibrated to damages at some reference level (e.g., damages at 3°C or damages for a ½ meter sea level rise). The specification allows for the possibility of "initial benefits" from small increases in regional temperature. The variables represented by a probability distributions in this specification are: the regional weighting factors; the initial benefits; the calibration point; the damages at the calibration point; and the exponent on the damage functions.

The damages from a discontinuity are treated differently from other damages in PAGE because the event either occurs or it does not in a given model simulation. In the PAGE model, the probability of a discontinuity is treated as a discrete event, where if it occurs, additional damages would be borne and therefore added to the other estimates of climate damages. Uncertain parameters related to this discontinuity include the threshold global mean temperature beyond which a discontinuity becomes possible and the increase in the probability of a discontinuity as the temperature anomaly continues to increase beyond this threshold. If the global mean temperature has exceeded the threshold for any time period in a model run, then the probability of a discontinuity occurring is assigned, otherwise the probability is set to zero. For each time period a uniform random variable is drawn and compared to this probability to determine if a discontinuity event has occurred in that simulation. The additional loss if a discontinuity does occur in a simulation is represented by an uncertain parameter and is multiplied by the uncertain regional weighting factor to obtain the regional effects.

Damages for each category in each region are adjusted to account for the region's forecast GDP in a given model year to reflect differences in vulnerability based on the relative level of economic development. Specifically, the damage estimates are multiplied by a factor equal to the ratio of a region's actual GDP per capita to the base year GDP per capita, where the ratio exponentiated with a value less than or equal to zero. The exponents vary across damage categories and in each case are treated as uncertain parameters.

Finally, in each region damages for each category are calculated sequentially (sea level rise, economic, non-economic, and discontinuity, in that order) and are assessed to ensure that they do not create total damages that exceed 100 percent of GDP for that region. Damages transition from a polynomial function to a logistic path once they exceed a certain proportion of remaining GDP, and the proportion where this transition begins is treated as uncertain. An additional parameter labeled the "statistical value of

civilization," also treated as uncertain, caps total damages (including abatement and adaptation costs described below) at some maximum level.

Figure C2 presents results of an analysis from the developers of the PAGE model that examines the uncertain parameters that have the greatest influence on estimates of the SC-CO_2 based on the default version of the model. Although some of the modeling inputs are different for the SC-CO_2 estimates calculated by the IWG, these parameters are likely to remain highly influential in the PAGE modeling results.

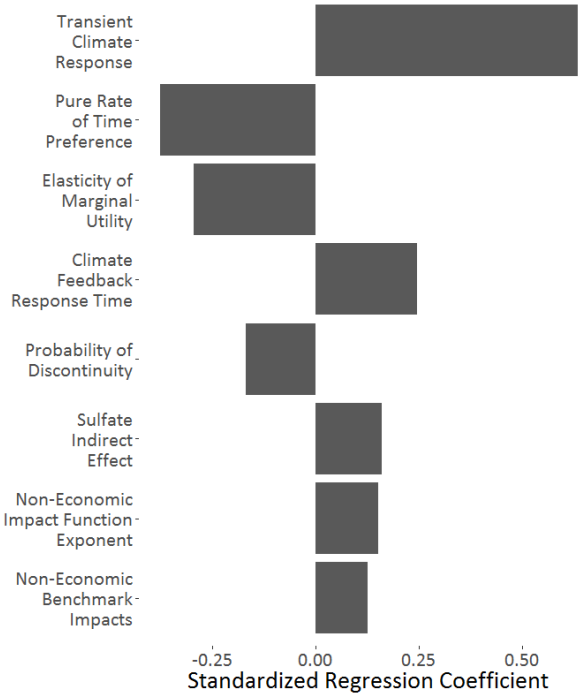

Figure C2: Influence of Key Uncertain Parameters in Default PAGE Model (Hope 2013)[21]

[21] Based on a standardized regression of the parameters. The values give the predicted increase in the SC-CO_2 in 2010 based on a one standard deviation increase in the coefficient, using the default parameters for PAGE09 under Ramsey discounting with an uncertain pure rate of time preference and rate of relative risk aversion.

Label: "FOIA/[SO 3349]"

Created by:mmford@blm.gov

Total Messages in label:29 (5 conversations)

Created: 09-25-2017 at 14:13 PM

Conversation Contents

program meeting topic: CBA and deregulation

Attachments:

/3. program meeting topic: CBA and deregulation/6.1 Amicus Brief EO 13771 eliminate 2 for 1.pdf

"Winthrop, Robert" <rwinthro@blm.gov>

From:	"Winthrop, Robert" <rwinthro@blm.gov>
Sent:	Thu May 25 2017 09:12:41 GMT-0600 (MDT)
To:	Bill Stevens <bpsteven@blm.gov>, "Dr. Robert Winthrop" <RWinthro@blm.gov>, Hilary Zarin <hzarin@blm.gov>, James C Tichenor <jtichenor@blm.gov>, Jennifer Schein Dobb <jscheindobb@blm.gov>, Jessica Montag <jmontag@blm.gov>, Joshua B Sidon <jsidon@blm.gov>, Keith Brown <kmbrown@blm.gov>, Martin Hensley <mhensley@blm.gov>, Michael D Johnson <mdjohnso@blm.gov>, Mike Ford <mmford@blm.gov>, Rebecca Moore <rmoore@blm.gov>, Scott Rickard <srickard@blm.gov>, Stacey Fritz <SFritz@blm.gov>, Stewart Allen <sdallen@blm.gov>, "Suhr Pierce, Julie A" <jsuhrpierce@blm.gov>, Tessa Teems <tteems@blm.gov>, Tyson J Sackett <tsackett@blm.gov>
Subject:	program meeting topic: CBA and deregulation

All:

I would really be interested in a short session on practical aspects of cost-benefit analysis in the context of deregulation. Over the next several years the BLM will likely undertake a number of regulatory actions aimed at modifying existing regulations. Reflecting significant policy disagreements between the Trump and Obama administrations, some of these intended regulatory changes may involve major changes or rollbacks of current requirements.

EO 12866 ("Regulatory Planning and Review"), Sect. 1(b)(6) states:

> "Each agency shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs."

To put things somewhat simplistically: the original rulemaking should have demonstrated that the estimated benefits of implementing the new regulation exceeded its costs. Presumably a rulemaking to modify an existing regulation must *also* demonstrate that the benefits of the change exceed its costs. We have at least two responsibilities here: to support the policy initiatives of the new departmental and bureau leadership, and to provide analyses that are objective and defensible to the best of our ability. Some discussion of the practical challenges of doing regulatory cost-benefit analysis might be helpful.

Is this a useful topic for the program meeting? Comments by phone or email would be welcome.

Rob

Rob Winthrop
Senior Social Scientist, Socioeconomics Program
Decision Support, Planning and NEPA (WO-210)
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20 M Street SE (2134 LM), Washington, DC 20003
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"Stevens, William" <bpsteven@blm.gov>

From:	"Stevens, William" <bpsteven@blm.gov>
Sent:	Thu May 25 2017 09:46:43 GMT-0600 (MDT)
To:	"Winthrop, Robert" <rwinthro@blm.gov>
CC:	Hilary Zarin <hzarin@blm.gov>, James C Tichenor <jtichenor@blm.gov>, Jennifer Schein Dobb <jscheindobb@blm.gov>, Jessica Montag <jmontag@blm.gov>, Joshua B Sidon <jsidon@blm.gov>, Keith Brown <kmbrown@blm.gov>, Martin Hensley <mhensley@blm.gov>, Michael D Johnson <mdjohnso@blm.gov>, Mike Ford <mmford@blm.gov>, Rebecca Moore <rmoore@blm.gov>, Scott Rickard <srickard@blm.gov>, Stacey Fritz <SFritz@blm.gov>, Stewart Allen <sdallen@blm.gov>, "Suhr Pierce, Julie A" <jsuhrpierce@blm.gov>, Tessa Teems <tteems@blm.gov>, Tyson J Sackett <tsackett@blm.gov>
Subject:	Re: program meeting topic: CBA and deregulation

I think it would be very useful.

On Thu, May 25, 2017 at 9:12 AM, Winthrop, Robert <rwinthro@blm.gov> wrote:

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--
Bill Stevens
Outdoor Recreation Planner
Moab Field Office
(435) 259-2101

"Suhr Pierce, Julie" <jsuhrpierce@blm.gov>

From:	"Suhr Pierce, Julie" <jsuhrpierce@blm.gov>
Sent:	Thu May 25 2017 12:16:57 GMT-0600 (MDT)
To:	"Winthrop, Robert" <rwinthro@blm.gov>
CC:	Bill Stevens <bpsteven@blm.gov>, Hilary Zarin <hzarin@blm.gov>, James C Tichenor <jtichenor@blm.gov>, Jennifer Schein Dobb <jscheindobb@blm.gov>, Jessica Montag <jmontag@blm.gov>, Joshua B Sidon <jsidon@blm.gov>, Keith Brown <kmbrown@blm.gov>, Martin Hensley <mhensley@blm.gov>, Michael D Johnson <mdjohnso@blm.gov>, Mike Ford <mmford@blm.gov>, Rebecca Moore <rmoore@blm.gov>, Scott Rickard <srickard@blm.gov>, Stacey Fritz <SFritz@blm.gov>, Stewart Allen <sdallen@blm.gov>, Tessa Teems <tteems@blm.gov>, Tyson J Sackett <tsackett@blm.gov>
Subject:	Re: program meeting topic: CBA and deregulation

I think it would be good.

Julie

On Thu, May 25, 2017 at 9:12 AM, Winthrop, Robert <rwinthro@blm.gov> wrote:

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--
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"Ford, Michael" <mmford@blm.gov>

From:	"Ford, Michael" <mmford@blm.gov>
Sent:	Thu May 25 2017 12:20:26 GMT-0600 (MDT)
To:	"Suhr Pierce, Julie" <jsuhrpierce@blm.gov>
CC:	"Winthrop, Robert" <rwinthro@blm.gov>, Bill Stevens <bpsteven@blm.gov>, Hilary Zarin <hzarin@blm.gov>, James C Tichenor <jtichenor@blm.gov>, Jennifer Schein Dobb <jscheindobb@blm.gov>, Jessica Montag <jmontag@blm.gov>, Joshua B Sidon <jsidon@blm.gov>, Keith Brown <kmbrown@blm.gov>, Martin Hensley <mhensley@blm.gov>, Michael D Johnson <mdjohnso@blm.gov>, Rebecca Moore <rmoore@blm.gov>, Scott Rickard <srickard@blm.gov>, Stacey Fritz <SFritz@blm.gov>, Stewart Allen <sdallen@blm.gov>, Tessa Teems <tteems@blm.gov>, Tyson J Sackett <tsackett@blm.gov>
Subject:	Re: program meeting topic: CBA and deregulation

Yes, absolutely

On Thu, May 25, 2017 at 2:16 PM, Suhr Pierce, Julie <jsuhrpierce@blm.gov> wrote:
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>
> Julie
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> On Thu, May 25, 2017 at 9:12 AM, Winthrop, Robert <rwinthro@blm.gov> wrote:
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Economist
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"Winthrop, Robert" <rwinthro@blm.gov>

From:	"Winthrop, Robert" <rwinthro@blm.gov>
Sent:	Thu May 25 2017 12:28:24 GMT-0600 (MDT)
To:	"Ford, Michael" <mmford@blm.gov>

Subject: Re: program meeting topic: CBA and deregulation

Thanks, Mike.

Rob Winthrop
Senior Social Scientist, Socioeconomics Program
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On Thu, May 25, 2017 at 2:20 PM, Ford, Michael <mmford@blm.gov> wrote:

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> > > To put things somewhat simplistically: the original rulemaking should have demonstrated that the estimated benefits of implementing the new regulation exceeded its costs. Presumably a rulemaking to modify an existing regulation must *also* demonstrate that the benefits of the change exceed its costs. We have at least two responsibilities here: to support the policy initiatives of the new departmental and bureau leadership, and to provide analyses that are objective and defensible to the best of our ability. Some discussion of the practical challenges of doing regulatory cost-benefit analysis might be helpful.
> > >
> > > Is this a useful topic for the program meeting? Comments by phone or email would be welcome.
> > >
> > > Rob
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To:	"Ford, Michael" <mmford@blm.gov>
CC:	"Suhr Pierce, Julie" <jsuhrpierce@blm.gov>, "Winthrop, Robert" <rwinthro@blm.gov>, Bill Stevens <bpsteven@blm.gov>, Hilary Zarin <hzarin@blm.gov>, James C Tichenor <jtichenor@blm.gov>, Jennifer Schein Dobb <jscheindobb@blm.gov>, Jessica Montag <jmontag@blm.gov>, Joshua B Sidon <jsidon@blm.gov>, Keith Brown <kmbrown@blm.gov>, Martin Hensley <mhensley@blm.gov>, Michael D Johnson <mdjohnso@blm.gov>, Rebecca Moore <rmoore@blm.gov>, Scott Rickard <srickard@blm.gov>, Stewart Allen <sdallen@blm.gov>, Tessa Teems <tteems@blm.gov>, Tyson J Sackett <tsackett@blm.gov>
Subject:	Re: program meeting topic: CBA and deregulation
Attachments:	Amicus Brief EO 13771 eliminate 2 for 1.pdf

Yes, absolutely.

You may have seen this https://www.eenews.net/eenewspm/2017/05/24/stories/1060055099

and it is about EO 13771 (not 12866) but I think it is relevant to 12866 and interesting - attaching the amicus brief here.

On Thu, May 25, 2017 at 10:20 AM, Ford, Michael <mmford@blm.gov> wrote:
> Yes, absolutely
>
> On Thu, May 25, 2017 at 2:16 PM, Suhr Pierce, Julie <jsuhrpierce@blm.gov> wrote:
> > I think it would be good.
> >
> > Julie

On Thu, May 25, 2017 at 9:12 AM, Winthrop, Robert <rwinthro@blm.gov> wrote:

> All:
>
> I would really be interested in a short session on practical aspects of cost-benefit analysis in the context of deregulation. Over the next several years the BLM will likely undertake a number of regulatory actions aimed at modifying existing regulations. Reflecting significant policy disagreements between the Trump and Obama administrations, some of these intended regulatory changes may involve major changes or rollbacks of current requirements.
>
> EO 12866 ("Regulatory Planning and Review"), Sect. 1(b)(6) states:
>
> > "Each agency shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs."
>
> To put things somewhat simplistically: the original rulemaking should have demonstrated that the estimated benefits of implementing the new regulation exceeded its costs. Presumably a rulemaking to modify an existing regulation must *also* demonstrate that the benefits of the change exceed its costs. We have at least two responsibilities here: to support the policy initiatives of the new departmental and bureau leadership, and to provide analyses that are objective and defensible to the best of our ability. Some discussion of the practical challenges of doing regulatory cost-benefit analysis might be helpful.
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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

PUBLIC CITIZEN, INC., et al.,	)	
	)	
	)	
Plaintiffs,	)	
	)	
	)	
v.	)	
	)	Civ. No. 17-253 (RDM)
	)	
DONALD TRUMP, PRESIDENT of the UNITED STATES, et al.,	)	
	)	
	)	
	)	
Defendants.	)	

BRIEF OF LAW PROFESSORS AS *AMICI CURIAE* IN SUPPORT OF PLAINTIFFS' OPPOSITION TO DEFENDANTS' MOTION TO DISMISS AND IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT

Respectfully submitted,

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INTEREST OF AMICUS CURIAE

This *amicus curiae* brief is submitted on behalf law professors from around the country with expertise in administrative and regulatory law. They teach at accredited law schools and have published extensively on the topics of government regulation and administrative law for several decades in the leading law reviews and journals and with leading law and university presses. *Amici* have an interest the proper administration of statutory duties by the executive branch and its agencies. They write to support the Plaintiffs' arguments, but also to advise the court on fundamental principles of administrative law and policy.

ARGUMENT

Introduction

> ROPER: *So now you'd give the Devil benefit of law?*
>
> MORE: *Yes. What would you do? Cut a great road through the law to get after the Devil?*
>
> ROPER: *I'd cut down every law in England to do that!*
>
> MORE: *And when the last law was down, and the Devil turned round on you – where would you hide, Roper, the laws all being flat? This country's planted thick with laws from coast to coast . . . and if you cut them down . . . d'you really think you could stand upright in the winds that would blow then?*

ROBERT BOLT, A MAN FOR ALL SEASONS 37-38 (1962), *quoted in Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 195 (1978) (Burger, C.J.).

On January 30, 2017, President Trump signed Executive Order 13,771, stating that an agency may issue a new regulation only if it rescinds two existing regulations that offset the costs of the new regulation. Unquestionably, wasteful, redundant, or otherwise ineffective regulations should be eliminated. Effective regulations, however, confer demonstrable, and often vital, benefits on society and, therefore, should be sustained as a matter of U.S. history, law, and policy.

The Executive Order ignores regulatory benefits and therefore fails to distinguish between effective and ineffective regulations. Accordingly, it will deprive those living in the United States of many benefits that they now enjoy and would enjoy in the future. Simply put, the Order aims to thwart implementation of many federal statutes, "cut[ting] down" and "flat[tening]" laws to the disadvantage of the public interest.

Of course, a new Administration is constitutionally empowered to advance its own agenda. However, the Executive Branch cannot flout the will of Congress and undermine the constitutional purpose of creating a government that works to benefit society. The Executive Order is fatally flawed because it violates established law and principles of our constitutional order and because it violates basic policies and practices of our modern government. These legal infirmities all have one costly consequence: regulations that Congress has directed agencies to promulgate to safeguard public health, safety, and the environment will be delayed, weakened, or withheld entirely, and citizens, consumers, and the economy as a whole will thereby suffer.

By way of three introductory examples, regulations requiring seat belts saved 12,802 lives in 2014 (airbags saved additional lives);[1] Clean Air Act rules saved over 164,000 lives in 2010 and are estimated to save over 237,000 lives annually by 2020;[2] and, Occupational Safety and Health Administration workplace regulations have reduced worker fatality rates from 18 per

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[1] Centers for Disease Control and Prevention, *Injury Prevention & Control: Motor Vehicle Safety*, (July 5, 2016), https://www.cdc.gov/motorvehiclesafety/seatbelts/facts.html (then select the tab titled "Effectiveness"); *see also* Donna Glassbrenner, *Estimating the Lives Saved by Seat Belts and Air Bags* 1-3 (Nat'l Highway Traffic Safety Admin.: Nat'l Ctr. for Statistics and Analysis, Paper No. 500), https://www-nrd.nhtsa.dot.gov/pdf/esv/esv18/cd/files/18esv-000500.pdf.

[2] U.S. Envtl. Prot. Agency, *The Benefits and Costs of the Clean Air Act from 1990 to 2020,* 5-25 (Table 5-6) (Mar. 2011), https://www.epa.gov/sites/production/files/2015-07/documents/fullreport_rev_a.pdf.

100,000 in 1970 to 4 deaths per 100,000 in 2006.[3] Because the challenged Executive Order is silent on regulatory benefits, such benefits may well be lost in pursuit of cost savings. However, as demonstrated, benefits matter greatly.

Regulatory benefits matter because they have been a consistent part of the country's regulatory history, constitutional and statutory law, and established and reliable practices and policies of government administration. Although regulatory design may be debated, the *need* for regulation to protect the public interest has never been seriously or responsibly questioned.

I. From the Founding to the New Deal and Great Society: Regulating for Public Benefit

As Yale legal historian Jerry Mashaw has amply demonstrated, the United States has always had regulatory functions implemented by administrative agencies, and those functions have always been exercised for the public good. *See generally* JERRY L. MASHAW, CREATING THE ADMINISTRATIVE CONSTITUTION: THE LOST ONE HUNDRED YEARS OF AMERICAN ADMINISTRATIVE LAW (2012). In 1789, the first Congress of the United States passed 26 statutes that were signed into law by President Washington. 1 Stat. 23-98 (1856 Ed.) Of those 26 laws, 20 dealt with the establishment of the executive branch, which then went on to adopt myriad government regulations regarding such things as import duties, lighthouses, vessels and pensions. The remaining laws dealt with governance issues such as treaties with Native Americans, the Northwest Territories, and payments to the states. *See generally* FERGUS M. BORDEWICH, THE FIRST CONGRESS: HOW JAMES MADISON, GEORGE WASHINGTON, AND A GROUP OF EXTRAORDINARY MEN INVENTED THE GOVERNMENT (2016).

To be sure, the United States has gone through several regulatory cycles, from mercantilism

[3] Rena Steinzor & Sidney Shapiro, *The People's Agents and the Battle to Protect the Public: Special Interests, Government, and Threats to Health, Safety, and the Environment* 18 (2010).

to laissez-faire and from progressivism to deregulation. During each of these historical cycles, however, the issue has never been about the presence or absence of regulation. Instead, the central issue has been how to use government regulation to maximize the common good, to maximize social benefits.

Indeed, even the early debate between the Hamiltonians and the Jeffersonians about the proper role of government was not a disagreement about the presence or absence of government regulation; rather, it was an argument about its proper locus. Hamilton believed in the central government; Jefferson believed in a decentralized agrarian society. Both, however, were committed to using regulation for the commonweal. This commitment was later dubbed the American System by Henry Clay; a system that established a three-pronged national economic policy based upon government support for infrastructure, nascent industries, and fiscal controls. In short, the American System was a system based on government regulation. SIDNEY A. SHAPIRO & JOSEPH P. TOMAIN, ACHIEVING DEMOCRACY: THE FUTURE OF PROGRESSIVE REGULATION Ch. 2 (2014).

Political and legal scholars, as well as economists, have for centuries debated the wisdom of one form of regulation or another. But it has never been disputed that regulation is based upon and grounded in the public interest as a matter of constitutional law—whether that regulation involves protecting corporate charters, *see Tr. of Dartmouth Coll. v. Woodward*, 17 U.S. 518 (1819), or granting or withholding monopolies, *see Charles River Bridge v. Warren Bridge*, 36 U.S. 420 (1837). In *Dartmouth College*, Chief Justice Marshall noted that the corporate charter involved in that case was deemed "beneficial to the country[.]" 17 U.S. at 637. Similarly, in *Charles River Bridge*, Chief Justice Taney established a rule of construction that required statutes to be construed "in favor of the public." 36 U.S. at 544.

As legal historian Herbert Hovenkamp has written: "American governments have always been involved in economic development and the creation of infrastructure, although both the amount and nature of the involvement changed over time." Herbert Hovenkamp, *Inventing the Classical Constitution*, 101 IOWA L. REV. 1, 11 (2015). Of particular note is the fact that with Andrew Jackson's election, government economic policy and regulation shifted from mercantilism to laissez-faire. That shift, however, did not eliminate government intervention into markets. Jacksonian populism was aimed at federal corruption and, therefore, looked to the states to protect economic liberty. In response to those Jacksonian concerns, to ensure against cronyism and legislative capture, the Supreme Court articulated a public use test for regulatory activity. *Loan Ass'n v. Topek*a, 87 U.S. 655 (1874) (taxation); *United States v. Gettysburg Elec. Ry. Co.*, 160 U.S. 668 (1896) (takings). The public use test is consistent with the Constitution because the purpose of government action is to generate public benefits.

By the mid-nineteenth century, the U.S. economy was evolving rapidly through northern migration, immigration, urbanization, and, most important, industrialization. The Industrial Revolution brought with it corporate concentration that began to have harmful effects on the economy and presented risks to public health and safety and to the environment. Federal and state legislatures responded by enacting laws designed to balance that power and to protect markets from abuse and citizens from suffering.

Munn v. Illinois, 94 U.S. 113 (1876), is generally considered to be the first modern administrative law case. In that case, the Supreme Court upheld Illinois legislation regulating grain elevators that, at the time, were exercising both monopoly and monopsony power. Farmers who sold grain to the elevators were underpaid, and consumers overpaid for the grain because of the market power exercised by the elevators. In reviewing the constitutionality of the Illinois

legislation, the Supreme Court established two principles for modern regulation. First, the Court recognized that governments have long regulated industries to correct for market failures that result in monopolistic power. Second, the Court determined that a regulation had to be based in the public interest. In *Munn*, then, the Court acknowledged that setting fair and reasonable grain prices in the country's breadbasket was clearly in the public interest and that regulation, therefore, was warranted. 94 U.S. at 136.

Shortly after the Supreme Court decided *Munn*, Congress created numerous agencies to protect the public against economic inefficiencies caused by monopolies and by health and safety threats presented by industrialization. The Interstate Commerce Commission (ICC), the first modern administrative agency, was created to monitor abuses of railroad rates. The agency was seen as an institution that was nonpolitical, expert, technically proficient and able to correct economic dislocations. Similarly, Congress passed legislation to correct for abuses of monopoly power (Sherman Anti-Trust Act, 26 Stat. 209 and the Federal Trade Commission Act, 38 Stat. 717); coordinate the development of hydropower projects (the Federal Power Act, 41 Stat. 1063); ensure airline safety (the Air Commerce Act of 1926, 44 Stat. 568); and the like. These laws established administrative agencies, including the Federal Trade Commission and the Federal Power Commission. Congress created these agencies, like the ICC before them, so that technically proficient expert administrators could address complex, ongoing social and economic problems for the benefit of all. In addition to market corrections, Congress created agencies to protect citizens from health and safety harms. For example, Congress created the Food and Drug Administration to implement regulations addressing such identified problems as tainted meat (the Federal Meat Inspection Act of 1906, 34 Stat. 1260) and adulterated food and drugs (the Pure Food and Drug Act of 1096, 34 Stat. 768).

All of this legislative and administrative activity took place before the proliferation of New Deal and Great Society agencies. But both sets of agencies expanded the scope and reach of government in response to the need for greater public protections. And, although directed at different problems, both sets of agencies were created in the public interest and for the public benefit.

New Deal economic legislation was intended to accomplish three things: develop a national infrastructure, particularly in energy (the Federal Power Act, 41 Stat. 1063, and the Natural Gas Act, 52 Stat. 821); regulate and stabilize markets (Securities Act of 1933, 48 Stat. 74, and the Securities Exchange Act of 1934, 48 Stat. 881); and promote and support a middle class (Social Security Act of 1935, 49 Stat. 620, and the National Labor Relations Act, 49 Stat. 449).

Several decades later, the Great Society legislation aimed at solving various social problems—from racial discrimination to threats to public health and safety. Most notably, Great Society legislation provided much-needed federal protection of civil rights (Civil Rights Act of 1964, 78 Stat. 241, and the Voting Rights Act of 1965, 79 Stat. 437). Legislation of that period also addressed environmental threats (National Environmental Policy Act of 1969, 83 Stat. 852), worker safety (Occupational Safety and Health Act of 1970, 84 Stat. 1590), consumer protection (Consumer Product Safety Act, 86 Stat. 1207), and poverty (Economic Opportunity Act of 1964, 78 Stat. 508) among other concerns.

Thus, in both the New Deal and Great Society eras, Congress created new agencies deemed necessary to implement legislation to ameliorate complex and ongoing economic and social harms. In each case, the legislation was expressly directed to serving the "public interest" in general or to serving identified specific public interests such as preventing racial discrimination, fighting poverty, or protecting workers.

As Justice Holmes recognized in *Pa. Coal Co. v. Mahon*, 260 U.S. 393, 413 (1922), regulation in the public interest can impose costs on select private individuals in exchange for overall benefits to society. ("Government hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law.").

President Trump's Executive Order does exactly the opposite. The first section of the Order is directed to protecting "private expenditures" at the expense of public benefits. That directive is not only at odds with two-plus centuries of regulatory history in this country, it also violates constitutional and statutory law.

II. The Great Society to the Present: The Paramount Importance of Regulatory Benefits

During and following World War II, the pace of industrialization quickened, bringing with it new comforts and conveniences, but also introducing new hazards and exacerbating existing ones. Toxic wastes leaked into homes and schools, rivers caught fire; car gas tanks exploded on impact; smog darkened the sky. In response, in the 1960s and 1970s Congress enacted, through bipartisan efforts, a series of laws to protect American workers, consumers, and the general public from toxic pollutants in the air and water, dangerous consumer goods, and other widespread dangers. *See, e.g.,* National Environmental Policy Act of 1969, 83 Stat. 852, Occupational Safety and Health Act of 1970, 84 Stat. 1590, Consumer Product Safety Act, 86 Stat. 1207; Clean Air Amendments of 1970, 84 Stat. 1676; Federal Water Pollution Control Act, 62 Stat. 1155. Consistent with the two centuries of historical precedent outlined above, Congress routinely delegated to executive branch agencies the task of crafting specific regulations to achieve these public benefits.

In the wake of this new legislation, industries that had not previously been made responsible for the harms they inflicted on others through pollution, unsafe consumer products,

or hazardous industrial processes inevitably chafed at the new restrictions imposed on them. In their efforts to push for less stringent regulation, they frequently lobbied agencies to take more account of costs or argued in the courts that agencies were giving insufficient consideration to the costs these new regulations imposed on them. *See generally* RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH 21-29 (2008).

Indeed, a long line of Supreme Court cases considering such arguments stretches back to the 1970s. While a number of these cases have approved of agencies considering costs in various ways, a common thread throughout has been the bedrock notion that the Court recognized since the Founding; namely, that agencies must in some way take account of *benefits* as well as costs. That notion has been accompanied by a longstanding vigilance to ensure that costs, which are typically so much more amenable to measurement and quantification, not be allowed to overshadow or even "cancel[]" out regulatory benefits. *See Whitman v. Am. Trucking Assn's*, 531 U.S. 457, 469 (2001).

Particularly in the environmental, health, and safety area, Congress has demonstrated a similar concern about costs eclipsing benefits, and, as a result, has only rarely directed agencies to set standards through an actual cost-benefit analysis that directly compares costs to benefits. Indeed, Congress' concern about costs overshadowing benefits has led it in several statutes to direct agencies to set public health and environmental standards based solely on consideration of benefits, prohibiting consideration of costs altogether. *See* 42 U.S.C. § 7409(b) (National Ambient Air Quality Standards); 42 U.S.C. § 7410(a)(2) & (k)(3) (EPA approval of state implementation plans); 16 U.S.C. § 1536(a)(2) (federal duties to protect endangered species); Food Additives Amendment of 1958, 72 Stat. 1784 (Delaney Clause). And the Supreme Court

has endorsed this approach. *Whitman*, 531 U.S. at 468-69; *Union Elec. Co. v. EPA*, 427 U.S. 246, 268-69 (1976); *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 194-95 (1978).

Thus, even when the Supreme Court has approved an agency's consideration of costs, or actually directed an agency to consider costs, it has done so in instances where no one questioned that the agency was also giving serious consideration to the benefits Congress sought to promote through the relevant statute. The Court has never suggested that it would be appropriate for an agency to weigh regulatory costs in a vacuum without a countervailing consideration of regulatory benefits. Indeed, while we have not combed through all the briefs in all of these cases, there is no indication from the Court's opinions that such an argument has ever even been made to the Court.

In the first of this line of cases, *Citizens to Pres. Overton Park v. Volpe,* 401 U.S. 402 (1971) *(Overton Park),* the Court reversed the Department of Transportation's decision to approve a federal highway through a public park despite statutory language prohibiting the agency from doing so unless there was "no feasible and prudent alternative." The phrase "feasible and prudent" clearly contemplated the consideration of costs, but not in a vacuum; the agency could consider these costs only against the backdrop of the regulatory benefits identified by Congress—"protection of parkland"—which were, according to a unanimous Court, "to be given paramount importance." *Id.* at 412-13.

Even in that early case, the Court was already demonstrating a concern that would arise repeatedly in subsequent opinions penned by both liberal and conservative justices. This was the worry that, without vigilance by Congress and the courts, regulatory benefits—such as saving lives or reducing illnesses and injuries, which are often so much less susceptible to dollars-and-cents accountings—might get short shrift:

> It is obvious that in most cases considerations of cost, directness of route, and community disruption will indicate that parkland should be used for highway construction whenever possible. . . . Thus, if Congress [had] intended [the costs and benefits of preserving park land] to be on an equal footing, there would have been no need for the statutes. . . . But the very existence of the statutes indicates that protection of parkland was to be given paramount importance.

Overton Park, 401 U.S. 402, 411-13. Thus, while the agency was to consider regulatory costs, it was only allowed to do so in a context in which benefits were also accounted for, and, indeed, given "paramount importance." *Id.*

Five years later, in *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976), the question of agency consideration of costs came before the Court again. There, electric utilities subject to restrictions in Missouri's state implementation plan (SIP) on their ability to emit harmful air pollutants, challenged EPA's approval of that plan for the agency's failure to consider the costs it would impose on industry—specifically, whether the plan was technologically and economically infeasible. A unanimous Supreme Court rejected the claim, noting that "the 1970 Amendments to the Clean Air Act were a drastic remedy to what was perceived as a serious and otherwise uncheckable problem of air pollution[,]" and concluded that this was one of those instances in which Congress had decided to exclude cost considerations from an agency's decision making altogether in order to ensure that regulatory benefits got their due. *Id.* at 256-57. In particular, by excluding cost considerations in this instance, Congress sought to promote the important public benefit of spurring private innovation in pollution control technology. *Id.* at 257 ("These requirements are of a 'technology-forcing character' [] and are expressly designed to force regulated sources to develop pollution control devices that might at the time appear to be economically or technologically infeasible."(citations omitted)); *see also id.* at 257, n. 5 ("Where Congress intended the Administrator to be concerned about economic and technological infeasibility, it expressly so provided.").

Just two years later, in its famous decision in *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978), the Supreme Court read another statute to prohibit agency cost considerations. The Court held that the provision of the Endangered Species Act requiring federal agencies "to insure that [their] actions . . . do not jeopardize the continued existence" of any endangered species, 16 U.S.C. § 1536, "admits of no exception," and "shows clearly that Congress viewed the value of endangered species as 'incalculable,'" thus precluding any balancing of costs against the paramount value of species protection. 437 U.S. at 173, 187.

In 1981, the Supreme Court revisited the subject of agency cost considerations in a case involving the regulation of cotton dust in textile mills, prolonged exposure to which causes byssinosis, or "brown lung disease." *Am. Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490 (1981). Like the statutes at issue in *Overton Park*, the Occupational Safety and Health Act employs a "feasibility" standard. It directs the Occupational Safety and Health Administration (OSHA) to establish standards for toxic materials "which most adequately assure[], to the extent feasible . . . that no employee will suffer material impairment of health or functional capacity." 29 U.S.C. § 655(b)(5). The notion of feasibility clearly encompasses consideration of economic feasibility, i.e., costs. Nonetheless, as it did in *Overton Park*, the Court made clear that the agency's cost consideration was to be performed against the backdrop of an overarching consideration of regulatory benefits, and that those benefits were paramount:

> [C]ongress itself defined the basic relationship between costs and benefits, by *placing the "benefit" of worker health above all other considerations* save those making the attainment of this "benefit" unachievable. Any standard based on a balancing of costs and benefits by the Secretary that strikes a different balance than that struck by Congress is inconsistent with the command set forth in §6(b)(5).

Am. Textile, 452 U.S. at 509 (emphasis added).

Thus, to ensure that benefits were not eclipsed by costs, Congress did not allow the agency to balance costs directly against benefits. Instead, the statute placed "the 'benefit' of worker health above all other considerations," allowing a standard less stringent than that required to protect every last worker only where such complete protection was so exorbitantly costly as to be infeasible. *Id.* Indeed, the Court made clear that it did not ordinarily expect Congress to permit agencies to directly balance costs against benefits, and would only interpret it as doing so where Congress "has clearly indicated such intent on the face of the statute." Id. at 510. Also, of particular relevance here, the Court went on to note that "Congress was fully aware that the Act would impose real and substantial costs of compliance on industry, and believed that such costs were part of the cost of doing business." *Id.* at 514. Once again, Congress viewed regulatory benefits as paramount.

A full two decades passed before the Supreme Court again took up the subject of agency cost considerations in *Whitman v. American Trucking Associations*, 531 U.S. 457 (2001). There, in an opinion authored by Justice Scalia, the Court read another provision of the Clean Air Act to prohibit cost considerations altogether. At issue was what is in many ways the centerpiece of the statute—the provision directing the EPA to set National Ambient Air Quality Standards (NAAQS). The Act directs EPA to set these standards at the level "requisite to protect the public health." 42 U.S.C. § 7409(b)(1). The Court read this language to say that the Clean Air Act "unambiguously bars cost considerations from the NAAQS-setting process." *Whitman,* 531 U.S. at 471; *see also id.* at 467-78 ("We have . . . refused to find implicit in ambiguous sections of the CAA an authorization to consider costs . . . [such authorization requires a] "textual commitment" that is "clear."). And Justice Scalia grounded the Court's rationale squarely in the concern that a direct balancing of costs against benefits might give benefits short shrift. "Cost," Justice Scalia

said, "is *both* so indirectly related to public health *and* so full of potential for canceling the conclusions drawn from direct health effects that it would surely have been expressly mentioned in §§ 108 and 109 had Congress meant it to be considered." 531 U.S. at 469. Once again, and explicitly, the Court made clear the paramount importance of regulatory benefits.

In its 2009 case, *Entergy Corp. v. Riverkeeper*, 556 U.S. 208 (2009), the Court affirmed a decision by EPA to consider costs in the context of a relatively obscure provision of the Clean Water Act, but once again, it was not in a vacuum, but in conjunction with the consideration of regulatory benefits. There the Court read the statute to allow the agency to do the kind of direct balancing of costs against benefits that the Court had held Congress to have precluded in all of its previous cases. But it did so based on an understanding that the agency had conducted only an informal, qualitative cost-benefit analysis, in which concerns about difficult-to-quantify benefits being eclipsed by costs might well be lessened. Indeed, in his opinion for the Court, Justice Scalia went out of his way to make clear that the Justices might well take a different view were the agency to engage in a more formal cost benefit analysis, noting that more "rigorous form[s] of cost-benefit analysis" might be "preclude[d]." 556 U.S. 223; *see also id.* at 235 (Breyer, J., concurring) ("The EPA's reading of the statute would seem to permit it to describe environmental benefits in non-monetized terms and to evaluate both costs and benefits in accordance with its expert judgment and scientific knowledge. The Agency can thereby avoid lengthy formal cost-benefit proceedings and futile attempts at comprehensive monetization [and] take account of Congress' technology-forcing objectives.") (citation omitted).

Five years later, in *EPA v. EME Homer City Generator, L.P.*, 134 S. Ct. 1584 (2014), the Court again upheld EPA's discretion to consider costs, this time in the context of a complicated provision of the Clean Air Act aimed at reducing interstate air pollution. The agency's

consideration of cost essentially took the form of a feasibility analysis.[4] As with the feasibility analyses approved by the Court in *Overton Park* and *American Textile*, there was no question that the agency's paramount consideration was benefits, and that the cost consideration took place against that backdrop. The statutory purpose at issue there was to tackle the persistent and growing problem of smog in the Northeast by ensuring that upwind states were preventing sources from emitting air pollution that would "*contribute significantly*" to downwind states' nonattainment of air quality standards. 42 U.S.C. § 7410(a)(2)(D)(i). Thus, the agency's feasibility analysis made air pollution control benefits paramount, identifying for each upwind state the most stringent level of pollution control that would be economically feasible. 134 S. Ct. at 1589-90.

Finally, and most recently, in *Michigan v. EPA*, 135 S. Ct. 2699 (2015), the Supreme Court held that the EPA must consider costs in connection with its finding that regulation of mercury and other air toxics from power plants is "appropriate and necessary." 135 S. Ct. at 2711; 42 U.S.C. § 7412(n)(1)(A). As in all of the Court's previous forays into this subject, it was clear that the agency's consideration of costs would be conducted not in a vacuum, but in conjunction with a thorough and detailed consideration of the public benefits that formed the purpose and *raison d'etre* of the statute. Indeed, Congress had specifically directed EPA to base its "appropriate and necessary" finding on the results of a study EPA was directed to perform on "the hazards to public health reasonably anticipated to occur as a result of emissions by [power plants] of [hazardous air] pollutants . . . after imposition of [other requirements in the Act]," i.e., the potential benefits of regulation. 135 S.Ct. at 2716; 42 U.S.C. § 7412(n)(1)(A). And EPA had

[4] *See* Amy Sinden, *A "Cost-Benefit State?" Reports of Its Birth have been Greatly Exaggerated*, 46 ENVTL. L. REP. 10933, 10950 (2016).

done just that, detailing in an 800-page report the myriad public health harms caused by power plant emissions of mercury and other toxic air pollutants. 135 S. Ct. at 2706. Once again, benefits were paramount.

It is also worth noting that, echoing concerns about costs eclipsing hard-to-quantify benefits that he had previously expressed in *Whitman* and *Riverkeeper*, Justice Scalia went to significant pains in this opinion to clarify that, while the agency had to account for costs in some way, "a formal cost-benefit analysis in which each advantage and disadvantage is assigned a monetary value" was not required—a point on which the dissent agreed. 135 S. Ct. at 2711; *id*. at 2717 (Kagan, J., dissenting).

In short, the long history of regulation in this country demonstrates that regulatory benefits are and always have been Congress' (and therefore agencies') paramount concern. And this is an ordering of priorities that the Supreme Court has long required. Agencies may in many instances consider costs in deciding whether and how to regulate, but only in conjunction with the consideration of benefits, which are, after all, the *raison d'etre* of agency regulation and the statutes that authorize it.

III. The Executive Order Represents an Abrupt About-Face from Decades of Academic and Public Policy Literature on Regulatory Reform.

The idea that wasteful or inefficient regulations need to be eliminated is by no means new. Ideas for streamlining and improving regulation stretch back decades. But previous efforts at regulatory reform have centered primarily around the idea of cost-benefit analysis—requiring an agency before promulgating a regulation to show that its benefits exceed its costs, or, more ambitiously, that it maximizes net social benefits. A large and well-established body of literature justifies the use of cost-benefit analysis on the basis of long-standing and extensively elaborated tenets of welfare economics, defending it as a means for achieving or approximating Kaldor-

Hicks efficiency, or welfare maximization. *See, e.g.*, ANTHONY E. BOARDMAN ET AL., COST-BENEFIT ANALYSIS: CONCEPTS AND PRACTICE 32 (4th ed. 2011); MATTHEW D. ADLER & ERIC A. POSNER, NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS (2006). From the outset, these ideas have sparked significant controversy, and a heated debate continues over whether cost-benefit analysis is actually an effective tool for achieving these goals. *See, e.g.*, FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING (2004); RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH 13–-16 (2008). Nonetheless, the underlying notion that increasing net social benefits is a laudable goal and should be considered in evaluating the effectiveness of regulation is relatively uncontroversial.

Executive Order 13,771, however, represents a radical and dramatic change in course from these longstanding ideas about regulatory reform. It is grounded in an idea that has begun to be referred to as "regulatory budgeting," the idea being that each agency has a fixed "budget" or cap for the amount of regulatory "costs" it is allowed to impose on society each fiscal year.[5]

[5] Regulatory budgeting measures adopted in the United Kingdom and Canada are quite different from Executive Order 13,771. The UK counts "*net* direct costs," a number derived by subtracting direct benefits to private sector entities from the direct costs imposed on them. *See* Jeffrey A. Rosen & Brian Callanan, *The Regulatory Budget Revisited*, 66 ADMIN. L. REV. 856 (2014). Moreover, the vast bulk of regulatory costs (including all EU regulations) have been excluded from the UK's regulatory budgeting requirements. *See* National Audit Office, *The Business Impact Target: Cutting the Cost of Regulation: 2016-17*, HC 236 (UK, 2016) ("The £8.3 billion of expected costs imposed on business so far this Parliament that are not included in the scope of the [regulatory budget] greatly exceed the £0.9 billion that are."). Canada's regulatory budgeting measure only counts administrative costs, not compliance costs and its effect has been small: $23.7 million in cost savings over three years. *See*, *The 2014-15 Scorecard Report on Reducing Regulatory Red Tape*, Government of Canada (Jan. 18, 2016), https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/2014-2015-scorecard-report.html#s4.

See EO § 1 ("[I]t is important . . . that the cost of planned regulations be prudently managed and controlled through a budgeting process."); *id* § 2(b) (setting incremental cost "budget" at zero for F.Y. 2017); *id*. § 3(d) *(*delegating to OMB Director task of setting each agency's incremental cost "budget"—at a positive or negative number—for each subsequent fiscal year).

The idea of "regulatory budgeting" strays far from the moorings of welfare economics that have grounded previous regulatory reform efforts into a new realm entirely untethered from any intellectually coherent theory about how government does or should work. While its intellectual foundations are not entirely clear, it appears to stem in part from the same impulse toward comprehensive quantification that has, as shown above, garnered such skepticism from the Supreme Court and Congress. And, indeed, "regulatory budgeting" appears to be the most extreme manifestation of exactly the danger that the Supreme Court has so often warned against—that costs, which are so much more amenable to measurement, quantification and monetization—will unjustifiably overshadow and upstage benefits. Indeed, in regulatory budgeting, benefits are not just upstaged, they are jettisoned entirely, simply because they are so difficult to quantify and therefore "speculative."[6]

The argument for regulatory budgeting appears at times to rest on an unsupported and unfounded assumption that regulations actually have no benefits—that they are nothing but senseless red tape to be eliminated at every opportunity. *See, e.g.*, Brief of Amici Curiae States, Docket No. 11, at 1 ("The Executive Order . . . will reduce the sprawl of unnecessary, costly regulations."). This is inconsistent with the empirical evidence, with decades of Supreme Court

[6] Marcus Peacock, *Implementing a Two-for-One Regulatory Requirement in the U.S. (Working Paper)* GEO. WASH. U. REG. STUD. CTR. 22 (2016) https://regulatorystudies.columbian.gwu.edu/sites/regulatorystudies.columbian.gwu.edu/files/downloads/Peacock_Implementing-Two-For-One%2012-2016_final.pdf.

precedent, and with the Congressional findings and declarations of purpose underlying innumerable statutes.

Overwhelming evidence indicates that regulatory benefits far exceed costs. The Office of Management and Budget (OMB) reports each year on the costs and benefits of federal regulation and regularly finds the benefits to be many times bigger than the costs. OMB's 2015 report, for example, determined that, for the previous decade, the total benefits of federal regulation were $216 billion to $812 billion, while total costs were only $57 billion to $85 billion.[7] The EPA has estimated that the regulatory benefits of the Clean Air Act exceed the costs by a 25-to-1 ratio.[8] The Congressional Research Service is in accord with this assessment.[9]

On the flip side, the argument for regulatory budgeting is often accompanied by estimates of regulatory costs that are wildly overstated. For example, one oft-repeated statistic claims that regulation costs the U.S. economy $1.75 trillion per year. That figure, however, is based upon a study prepared for the National Association of Manufacturers[10] that has been widely discredited.[11]

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[7] Office of Mgmt. & Budget, Office of Info. & Reg. Aff., *2015 Report To Congress On The Benefits And Costs Of Federal Regulations And Unfunded Mandates On State, Local, And Tribal Entities* 1-2, https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/2015_cb/2015-cost-benefit-report.pdf.

[8] Envtl. Prot. Agency, *The Benefits and Costs of the Clean Air Act from 1990 to 2020* 7-9 (Mar. 2011), https://www.epa.gov/sites/production/files/2015-07/documents/fullreport_rev_a.pdf.

[9] Congressional Research Service, *EPA Regulations: Too Much, Too Little, or On Track?* (Dec. 30, 2016), https://fas.org/sgp/crs/misc/R41561.pdf.

[10] W. Mark Crain & Nicole V. Crain, *The Impact of Regulatory Costs on Small Firms*, 6 (Sept. 1 2010), https://www.sba.gov/sites/default/files/advocacy/The%20Impact%20of%20Regulatory%20Costs%20on%20Small%20Firms%20(Full)_0.pdf

[11] *See* Lisa Heinzerling & Frank Ackerman, *The $1.75 Trillion Lie*, 1 MICH. J. ENVTL. & ADMIN. LAW 127 (2012). Congressional Research Service, *Analysis of an Estimate of the Total Costs of Federal Regulation* Summary (April 6, 2011); U.S. Government Accountability Office, *Small Business Administration: Office of Advocacy Needs to Improve Controls Over Research,*

A small, nascent body of literature has made a few tentative efforts to defend the idea of "regulatory budgeting" on the basis of a purported analogy between regulatory costs and taxes. *See, e.g.,* Jeffrey A. Rosen & Brian Callanan, *The Regulatory Budget Revisited* 66 ADMIN. L. REV. 835 (2014). The idea is that regulatory costs are akin to a tax because, like taxes, they impose costs on the private sector. Because agencies each receive a budget capping the amount of tax revenues they can spend each year, so the argument goes, agencies should similarly have a "regulatory budget" capping the amount of regulatory cost they can impose on society each year.

Right away, the first flaw in the analogy becomes apparent. Standard government budgets, like all budgets, have two columns. One column lists tax revenues coming in; the other column lists government expenditures going out. And the government expenditures detailed in the second column are limited by the tax revenues tallied in the first. But the regulatory budget contains only one column—regulatory costs. This one-column, cost-only regulatory budget provides no logical or principled way to determine what the limit or cap on regulatory cost "expenditures" should be. This puts proponents in the awkward position of having to come up with an admittedly arbitrary number to serve as the cap on "expenditures" of regulatory costs. *See* Sam Batkins, *A Reply: The Regulatory Budget Takes Form*, 67 ADMIN. L. REV. 115, 128-30 (2016).

The second flaw in the argument becomes apparent upon closer examination of the purported analogy between regulatory costs and taxes. Taxes are aimed primarily at raising revenue while regulations, in addition to generating benefits, often aim to hold private actors accountable for harms they inflict on others. A regulation that imposes costs on a business, by, for example, forcing a power plant to install scrubbers on its smokestacks, is not so much

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Regulatory, and Workforce Planning Activities, GAO-14-525 (July 2014).

imposing a tax as it is forcing the business simply to take responsibility for actions that impose harms on other people without their consent—harms like suffering from asthma, bronchitis, or heart disease just from trying to breathe the air. Internalizing externalities in this way is not government overreach; it is simply a matter of basic fairness and personal responsibility.

In sum, the Executive Order, and the idea of "regulatory budgeting" on which it is based, represents a radical departure from decades of previous thinking about regulatory reform with no coherent theoretical or empirical foundation.

IV. Conclusion

For more than two centuries, Congress has delegated power to agencies to issue regulations aimed at achieving public benefits. These benefits—as defined and chosen by Congress—are of "paramount importance" and cannot be cast aside by the executive branch without running roughshod over our constitutional scheme of divided powers. While some regulations that have become outmoded or non-beneficial should be eliminated, the effectiveness or value of a regulation cannot possibly be discerned by looking only at its costs, any more than the success of a business enterprise can be judged by looking only at the expense side of the ledger and ignoring revenues.

The Executive Order is fraught with difficulties that are fatal. Most glaringly, by failing to account for the benefits of regulation and focusing solely on the costs, it distorts the purposes of the laws underlying the regulations at issue. In short, the Executive Order ignores constitutional and statutory requirements and is contrary to centuries of good government practices and policies. Accordingly, it should be struck down.

Respectfully submitted,

___/s/_____

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Label: "FOIA/[SO 3349]"

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Created: 09-25-2017 at 14:13 PM

Conversation Contents

FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

Attachments:

/4. FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"/1.1 AgencyName_Sec2_EO13783_WO300.xlsx
/4. FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"/2.1 M-17-24 (3).pdf
/4. FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"/3.1 M-17-24 (3).pdf
/4. FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"/7.1 AgencyName_Sec2_EO13783_WO300_v2.xlsx
/4. FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"/13.1 AgencyName_Sec2_EO13783_WO300_v2.jt.xlsx
/4. FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"/17.1 BLM_Sec2_EO13783.xlsx

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed May 10 2017 10:40:55 GMT-0600 (MDT)
To:	"Tichenor, James C" <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>
CC:	Shelley McGinnis <smcginnis@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>
Subject:	FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
Attachments:	AgencyName_Sec2_EO13783_WO300.xlsx

James/Mike:
Please see attached table (and email trail below) that needs to be completed by about 11 am 5/11. It is an OMB exercise that is asking for more information in regards to the items that WO300 identified as potentially impacting energy development opportunities. There are several columns in there looking for cost/cost savings figures at 3%/7% and low/high ranges. Not sure those particularly apply to rescinding policy. Shelley can serve to provide some background and please contact 310/320 staff as needed for specific information on the policies identified.

Theresa: my apologies for assigning directly to James/Mike as this is a very short turnaround time and I wanted to them as much time as possible.

Steve/Mitch: Please ensure to provide data as needed to complete the analysis from James/Mike.

Thanks all!
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

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From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Wednesday, May 10, 2017 12:28 PM
To: Timothy Spisak; Lonny Bagley
Cc: Kristin Bail; Karen Kelleher
Subject: Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

Tim,

Please use attached version of spreadsheet.

Kristin and Karen - could you let us know if anyone from your team is working on filling in the information for the following:

(b) (5) [redacted]

[redacted]

Thanks, Shelley

On Wed, May 10, 2017 at 10:00 AM, Stewart, Shannon <scstewar@blm.gov> wrote:
Hi All

We have received a new, short turnaround request from ASLM - see below. I have added the items from our memo on SO 3349 Section C to the spreadsheet to get us started. Rich is clear below that if an entry does not lend itself to the information requested, we should simply put N/A. This is due back to ASLM tomorrow mid-day. Happy to discuss further after you have sometime to digest.

Shannon

Begin forwarded message:

> **From:** "Cardinale, Richard" <richard_cardinale@ios.doi.gov>
> **Date:** May 9, 2017 at 6:31:31 PM EDT
> **To:** Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, Margaret Schneider <margaret.schneider@bsee.gov>, "Nedd, Mike" <mnedd@blm.gov>
> **Cc:** Katharine Macgregor <kate_macgregor@ios.doi.gov>
> **Subject: Fwd: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting**

Energy Independence and Economic Growth"

All,

Attached please find an Excel template that OMB sent to Exec. Sec. late yesterday seeking information in connection with Section 2(a) of Executive Order 13783, which requires the head of each Executive Department and Agency to review all of that agency's existing regulations, orders, guidance documents, policies, and any other similar agency actions that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources.

This data that is request for the attached Excel spreadsheet is based on the information that your bureaus previously provided to Jim Cason. Unfortunately, it took quite a while for OMB to develop this template and before I sent it out I wanted to ensure that Julie had an opportunity to discuss it with the front office.

In populating the spreadsheet, if a particular item that you are including does not lend itself to the information requested in one (or more) of the data columns, simply put N/A.

We apologize for the short turn around on this assignment. Per the attached Memorandum from Acting OIRA Administrator Dominic Mancini, each Department is required to submit its plan for responding to the EO by this Friday, March 12. Accordingly, please have your bureaus send me their respective spreadsheets by Noon on Thursday, May 11.

Thank you in advance for your assistance and, again, our apologies for the quick turn around.

Rich
---------- Forwarded message ----------
From: **Lillie, Juliette** <juliette_lillie@ios.doi.gov>
Date: Tue, May 9, 2017 at 7:10 AM
Subject: Fwd: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
To: Richard Cardinale <Richard_Cardinale@ios.doi.gov>, Maureen Foster <maureen_foster@ios.doi.gov>, Sarah Walters <sarah_walters@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Amy Holley <amy_holley@ios.doi.gov>

Good morning: We received guidance from OMB on the report due for EO 12783 Promoting Energy Independence and Economic Growth. I wanted to pass it on to you because I believe a report is due this week. We did send a copy of this information to Jim Cason.

Julie
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Director Executive Secretariat and Regulatory Affairs
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Cell: 202-578-3010
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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed May 10 2017 10:43:01 GMT-0600 (MDT)
To:	"Tichenor, James C" <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>
CC:	"Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Subject:	Re: FW: Procedural Guidance on Section 2 of Executive Order 13783, “Promoting Energy Independence and Economic Growth”
Attachments:	M-17-24 (3).pdf

James/Mike:

Please also see attached pdf that was part of the original email.

Thanks, Shelley

On Wed, May 10, 2017 at 12:40 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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Thanks all!
Tim

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'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Wednesday, May 10, 2017 12:28 PM
To: Timothy Spisak; Lonny Bagley
Cc: Kristin Bail; Karen Kelleher
Subject: Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

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(b) (5) [redacted]

[redacted]

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> **Cc:** Katharine Macgregor <kate_macgregor@ios.doi.gov>
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To: Richard Cardinale <Richard_Cardinale@ios.doi.gov>, Maureen Foster <maureen_foster@ios.doi.gov>, Sarah Walters <sarah_walters@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Amy Holley <amy_holley@ios.doi.gov>

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Julie
Juliette Lillie
Director Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C St. NW
Washington DC 20240

Email: juliette_lillie@ios.doi.gov
Ph: 202-219-7724

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Shannon Stewart
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Shelley McGinnis, Ph.D.
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Email: smcginnis@blm.gov

"Ford, Michael" <mmford@blm.gov>

From:	"Ford, Michael" <mmford@blm.gov>
Sent:	Wed May 10 2017 10:45:41 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
Subject:	Fwd: FW: Procedural Guidance on Section 2 of Executive Order 13783, “Promoting Energy Independence and Economic Growth”
Attachments:	M-17-24 (3).pdf

Whelp, there goes the day.

Headed to the doctor's right now but can call when I'm done around 2:30 if that's ok

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From: jeanett@blm.gov
To: laun@westernlaw.org; king@westernlaw.org
Subject: FOIA Request BLM-2017-00883 Release 6 Part 3 of 3
Date: Friday, February 9, 2018 1:07:42 PM
Attachments: 2017-00883_Release_6_Redacted_Part3.pdf

Ms. Laun and Ms. King,

Please see the attached responsive documents to your FOIA request. This release is the sixth in a series of rolling releases. To ensure delivery of the records via email, the sixth interim release is broken into three parts. Parts 1 and 2 were sent in a separate email.

Thank you,

Jillian Eanett

Washington Office FOIA Coordinators
Bureau of Land Management
Phone: 202-912-7650

Fax: 202-245-0027
BLM_WO_FOIA@blm.gov

To: "Tichenor, James C" <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>
Cc: "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>

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Michael M. Ford
Economist
Bureau of Land Management
mmford@blm.gov
w: 202-912-7623
m: 202-774-8530

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Wed May 10 2017 10:59:09 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Michael Ford <mmford@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>
Subject:	Re: FW: Procedural Guidance on Section 2 of Executive Order 13783, “Promoting Energy Independence and Economic Growth”

Hi Tim,

Mike and I will take a look and see what we can provide. I don't think there will be any way to provide numbers for the various IMs listed, at least by tomorrow at 11am. Will likely populate with N/A, unless the programs have numbers on those.

Just an FYI that there are several other cells to populate (not sure cost figures), so we can take a look at that, but it would be helpful to know if others are as well.

Also (b) (5) [redacted]

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Energy, Minerals, and Realty Management Directorate WO-300
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Sent:	Wed May 10 2017 11:13:20 GMT-0600 (MDT)
To:	"Ford, Michael" <mmford@blm.gov>
Subject:	Re: FW: Procedural Guidance on Section 2 of Executive Order 13783, “Promoting Energy Independence and Economic Growth”

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To: Richard Cardinale <Richard_Cardinale@ios.doi.gov>, Maureen Foster <maureen_foster@ios.doi.gov>, Sarah Walters <sarah_walters@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Amy Holley <amy_holley@ios.doi.gov>

Good morning: We received guidance from OMB on the report due for EO 12783 Promoting Energy Independence and Economic Growth. I wanted to pass it on to you because I believe a report is due this week. We did send a copy of this information to Jim Cason.

Julie
Juliette Lillie
Director Executive Secretariat and Regulatory Affairs
Department of the Interior
1849 C St. NW
Washington DC 20240

Email: juliette_lillie@ios.doi.gov
Ph: 202-219-7724

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

--
Shelley McGinnis, Ph.D.
Resource Advisor
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Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
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Michael M. Ford
Economist
Bureau of Land Management
mmford@blm.gov
w: 202-912-7623
m: 202-774-8530

--
James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

Michael Ford <mmford@blm.gov>

From:	Michael Ford <mmford@blm.gov>
Sent:	Wed May 10 2017 11:24:37 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
Subject:	Re: Procedural Guidance on Section 2 of Executive Order 13783, “Promoting Energy Independence and Economic Growth”

Yep, sounds good. Gotta love these fire drills

Sent from my iPhone

On May 10, 2017, at 1:13 PM, Tichenor, James <jtichenor@blm.gov> wrote:

> Sounds good, give me a ring when you're back online. Looking at this, it's such a farce to take seriously.
>
> On Wed, May 10, 2017 at 9:45 AM, Ford, Michael <mmford@blm.gov> wrote:
>> Whelp, there goes the day.
>>
>> Headed to the doctor's right now but can call when I'm done around 2:30 if that's ok
>>
>>
>>
>> ---------- Forwarded message ----------
>> From: **McGinnis, Shelley** <smcginnis@blm.gov>
>> Date: Wed, May 10, 2017 at 12:43 PM
>> Subject: Re: FW: Procedural Guidance on Section 2 of Executive Order 13783,

“Promoting Energy Independence and Economic Growth”
To: "Tichenor, James C" <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>
Cc: "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>

James/Mike:

Please also see attached pdf that was part of the original email.

Thanks, Shelley

On Wed, May 10, 2017 at 12:40 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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> Thanks all!
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> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
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> DOI-Bureau of Land Management
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> (202) 208-4201 office
> (202) 251-3079 cell
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> **From:** McGinnis, Shelley [mailto:smcginnis@blm.gov]
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> **To:** Timothy Spisak; Lonny Bagley
> **Cc:** Kristin Bail; Karen Kelleher
> **Subject:** Re: Procedural Guidance on Section 2 of Executive Order 13783, “Promoting Energy Independence and Economic Growth”
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> Please use attached version of spreadsheet.
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> (b) (5) [redacted]

(b) (5) [redacted]

(b) (5) [redacted]

Thanks, Shelley

On Wed, May 10, 2017 at 10:00 AM, Stewart, Shannon <scstewar@blm.gov> wrote:
Hi All

We have received a new, short turnaround request from ASLM - see below. I have added the items from our memo on SO 3349 Section C to the spreadsheet to get us started. Rich is clear below that if an entry does not lend itself to the information requested, we should simply put N/A. This is due back to ASLM tomorrow mid-day. Happy to discuss further after you have sometime to digest.

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> **To:** Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, Margaret Schneider <margaret.schneider@bsee.gov>, "Nedd, Mike" <mnedd@blm.gov>
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Thank you in advance for your assistance and, again, our apologies for the quick turn around.

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Date: Tue, May 9, 2017 at 7:10 AM
Subject: Fwd: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
To: Richard Cardinale <Richard_Cardinale@ios.doi.gov>, Maureen Foster <maureen_foster@ios.doi.gov>, Sarah Walters <sarah_walters@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Amy Holley <amy_holley@ios.doi.gov>

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jtichenor@blm.gov
202-573-0536

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed May 10 2017 12:00:49 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>
Subject:	Re: FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
Attachments:	AgencyName_Sec2_EO13783_WO300_v2.xlsx

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I have been coordinating with Shannon Stewart (BLM Acting Chief of Staff) on this. (b) (5) [redacted]

(b) (5) [redacted]

Could you please add your information to the attached version of the spreadsheet?

Do we have enough information to complete columns L-R for the rules (b) (5) [redacted] ?

Thanks, Shelley

Thanks, Shelley

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> Just an FYI that there are several other cells to populate (not sure cost figures), so we can take a look at that, but it would be helpful to know if others are as well.
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> > **From:** McGinnis, Shelley [mailto:smcginnis@blm.gov]
> > **Sent:** Wednesday, May 10, 2017 12:28 PM
> > **To:** Timothy Spisak; Lonny Bagley

Cc: Kristin Bail; Karen Kelleher
Subject: Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

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"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Wed May 10 2017 12:07:42 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Michael Ford <mmford@blm.gov>, Timothy Spisak <tspisak@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>
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To:	"Tichenor, James" <jtichenor@blm.gov>

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Subject: Re: FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

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Sent:	Wed May 10 2017 14:31:16 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>, Richard Estabrook <restabro@blm.gov>
CC:	"Tichenor, James" <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>
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To: Timothy Spisak; Lonny Bagley
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CC:	Timothy Spisak <tspisak@blm.gov>, Michael Ford <mmford@blm.gov>, Richard Estabrook <restabro@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>
Subject:	Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
Attachments:	AgencyName_Sec2_EO13783_WO300_v2.jt.xlsx

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--
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Email: smcginnis@blm.gov

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Wed May 10 2017 15:25:42 GMT-0600 (MDT)
To:	Michael Ford <mmford@blm.gov>
Subject:	Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

Hey, thanks for the effort today. Have a beer tonight at the Cantina.

On Wed, May 10, 2017 at 10:24 AM, Michael Ford <mmford@blm.gov> wrote:

> Yep, sounds good. Gotta love these fire drills
>
> Sent from my iPhone
>
> On May 10, 2017, at 1:13 PM, Tichenor, James <jtichenor@blm.gov> wrote:
>
>> Sounds good, give me a ring when you're back online. Looking at this, it's such a farce to take seriously.
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>> On Wed, May 10, 2017 at 9:45 AM, Ford, Michael <mmford@blm.gov> wrote:
>>> Whelp, there goes the day.
>>>
>>> Headed to the doctor's right now but can call when I'm done around 2:30 if that's ok
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>>> ---------- Forwarded message ----------
>>> From: **McGinnis, Shelley** <smcginnis@blm.gov>
>>> Date: Wed, May 10, 2017 at 12:43 PM
>>> Subject: Re: FW: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
>>> To: "Tichenor, James C" <jtichenor@blm.gov>, Michael Ford <mmford@blm.gov>
>>> Cc: "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>, Timothy Spisak <tspisak@blm.gov>
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>>> James/Mike:
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>>> Please also see attached pdf that was part of the original email.
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>>> Thanks, Shelley
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>>> On Wed, May 10, 2017 at 12:40 PM, Timothy Spisak <tspisak@blm.gov> wrote:
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about 11 am 5/11. It is an OMB exercise that is asking for more information in regards to the items that WO300 identified as potentially impacting energy development opportunities. There are several columns in there looking for cost/cost savings figures at 3%/7% and low/high ranges. Not sure those particularly apply to rescinding policy. Shelley can serve to provide some background and please contact 310/320 staff as needed for specific information on the policies identified.

Theresa: my apologies for assigning directly to James/Mike as this is a very short turnaround time and I wanted to them as much time as possible.

Steve/Mitch: Please ensure to provide data as needed to complete the analysis from James/Mike.

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Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
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(202) 251-3079 cell
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From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Wednesday, May 10, 2017 12:28 PM
To: Timothy Spisak; Lonny Bagley
Cc: Kristin Bail; Karen Kelleher
Subject: Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

Tim,

Please use attached version of spreadsheet.

Kristin and Karen - could you let us know if anyone from your team is working on filling in the information for the following:

(b) (5) [redacted]

[redacted]

Thanks, Shelley

On Wed, May 10, 2017 at 10:00 AM, Stewart, Shannon <scstewar@blm.gov> wrote:
Hi All

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Shannon

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> **Date:** May 9, 2017 at 6:31:31 PM EDT
> **To:** Walter Cruickshank <walter.cruickshank@boem.gov>, Glenda Owens <gowens@osmre.gov>, Margaret Schneider <margaret.schneider@bsee.gov>, "Nedd, Mike" <mnedd@blm.gov>
> **Cc:** Katharine Macgregor <kate_macgregor@ios.doi.gov>
> **Subject: Fwd: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"**
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> All,
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> Attached please find an Excel template that OMB sent to Exec. Sec. late yesterday seeking information in connection with Section 2(a) of Executive Order 13783, which requires the head of each Executive Department and Agency to review all of that agency's existing regulations, orders, guidance documents, policies, and any other similar agency actions that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources.
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> Thank you in advance for your assistance and, again, our apologies for the quick turn around.
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> Rich
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> Date: Tue, May 9, 2017 at 7:10 AM
> Subject: Fwd: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
> To: Richard Cardinale <Richard_Cardinale@ios.doi.gov>, Maureen Foster <maureen_foster@ios.doi.gov>, Sarah Walters <sarah_walters@ios.doi.gov>, Kerry Rae <kerry_rae@ios.doi.gov>, Amy Holley <amy_holley@ios.doi.gov>
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> Good morning: We received guidance from OMB on the report due for

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Julie
Juliette Lillie
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"Ford, Michael" <mmford@blm.gov>

From:	"Ford, Michael" <mmford@blm.gov>
Sent:	Wed May 10 2017 15:26:47 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
Subject:	Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"

Ha - same to you man. Well handled all-around.

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James/Mike:

Please also see attached pdf that was part of the original email.

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> Thanks all!
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> **To:** Timothy Spisak; Lonny Bagley
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Kristin and Karen - could you let us know if anyone from your team is working on filling in the information for the following:

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Good morning: We received guidance from OMB on the report due for EO 12783 Promoting Energy Independence and Economic Growth. I wanted to pass it on to you because I believe a report is due this week. We did send a copy of this information to Jim Cason.

Julie
Juliette Lillie
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"McGinnis, Shelley" <smcginnis@blm.gov>

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Sent:	Thu May 11 2017 14:33:42 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Michael Ford <mmford@blm.gov>, Richard Estabrook <restabro@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, "Wells, Steven" <s1wells@blm.gov>, Theresa Coleman <tcoleman@blm.gov>, "Leverette, Mitchell" <mleveret@blm.gov>, Alfred Elser <aelser@blm.gov>, Catherine Cook <ccook@blm.gov>, Ruth Zimmerman <rmzimmerman@blm.gov>
Subject:	Re: Procedural Guidance on Section 2 of Executive Order 13783, "Promoting Energy Independence and Economic Growth"
Attachments:	BLM_Sec2_EO13783.xlsx

Hi all,

Attached is the version that WO-100 sent to ASLM. Mike Nedd added timelines in columns H and I that we will want to be aware of. Thanks, Shelley

On Wed, May 10, 2017 at 5:16 PM, Tichenor, James <jtichenor@blm.gov> wrote:

> Hi Shelley,
>
> Please see attached (cells highlighted yellow where edited). I'd like to note the following:
>
> (b) (5) [redacted]
>
> (b) (5) [redacted]
>
> On Wed, May 10, 2017 at 2:00 PM, Tichenor, James <jtichenor@blm.gov> wrote:
>
> > Ok, I'll have something for you shortly.
> >
> > On Wed, May 10, 2017 at 1:57 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:
> >
> > > Tim/James/Mike,

Shannon Stewart and I just met with Mike Nedd. (b) (5) [redacted]

Thanks, Shelley

On Wed, May 10, 2017 at 4:31 PM, Timothy Spisak <tspisak@blm.gov> wrote:

James/Mike: (b) (5) [redacted]

Does that help?
Thanks
Tim

Sent from my iPad

On May 10, 2017, at 2:20 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

OK, thanks. Let's focus on completing the information for the (b) (5) [redacted]

On Wed, May 10, 2017 at 2:07 PM, Tichenor, James <jtichenor@blm.gov> wrote:

Hi Shelley,

We have enough information to complete columns L-R for the (b) (5) [redacted]

(b) (5) [redacted]

(b) (5) [redacted]

Noted, on the attachment. We will work off of this version.

On Wed, May 10, 2017 at 11:00 AM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

James and Mike,

I have been coordinating with Shannon Stewart (BLM Acting Chief of Staff) on this. (b) (5) [redacted]

(b) (5) [redacted]

Could you please add your information to the attached version of the spreadsheet?

Do we have enough information to complete columns L-R for the rules ((b) (5) [redacted])?

Thanks, Shelley

Thanks, Shelley

On Wed, May 10, 2017 at 12:59 PM, Tichenor, James <jtichenor@blm.gov> wrote:

Hi Tim,

Mike and I will take a look and see what we can provide. I don't think there will be any way to provide numbers for the various IMs listed, at least by tomorrow at 11am. Will likely populate with N/A, unless the programs have numbers on those.

Just an FYI that there are several other cells to populate (not sure cost figures), so we can take a look at that, but it would be helpful to know if others are as well.

Also, (b) (5) [redacted]

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Shelley McGinnis, Ph.D.
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May 8, 2017

M-17-24

MEMORANDUM FOR: REGULATORY REFORM OFFICERS AND
REGULATORY POLICY OFFICERS
AT EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Dominic J. Mancini, Acting Administrator
Office of Information and Regulatory Affairs



SUBJECT: Guidance for Section 2 of Executive Order 13783, Titled
"Promoting Energy Independence and Economic Growth"

Section I. Background

This memorandum provides guidance regarding Section 2 of Executive Order (EO) 13783, titled "Promoting Energy Independence and Economic Growth," published on March 28, 2017.

Section 2(a) of EO 13783 requires the head of each Executive Department and Agency (agency) to review all of that agency's existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources.

Section 2(c) requires the head of each agency to submit to the Director of the Office of Management and Budget (OMB) by May 12, 2017, (*i.e.*, 45 days from the date EO 13783 was issued) a plan to carry out the review of agency actions discussed above. The plan shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality (CEQ).

An agency that determines that it does not have agency actions described above shall submit a written statement to the OMB Director to that effect and, absent a determination by the OMB Director that such agency has agency actions described in Section 2(a), shall have no further responsibilities under Section 2.

Sections 2(d) requires all agencies that submitted a plan to submit a draft final report by July 26, 2017, (*i.e.*, 120 days from the date EO 13783 was issued) to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of CEQ. The draft final report shall include specific

recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

Section 2(e) requires the report to be finalized by September 24, 2017, (*i.e.*, 180 days from the date EO 13783 was issued) unless the OMB Director, in consultation with other Executive Office of the President officials who receive the draft final report, extends the deadline.

Agencies are encouraged to coordinate their compliance with Section 2 of EO 13783 with their compliance with EO 13777, which directs agencies to establish Regulatory Reform Task Forces to evaluate existing regulations generally and make recommendations to the agency head regarding their repeal, replacement and modification, consistent with applicable law. EO 13777 directs these task forces to seek input and other assistance, as permitted by law, from entities significantly affected by Federal regulations, including State, local and tribal governments, small businesses, consumers, non-governmental organizations, and trade associations. As part of this outreach, agencies should seek input specifically regarding existing agency actions that potentially burden the development or use of domestically produced energy resources, and recommendations for actions the agency may take to alleviate or eliminate such burden.

Section II. Application

The requirements in this guidance apply to all Executive Departments and Agencies, except for independent regulatory agencies, as defined in 44 U.S.C. 3502(5). This is the same group of agencies subject to the regulatory review requirements in Section 6 of EO 12866.

Independent regulatory agencies are encouraged to provide a plan and report in response to EO 13783, especially those independent regulatory agencies that directly regulate the development or use of domestically produced energy resources.

Section 2(a) of EO 13783 states, "[t]he heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order."

Section 2(b) of EO 13783 further defines "burden" as actions that "unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources."

The types of agency actions that are covered under Section 2(a) of EO 13783 include, but are not limited to, agency actions that materially:

(1) Affect the design and/or location of domestic energy production;
(2) Affect the design and/or location of drilling or mining of energy production resources; and

(3) Limit the use of certain sources of energy, such that the development of domestically produced energy resources from a certain sector may be negatively affected.

Agencies are not required to review agency actions that meet all of the following requirements:

(1) Mandated by law;
(2) Necessary for the public interest; and
(3) Consistent with the policy set forth in Section 1 of EO 13783.

Agency heads should apply reasonable discretion in assessing which agency actions may rise to the level of potential burden on the development or use of domestically produced energy resources under EO 13783.

Section III. Requirements

A. Plan

As stated above, the heads of all agencies are required to provide a plan by May 12, 2017, to the OMB Director and also provide the plan to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the CEQ. The plan should include, at a minimum, how the agency intends to:

(1) Identify agency actions or categories of actions that potentially burden the development or use of domestically produced energy resources;
(2) Seek input from entities significantly affected by those agency actions;
(3) Classify those agency actions;
(4) Review those agency actions, including any quantitative analysis (*e.g.*, costs, lost production) the agency plans to perform; and
(5) Develop recommendations that could alleviate or eliminate the potential burden.

The classification should, at a minimum, identify the energy source potentially affected (*e.g.*, oil, natural gas, coal, nuclear, renewable); the type of agency action (*e.g.*, rule, order, guidance document, policy, or other similar agency actions); and whether the potential effects are direct or indirect. The classification should also identify actions that the agency believes are exempt because they are mandated by law, necessary for the public interest, and consistent with the policy set forth in Section 1 of EO 13783, along with a brief explanation of the basis for this determination.

If an agency does not believe that it has any agency actions that potentially burden the development or use of domestically produced energy resources, then the agency should state that in a written statement to the OMB Director, along with a brief explanation of the basis for this determination.

If an agency has actions that potentially burden the development or use of domestically produced energy resources, but does not believe that these actions are suitable for further review because they are mandated by law, necessary for the public interest, and consistent

with the policy set forth in Section 1 of EO 13783, then the agency should identify those actions in the written statement to the OMB Director, along with a brief explanation of the basis for this determination, no later than May 12, 2017.

If the OMB Director does not provide a determination within 30 days that the agency has agency actions as described in Section 2(a), then the agency will not be required to develop a plan or report.

B. Report

The draft final report due to the OMB Director by July 26, 2017, should, at a minimum, include the following information:

(1) The identification and classification of agency actions that potentially burden the development or use of domestically produced energy resources;
(2) How the agency plans to seek input from entities significantly affected by agency actions that potentially burden the development or use of domestically produced energy resources;
(3) Recommendations, consistent with law, that could alleviate or eliminate aspects of agency actions that burden domestic energy production or use;
(4) The expected timeframe for when the recommendation would be implemented;
(5) How the agency will track implementation, including points of contact;
(6) To the extent feasible, preliminary estimates by agency action of the costs and cost savings, increased production, or other beneficial effects, that may be achieved by implementing each recommended action; and
(7) Whether those actions have been identified as part of activities undertaken in compliance with EO 13771 or EO 13777.

Agencies should attach the excel spreadsheet template provided with this guidance to the draft final report.

When estimating cost savings, agencies should use the guidance provided for EO 13771 and OMB Circular A-4. If an agency is unable to monetize the cost savings of a recommended agency action, the agency should describe qualitatively and include any planned future actions to determine the cost savings.

Agency recommendations are to be accomplished using existing resources.

The draft final report should be submitted by July 26, 2017, to the OMB Director and concurrently sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the CEQ. A copy of the draft final report should also be sent to the Administrator of the Office of Information and Regulatory Affairs, who will coordinate Executive Office of the President review, in consultation with the Assistant to the President for Economic Policy. Agencies should consider seeking public input on the draft final report, and should consult with OMB on appropriate means for doing so.

Agencies shall publish their final reports in the *Federal Register* and on the agency website, as well as submit copies to the OMB Director, the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the CEQ.

Label: "FOIA/[SO 3349]"

Created by:mmford@blm.gov

Total Messages in label:29 (5 conversations)

Created: 09-25-2017 at 14:14 PM

Conversation Contents

costs for OOs 3-5_E.O. 13783 spreadsheet

Attachments:

/5. costs for OOs 3-5_E.O. 13783 spreadsheet/1.1
AgencyName_Sec2_EO13783_WO300_v2_mf.xlsx

"Ford, Michael" <mmford@blm.gov>

From:	"Ford, Michael" <mmford@blm.gov>
Sent:	Wed May 10 2017 13:41:44 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
Subject:	costs for OOs 3-5_E.O. 13783 spreadsheet
Attachments:	AgencyName_Sec2_EO13783_WO300_v2_mf.xlsx

Hey James,

The orange-shaded cells in the attached are what I filled in for OOs 3-5 in the E.O. 13783 spreadsheet.

The second tab ('TotalCosts_OOs345) shows how I did my calculations using the combined costs for the three OOs, in case that's helpful.

Thanks,
Mike

"Tichenor, James" <jtichenor@blm.gov>

From:	"Tichenor, James" <jtichenor@blm.gov>
Sent:	Wed May 10 2017 13:48:42 GMT-0600 (MDT)
To:	"Ford, Michael" <mmford@blm.gov>
Subject:	Re: costs for OOs 3-5_E.O. 13783 spreadsheet

Great thanks. I'll add to the spreadsheet.
I think the background is helpful when questions arise. When I return to Shelley, I'll note that these include govt costs, and something in reference to the $value.

On Wed, May 10, 2017 at 12:41 PM, Ford, Michael <mmford@blm.gov> wrote:

> Hey James,
>
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> Thanks,
> Mike

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James Tichenor
Economist
Energy, Minerals, and Realty Management Directorate WO-300
Bureau of Land Management
jtichenor@blm.gov
202-573-0536

"Ford, Michael" <mmford@blm.gov>

From:	"Ford, Michael" <mmford@blm.gov>
Sent:	Wed May 10 2017 13:49:49 GMT-0600 (MDT)
To:	"Tichenor, James" <jtichenor@blm.gov>
Subject:	Re: costs for OOs 3-5_E.O. 13783 spreadsheet

Sounds good - feel free to copy/paste what I've got there in the comments

On Wed, May 10, 2017 at 3:48 PM, Tichenor, James <jtichenor@blm.gov> wrote:

> Great thanks. I'll add to the spreadsheet.
> I think the background is helpful when questions arise. When I return to Shelley, I'll note that these include govt costs, and something in reference to the $value.
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> > Thanks,
> > Mike
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> --
> James Tichenor
> Economist
> Energy, Minerals, and Realty Management Directorate WO-300
> Bureau of Land Management
> jtichenor@blm.gov
> 202-573-0536

--
Michael M. Ford
Economist

Bureau of Land Management
mmford@blm.gov
w: 202-912-7623
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Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:36 PM

Conversation Contents

Report on SO 3349, Sections 5(c)(i), (ii), and (v)

Attachments:

/2. Report on SO 3349, Sections 5(c)(i), (ii), and (v)/1.1 Briefing Memo_2017_0411_revised.docx
/2. Report on SO 3349, Sections 5(c)(i), (ii), and (v)/3.1 Briefing Memo_2017_0411_revised.docx

"Stewart, Shannon" <scstewar@blm.gov>

From:	"Stewart, Shannon" <scstewar@blm.gov>
Sent:	Tue Apr 11 2017 14:10:59 GMT-0600 (MDT)
To:	mike nedd <mnedd@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Jerome Perez <jperez@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Report on SO 3349, Sections 5(c)(i), (ii), and (v)
Attachments:	Briefing Memo_2017_0411_revised.docx

Attached is the second report on SO 3349 prepared by WO-300 which is due to ASLM on Wednesday 4/12. The SOLs are reviewing concurrent with WO-100.

Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
202-570-0149 (cell)
202-208-4586 (office)
scstewar@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Apr 11 2017 14:16:11 GMT-0600 (MDT)
To:	"Stewart, Shannon" <scstewar@blm.gov>
Subject:	Re: Report on SO 3349, Sections 5(c)(i), (ii), and (v)

Thanks - by what time should I request comments from SOL?

On Tue, Apr 11, 2017 at 4:10 PM, Stewart, Shannon <scstewar@blm.gov> wrote:

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> Shannon
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> Shannon Stewart
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Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Apr 11 2017 14:32:34 GMT-0600 (MDT)
To:	Aaron Moody <aaron.moody@sol.doi.gov>, Richard McNeer <richard.mcneer@sol.doi.gov>, "Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>, "Dorman, Wendy" <wendy.dorman@sol.doi.gov>, Briana Collier <briana.collier@sol.doi.gov>, "Russell, Gregory" <gregory.russell@sol.doi.gov>
CC:	Shannon Stewart <scstewar@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Fwd: Report on SO 3349, Sections 5(c)(i), (ii), and (v)
Attachments:	Briefing Memo_2017_0411_revised.docx

Good afternoon,

Attached is a draft memorandum that addresses implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v). This was just sent to the BLM Director and Deputy Directors and will be provided to ASLM tomorrow for an extended review.

If you have any initial comments that you would like us to incorporate before this is sent to ASLM, please send by noon on Wednesday, April 12th. We are requesting any additional comments by Friday, April 14th and will let ASLM know that the document is still undergoing SOL review when it is sent tomorrow.

Thanks, Shelley

---------- Forwarded message ----------
From: **Stewart, Shannon** <scstewar@blm.gov>
Date: Tue, Apr 11, 2017 at 4:10 PM
Subject: Report on SO 3349, Sections 5(c)(i), (ii), and (v)
To: mike nedd <mnedd@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Jerome Perez <jperez@blm.gov>
Cc: Timothy Spisak <tspisak@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Lonny Bagley <lbagley@blm.gov>

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Email: smcginnis@blm.gov

"Dorman, Wendy" <wendy.dorman@sol.doi.gov>

From:	"Dorman, Wendy" <wendy.dorman@sol.doi.gov>
Sent:	Tue Apr 11 2017 15:02:37 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
Subject:	Re: Report on SO 3349, Sections 5(c)(i), (ii), and (v)

Thank you, Shelley. I'll take a look at the draft memo now. --Wendy

Wendy S. Dorman
U.S. Department of the Interior
Office of the Solicitor
Division of Mineral Resources
Phone: (202) 208-5312

On Tue, Apr 11, 2017 at 4:32 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

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Michael Nedd <mnedd@blm.gov>

From:	Michael Nedd <mnedd@blm.gov>
Sent:	Tue Apr 11 2017 15:08:28 GMT-0600 (MDT)
To:	Shannon Stewart <scstewar@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Jerome Perez <jperez@blm.gov>

Subject: RE: Report on SO 3349, Sections 5(c)(i), (ii), and (v)

Shannon,

I believe all the information is there and I'm wondering if we should not put this in a similar memo format as we did with the Mitigation and Climate Change report (from me through the ASLM to the Secretary).

For the next steps, (b) (5) [redacted]

Take care and have a wonderful day! :)
Michael Nedd
202-208-3801 Office
202-208-5242 Fax
mnedd@blm.gov
A thought to consider "Do all the good you can, in all the ways you can, for all the people you can, while you can!"

From: Stewart, Shannon [mailto:scstewar@blm.gov]
Sent: Tuesday, April 11, 2017 4:11 PM
To: mike nedd; Kathleen Benedetto; Jerome Perez
Cc: Timothy Spisak; Shelley McGinnis; Lonny Bagley
Subject: Report on SO 3349, Sections 5(c)(i), (ii), and (v)

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"Stewart, Shannon" <scstewar@blm.gov>

From:	"Stewart, Shannon" <scstewar@blm.gov>
Sent:	Tue Apr 11 2017 15:14:41 GMT-0600 (MDT)
To:	Michael Nedd <mnedd@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, Jerome Perez <jperez@blm.gov>
Subject:	Re: Report on SO 3349, Sections 5(c)(i), (ii), and (v)

I can make those changes Mike. I will wait for any other input and finish this up in the morning.

Shannon

On Tue, Apr 11, 2017 at 5:08 PM, Michael Nedd <mnedd@blm.gov> wrote:

> Shannon,
>
> I believe all the information is there and I'm wondering if we should not put this in a similar memo format as we did with the Mitigation and Climate Change report (from me through the ASLM to the Secretary).
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> **To:** mike nedd; Kathleen Benedetto; Jerome Perez
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> **Subject:** Report on SO 3349, Sections 5(c)(i), (ii), and (v)
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INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: April 11, 2017

FROM: Michael D. Nedd, Acting Director – Bureau of Land Management

SUBJECT: Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)

BACKGROUND
Secretarial Order (S.O.) 3349, which was signed on March 29, 2017, implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017, entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (DOI) in order to better balance conservation strategies and policies with the need for creating jobs.

DISCUSSION
This memorandum responds to sections 5(c)(i), 5(c)(ii), and 5(c)(v) of S.O. 3349. Section 5(c)(i) states that the Bureau of Land Management (BLM) shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg*. 16128 (Mar. 26, 2015). The BLM is proceeding with proposing to rescind the final rule in coordination with the DOI Solicitor's Office.

Section 5(c)(ii) states that within 21 days, the BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O. The BLM has reviewed the final rule and determined that it is not fully consistent with the policy in Section 1 March 28, 2017 E.O. Specifically, some provisions of the rule add regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. (b) (5) [redacted]

Section 5(c)(v) of S.O. 3349 states that within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources. The term burden as defined in the March 28, 2017 E.O. means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources. In addition to the Hydraulic Fracturing and Waste Prevention Rules, following is a preliminary list of the Actions that have been identified by the BLM that have the highest potential to burden the development or utilization of BLM energy resources. These are in addition to the items that were identified by the BLM in a separate memorandum responding to sections 5(a)(i) and 5(b)(i) of S.O. 3349, regarding "actions" the BLM has adopted or is in the processes of developing with respect to certain memoranda and orders related to mitigation and climate change.

Fluid Minerals

Title: Instruction Memorandum (IM) 2010-117, Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews
Date: 5/17/2010
Purpose: Establishes a process for ensuring orderly, effective, timely, and environmentally responsible leasing of oil and gas resources on Federal lands. The leasing process established in this IM will create more certainty and predictability, protect multiple-use values when the BLM makes leasing decisions, and provide for consideration of natural and cultural resources as well as meaningful public involvement.

Title: IM 2013-101, Oil and Gas Leasing Reform – Master Leasing Plans
Date: 4/15/2013
Purpose: Supplements existing BLM policy and guidance for processing Applications for Permit to Drill and outlines the regulatory and statutory requirements of Onshore Oil and Gas Order Number 1 (Order 1) and the Energy Policy Act of 2005.

Title: IM 2013-177, National Environmental Policy Act (NEPA) Compliance for Oil and Gas Lease Reinstatement Petitions
Date: 8/13/2013
Purpose: Directs all oil and gas leasing offices to: 1) ensure Resource Management Plan conformance; 2) evaluate the adequacy of existing NEPA analysis and documentation; and 3) complete any necessary new or supplemental NEPA analysis and documentation before approving a Class I or Class II oil and gas lease reinstatement petition.

Title: IM 2016-140, Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments – Oil & Gas Leasing and Development Sequential Prioritization
Date: 9/1/2016
Purpose: Provides guidance on prioritizing implementation decisions for BLM oil and gas leasing and development, to be consistent with the Approved Resource Management Plan Amendments for the Rocky Mountain and Great Basin Greater Sage-Grouse Regions and nine Approved Resource Management Plans in the Rocky Mountain Greater Sage-Grouse Region (collectively referred to as the GRSG Plans). This IM applies to activities in the areas covered by both the Rocky Mountain and Great Basin Regions Records of Decision, issued by the BLM in September 2015. This IM also contains reporting requirements for communication between State Offices and the Washington Office.

Title: Onshore Orders Nos. 3, 4 and 5
Date: All three final rules were published in the *Federal Register* on 11/17/2016, and became effective on 1/17/2017
Purpose: "Onshore Orders" is shorthand for the three concurrent rulemakings that replaced the BLM's site security, oil measurement, and gas measurement regulations contained in Onshore Oil and Gas Orders Nos. 3, 4 and 5, which had been in place since 1989. The recent rulemakings resulted in new site security, oil measurement, and gas measurement regulations for Onshore Federal and Indian oil and gas production and are codified in the Code of Federal Regulations at 43 C.F.R. part 3170. These rulemakings were prompted by external and internal oversight

reviews which found many of the BLM's production measurement and accountability policies to be outdated and inconsistently applied. The new rules also address some of the Government Accountability Office concerns for High Risk with regards to the Department's production accountability.

Solid Minerals

Title: IM 2014-156, Supplemental Guidance on Processing Royalty Rate Reduction Applications
Date: 9/26/2014
Purpose: Provides State Directors notice that they must provide the Washington Office (WO) a royalty rate reduction (RRR) justification with a copy of their draft decision when requesting WO concurrence. A checklist is attached to ensure that all required RRR application elements are included. Further, this IM augments and reiterates the existing policy for processing RRR applications.

(b) (5) [redacted]

Title: IM 2017-035, Publicly Accessible Bureau of Land Management Websites for Information Regarding Federal Coal Program Leasing, Exploration Licensing, and Royalty Rate Reductions
Date: 1/19/2017
Purpose: Improves transparency in administering the Federal coal program. Responds to stakeholder suggestions for improved access to information on the Federal coal program, and replaces the policy and guidance previously provided in WO-IM-2014-159, *Publicly Accessible Bureau of Land Management Websites for Coal Leasing Information*. This IM directs the BLM offices to post and update specified Federal coal program information on BLM publicly accessible websites, including, as described more fully below: (1) information about Federal coal lease applications and leases, lease modification applications, and lease modifications; (2) information about exploration licensing applications and exploration licenses; (3) information about royalty rate reduction applications; and (4) summary information on the Federal coal program.

Title: IM 2017-037, Waste Mine Methane Policy
Date: 1/20/2017
Purpose: Establishes national policies and processes to foster voluntary activities by operators to capture waste mine methane from underground coal or other solid mineral mines. These policies will allow waste mine methane to be put to productive use, where economical, and reduce environmental impacts, while ensuring continued safe underground mining operations on Federal lands.

Other

Title: IM 2016-140, Process for Assessing, Coordinating, and Implementing Greater Sage-Grouse Land Use Plan Adaptive Management Hard and Soft Triggers
Date: 9/1/2016
Purpose: Directs the implementation of the land use plan adaptive management process to evaluate and apply hard and soft triggers and responses, as detailed in the Greater Sage-Grouse Approved Resource Management Plans and Amendments, Great Basin and Rocky Mountain Greater Sage-Grouse Regional Records of Decision (September 21, 2015).

(b) (5) [redacted]

Title: BLM Land Use Planning Handbook, H-1601-1, Appendix C
Date: 3/11/2017
Purpose: The Handbook provides specific guidance for preparing, amending, revising, maintaining, implementing, monitoring, and evaluating BLM land use plans. Appendix C of the handbook identifies resource-specific guidance for BLM program areas that could restrict or impact energy development. The specific restrictions depend on the individual program's requirements, as identified in the laws, regulations, manuals, handbooks, and instruction memoranda governing each program.

NEXT STEPS
In some cases, the aforementioned Actions include only certain components that are unnecessarily burdensome. (b) (5) [redacted] Therefore, the BLM recommends coordination with the DOI Solicitor's Office to discuss modification of these Actions where appropriate, rather than complete rescission.

Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:36 PM

Conversation Contents

Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)

Attachments:

/3. Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)/1.1 Briefing Memo_2017_0411.docx
/3. Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)/7.1 Briefing Memo_2017_0411_trackchanges.docx
/3. Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)/8.1 Briefing Memo_2017_0411_revised.docx

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Apr 11 2017 07:59:37 GMT-0600 (MDT)
To:	Shannon Stewart <scstewar@blm.gov>, Beverly Winston <bwinston@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Erica Pionke <epionke@blm.gov>
Subject:	Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)
Attachments:	Briefing Memo_2017_0411.docx

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Thanks,

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Shelley McGinnis, Ph.D.
Resource Advisor
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1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Stewart, Shannon" <scstewar@blm.gov>

From:	"Stewart, Shannon" <scstewar@blm.gov>

Sent:	Tue Apr 11 2017 08:13:28 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Beverly Winston <bwinston@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Erica Pionke <epionke@blm.gov>
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Tue Apr 11 2017 08:25:05 GMT-0600 (MDT)
To:	"Stewart, Shannon" <scstewar@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Beverly Winston <bwinston@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Erica

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From:	"Stewart, Shannon" <scstewar@blm.gov>
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To:	Timothy Spisak <tspisak@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Beverly Winston <bwinston@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Erica Pionke <epionke@blm.gov>
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From:	"Stewart, Shannon" <scstewar@blm.gov>
Sent:	Tue Apr 11 2017 10:43:22 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	"McGinnis, Shelley" <smcginnis@blm.gov>, Beverly Winston <bwinston@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Erica Pionke <epionke@blm.gov>
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To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Erica Pionke <epionke@blm.gov>
Subject:	Re: Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)
Attachments:	Briefing Memo_2017_0411_trackchanges.docx

Tim,

See attached revised version in track changes.

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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
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Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: April 11, 2017

FROM: Michael D. Nedd, Acting Director – Bureau of Land Management

SUBJECT: Implementation of Secretarial Order 3349, Sections 5(c)(i), (ii), and (v)

BACKGROUND
Secretarial Order (S.O.) 3349, which was signed on March 29, 2017, implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017, entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (DOI) in order to better balance conservation strategies and policies with the need for creating jobs.

DISCUSSION
This memorandum responds to sections 5(c)(i), 5(c)(ii), and 5(c)(v) of S.O. 3349. Section 5(c)(i) states that the Bureau of Land Management (BLM) shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg*. 16128 (Mar. 26, 2015). Section 5(c)(ii) states that within 21 days, the BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O. (b) (5) [redacted]

Section 5(c)(v) of S.O. 3349 states that within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources. The term burden as defined in the March 28, 2017 E.O. means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources. In addition to the Hydraulic Fracturing and Waste Prevention Rules, following is a preliminary list of the Actions that have been identified by the BLM that have the highest potential to burden the development or utilization of BLM energy resources. These are in addition to the items that were identified by the BLM in a separate memorandum responding to sections 5(a)(i) and 5(b)(i) of S.O. 3349, regarding "actions" the BLM has adopted or is in the processes of developing with respect to certain memoranda and orders related to mitigation and climate change.

Fluid Minerals

Title: Instruction Memorandum (IM) 2010-117, Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews
Date: 5/17/2010

Purpose: Establishes a process for ensuring orderly, effective, timely, and environmentally responsible leasing of oil and gas resources on Federal lands. The leasing process established in this IM will create more certainty and predictability, protect multiple-use values when the BLM makes leasing decisions, and provide for consideration of natural and cultural resources as well as meaningful public involvement.

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Title: IM 2016-140, Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments – Oil & Gas Leasing and Development Sequential Prioritization
Date: 9/1/2016
Purpose: Provides guidance on prioritizing implementation decisions for BLM oil and gas leasing and development, to be consistent with the Approved Resource Management Plan Amendments for the Rocky Mountain and Great Basin Greater Sage-Grouse Regions and nine Approved Resource Management Plans in the Rocky Mountain Greater Sage-Grouse Region (collectively referred to as the GRSG Plans). This IM applies to activities in the areas covered by both the Rocky Mountain and Great Basin Regions Records of Decision, issued by the BLM in September 2015. This IM also contains reporting requirements for communication between State Offices and the Washington Office.

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Solid Minerals

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Date: 1/20/2017
Purpose: Establishes national policies and processes to foster voluntary activities by operators to capture waste mine methane from underground coal or other solid mineral mines. These policies will allow waste mine methane to be put to productive use, where economical, and reduce environmental impacts, while ensuring continued safe underground mining operations on Federal lands.

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Purpose: Directs the implementation of the land use plan adaptive management process to evaluate and apply hard and soft triggers and responses, as detailed in the Greater Sage-Grouse Approved Resource Management Plans and Amendments, Great Basin and Rocky Mountain Greater Sage-Grouse Regional Records of Decision (September 21, 2015).

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NEXT STEPS

In some cases, the aforementioned Actions include only certain components that are unnecessarily burdensome. (b) (5) [redacted] Therefore, the BLM recommends coordination with the DOI Solicitor's Office to discuss modification of these Actions where appropriate, rather than complete rescission.

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DISCUSSION
This memorandum responds to sections 5(c)(i), 5(c)(ii), and 5(c)(v) of S.O. 3349. Section 5(c)(i) states that the Bureau of Land Management (BLM) shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg*. 16128 (Mar. 26, 2015). The BLM is proceeding with proposing to rescind the final rule in coordination with the DOI Solicitor's Office.

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Fluid Minerals

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resulted in new site security, oil measurement, and gas measurement regulations for Onshore Federal and Indian oil and gas production and are codified in the Code of Federal Regulations at 43 C.F.R. part 3170. These rulemakings were prompted by external and internal oversight reviews which found many of the BLM's production measurement and accountability policies to be outdated and inconsistently applied. The new rules also address some of the Government Accountability Office concerns for High Risk with regards to the Department's production accountability.

Solid Minerals

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NEXT STEPS

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Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:36 PM

Conversation Contents

Fwd: Response to SO 3349 Section 5 (a) and (b)

Attachments:

/4. Fwd: Response to SO 3349 Section 5 (a) and (b)/1.1 Memo to ASLM on SO3349_clean final draft_041017_113.docx

"Bail, Kristin" <kbail@blm.gov>

From:	"Bail, Kristin" <kbail@blm.gov>
Sent:	Mon Apr 10 2017 15:38:00 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Fwd: Response to SO 3349 Section 5 (a) and (b)
Attachments:	Memo to ASLM on SO3349_clean final draft_041017_113.docx

For awareness. Most of the comments we received were on the Next Steps section at the end. -K

---------- Forwarded message ----------
From: **Stewart, Shannon** <scstewar@blm.gov>
Date: Mon, Apr 10, 2017 at 4:50 PM
Subject: Response to SO 3349 Section 5 (a) and (b)
To: Richard Cardinale <richard_cardinale@ios.doi.gov>, Katharine Macgregor <katharine_macgregor@ios.doi.gov>
Cc: Kathleen Benedetto <kathleen_benedetto@ios.doi.gov>, mike nedd <mnedd@blm.gov>, Jerome Perez <jperez@blm.gov>, Kristin Bail <kbail@blm.gov>, "Kelleher, Karen" <kkelleh@blm.gov>, Steve Tryon <stryon@blm.gov>

Attached is BLM's draft response to SO 3349 Section 5 (a) and (b). Our understanding is that this is due to the Secretary on Wednesday 4/12.

Thanks
Shannon

--
Shannon Stewart
Acting Chief of Staff
Bureau of Land Management
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scstewar@blm.gov

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Mon Apr 10 2017 15:41:25 GMT-0600 (MDT)
To:	"Bail, Kristin" <kbail@blm.gov>
CC:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	Re: Response to SO 3349 Section 5 (a) and (b)

Thanks. We'll take a look.

Sent from my iPhone

On Apr 10, 2017, at 5:38 PM, Bail, Kristin <kbail@blm.gov> wrote:

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> <Memo to ASLM on SO3349_clean final draft_041017_113.docx>

INFORMATION/BRIEFING MEMORANDUM FOR THE SECRETARY

DATE: April 12, 2017

THROUGH: Katharine MacGregor, Acting Assistant Secretary – Land and Minerals

FROM: Michael D. Nedd, Acting Director – Bureau of Land Management

SUBJECT: Implementation of Secretary's Order 3349, Section 5 (a) and (b)

This memorandum responds to questions posed in sections 5(a)(i) and 5(b)(i) of Secretary's Order (SO) 3349, "American Energy Independence," which requests summary information about "actions" the Bureau of Land Management (BLM) has adopted or is in the processes of developing with respect to certain memoranda and orders related to mitigation and climate change. The BLM has interpreted "actions," as described in SO 3349 to include: (1) new regulations or amendments to existing regulations, (2) new or revised BLM Manual Sections, (3) new or revised handbooks, (4) Instruction Memoranda (IM), (5) Information Bulletins (IB), and (6) other policy and guidance documents that include direction on mitigation and climate change.

MITIGATION

BLM has been using mitigation to reduce the severity or seriousness of impacts to resources and land uses across the landscape for decades. As required under the National Environmental Policy Act (NEPA), the BLM routinely evaluates mitigation measures in its Environmental Impact Statements and Environment Assessments for land use plans and project authorizations. When BLM implements mitigation, it seeks to avoid impacts, minimize impacts, and compensate for residual impacts to sensitive, scarce, or important resources consistent with the definition of mitigation in the Council on Environmental Quality (CEQ) regulations (40 C.F.R. § 1508.20). Avoidance and minimization have been and continue to be the most commonly used mitigation when BLM is authorizing an action. Compensatory mitigation (b) (5) [redacted] particularly to reduce residual impacts to threatened and endangered species, cultural resources, air, and water.

Mitigation measures are often incorporated into lease stipulations, permit conditions of approval, best management practices, or reclamation measures; avoidance and minimization measures are also commonly built into the proposed action as design features to avoid known sensitive resources. Mitigation, including compensation, can help to facilitate compliance with a variety of applicable laws.[1] The Permian Basin Agreement is an example of a voluntary program in which

[1] Mitigation can play an important role under the Clean Water Act, for example when restoration can help achieve the no net loss of wetlands standard; under the Clean Air Act to comply with Implementation Plans for non-attainment areas or to prevent/reduce air quality degradation; under the Endangered Species Act, as incorporated in reasonable and prudent alternatives to avoid jeopardizing the continued existence of a listed species under section 7 or as a component of a Habitat Conservation Plan under section 10; under the National Historic Preservation Act, since BLM must consult with states, tribes, and other parties to seek to resolve an undertaking's adverse impacts on historic properties, and seek to minimize harm on National Historic Landmarks; and under the Federal Land Policy

a company may choose to contribute the cost of the required archaeological survey (required under Section 106 of the NHPA), into a mitigation pool. The pooled fund allows for effective management of the area's archaeological resources and provides industry more predictability and control over schedules and budgets needed to operate efficiently.

In addition to aiding compliance with various laws and regulations, use of mitigation in appropriate circumstances may also increase the defensibility of BLM's decisions. For example, in 2008, when BLM authorized natural gas development in the Pinedale Anticline in western Wyoming, that record of decision was challenged on the grounds that it violated FLPMA's direction to prevent unnecessary or undue degradation of the public lands. The D.C. Circuit, however, found that BLM's authorization complied with FLPMA, citing BLM's reliance on mitigation measures to reduce project impacts (Theodore Roosevelt Conservation Partnership v. Salazar, 661 F.3d 66, 76–77 (D.C. Cir. 2011)).

BLM began working on formal mitigation policy in the early 2000s to provide clarity and guidance for the field and increase consistency in the implementation of mitigation, in particular, identifying, considering, and, as appropriate, requiring, mitigation to address impacts to sensitive, important, or rare resources from public land uses. BLM has also focused on proactive and regional approaches that consider mitigation in the planning process, as well as to encourage the use of mitigation banks, exchanges and similar mechanisms. This has provided more certainty to applicants on the types of mitigation likely to be considered for a project and has helped to streamline the permitting process.

BLM MITIGATION ACTIONS

The BLM has adopted or is in the process of developing the following actions relating to (1) Secretary's Order 3330, dated October 31, 2013, "Improving Mitigation Policies and Practices of the Department of the Interior;" and the associated report dated April 2014, "A Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior;" and (2) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment."

1. **BLM IB No. 2017-015, Availability of Model Compensatory Mitigation MOU** (December 2016). The IB announces the availability of a model memorandum of understanding (MOU) for use by the BLM State Offices when collaborating with state governments regarding state-based compensatory mitigation programs for the Greater Sage-Grouse and its habitat. This model provides language that makes the strongest commitment the BLM can make within our legal constraints to coordinate our project review processes with the states' compensatory mitigation programs. The model MOU can be adapted for other resources and circumstances where state compensatory mitigation programs may assist the BLM in achieving its mission.
2. **BLM Mitigation Manual, MS-1794** (December 2016). This manual section and the Mitigation Handbook, H-1794-1 (listed below), were issued under **BLM IM No. 2017-**

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and Management Act (FLPMA), to prevent unnecessary or undue degradation of public lands.

021. This policy includes principles for mitigation that, "effective mitigation is durable, defined by outcomes, implemented and monitored for effectiveness, considered within an adaptive management framework, reported upon, managed by a responsible party, guided by the best available science, and developed through effective, early, and frequent communication with public land users, cooperating agencies, and other stakeholders, including the public."

3. **BLM Mitigation Handbook, H-1794-1** (December 2016). Description included above under MS-1794.
4. **BLM New Mexico IM No. NM-F010-2016-004, Bureau of Land Management (BLM) Sensitive Species – Brack's Cactus Management** (September 7, 2016). This IM is specific to the Farmington District and provides guidance to conserve habitat and protect Brack's cactus, a BLM Sensitive Species and a species included on the State of New Mexico list of endangered plant species, from ground-disturbing projects by (1) requiring surveys to identify Brack's cactus locations; and (2) implementing management guidance to mitigate impacts to Brack's cactus by avoiding and minimizing impacts, and then compensating for impacts that cannot be avoided.
5. **BLM California IM No. CA-2015-009, Renewal of IM Implementing Provisions within the Consolidated Appropriations Act, 2012 (Public Law 112-74) Related to Livestock Grazing Authorizations in the California Desert Conservation Area** (December 17, 2014). This IM reiterates and provides direction on implementing the livestock grazing provisions in P.L. 112-74, which states that BLM shall accept the donation of valid existing grazing allotments and make the land available for mitigation by allocating the forage to wildlife use consistent with any applicable Habitat Conservation Plan, Endangered Species Act section 10 permit, or biological opinion.
6. **Multi-Scale Guidance for Identifying Shared Visual Resources and Mitigation Adverse Impacts through a Collective and Collaborative Process** (in progress). The National Park Service and the BLM are co-leading an interagency group to advance a coordinated effort to encourage thoughtful management of shared scenic resources, which encompass both natural and cultural settings. As part of its effort, the team developed the visual resources guidance called for under #15 of the "Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior." The guidance underwent solicitor review but has not been finalized. The NPS and BLM agreed to wait for the new Administration to finalize the guidance. The draft guidance does not place requirements on agencies instead it encourages them to work cooperatively with states, industry, private property owners and stakeholders to identify important scenic views and visual resources and to forge a collective management strategy for their stewardship into the future, while resolving potential conflicts early in the decision making processes.

(b) (5)



(b) (5) [redacted] n addition, the Greater Sage Grouse Task Force requested a team of state and federal agencies, including BLM, discuss the implementation of mitigation requirements contained in the sage-grouse plans. The team produced the "Report to the Sage-Grouse Task Force: Greater Sage-Grouse Compensatory Mitigation (December 2016)" which identifies key principles and approaches to mitigation commonly agreed to by the state and federal agencies and provides an overview of each state's approach to compensatory mitigation.

Prior to issuance of Secretarial Order 3330 and the 2015 Presidential Memorandum, the BLM took the following actions of note related to mitigation.

1. **BLM IM No. 2013-142, Interim Policy, Draft Regional Mitigation Manual Section (MS-1794)** (June 2013). This interim policy directed resource programs to move from case-by-case application of mitigation to a regional approach that involves anticipating future mitigation needs and strategically identifies mitigation sites and measures that can help the BLM achieve its resource objectives while improving permitting efficiencies and providing greater certainty to permit applicants, partners, stakeholders, and the public. The 2013 interim policy covered all resource programs and was the precursor to the current Mitigation Policy.
2. **BLM Arizona IM No. AZ-2012-031, Desert Tortoise Conservation Agreement Implementation** (June 2012). This IM articulates mitigation policy, including off-site compensation for the desert tortoise and its habitat on public lands managed by the BLM in Arizona, (b) (5) [redacted]
3. **BLM Special Status Species Manual (M 6840)** (December 2008). This Manual identifies and interprets BLM's responsibilities under the Endangered Species Act and mentions off-site compensatory mitigation as a means to further the conservation of federally listed species.
4. **BLM IM No. 2009-011, Assessment and Mitigation of Potential Impacts to Paleontological Resources** (October 10, 2008). The IM provides guidelines for assessing potential impacts to paleontological resources in order to determine mitigation steps for federal actions on public lands under the Federal Land Policy and Management Act and the National Environmental Policy Act. These guidelines also apply where a federal action impacts split-estate lands. It also provides field survey and monitoring procedures to help minimize impacts to paleontological resources determined to be significant that are expected to be adversely affected by a federal action.
5. **BLM IM No. 2008-204, Offsite Mitigation** (September 30, 2008). This instruction memorandum outlines policy for the use of offsite mitigation for authorizations issued by the BLM and replaced IM WO-2005-069 Interim Offsite Compensatory Mitigation for Oil, Gas, Geothermal and Energy Rights-of-way Authorizations (February 1, 2005).
6. **BLM National Environmental Policy Act Handbook, H-1790-1** (January 2008). Consistent with the CEQ regulations at 40 CFR 1508.20, this Handbook defines mitigation to include avoidance, minimization, and compensation. It also describes how mitigation can be used to reduce the effects of an action below the threshold of

significance thereby avoiding the need to prepare an EIS (i.e., to arrive at a "mitigated Finding of No Significant Impact (FONSI)"). It also provides guidance relating to BLM's description of any effects that remain after mitigation measures have been applied, incorporation of mitigation measures into decision documents, and discussions of monitoring to ensure implementation of adopted measures.

7. **BLM IM No. 2008-050, Migratory Bird Treaty Act – Interim Management Guidance** (December 2007). This Memorandum provides direction to avoid, reduce, or mitigate adverse impacts to the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.
8. **BLM land use planning regulations, 43 CFR 1610** and **Land Use Planning Handbook H-1601-1** (2005). BLM's land use planning regulations and handbook provide broad guidance on the development of land use plans. The handbook guidance includes the consideration of mitigation measures as appropriate to address resource, social, and economic impacts.
9. **BLM Protecting Cultural Resources Manual (MS-8140)** (December 2004). This Manual provides general guidance for protecting cultural resources from inadvertent adverse effects associated with BLM land use decisions, pursuant to the National Historic Preservation Act, the National Environmental Policy Act, Executive Order 11593, and the National Programmatic Agreement regarding the manner in which the BLM will meet its responsibilities under the National Historic Preservation Act.
10. **BLM hardrock mining regulations, 43 CFR 3809.** Among the general performance standards for surface management within a mining plan of operations is the requirement to "take mitigation measures specified by BLM to protect public lands" (43 CFR 3809.420(a)(4)).
11. **BLM FLPMA right of way regulations, 43 CFR 2800.** These regulations require holders to "restore, revegetate, and curtail erosion or conduct any other rehabilitation measures BLM determines necessary" including conditioning agreements on compensatory mitigation, 43 CFR 2805.12(i)).
12. **BLM easement regulations, 43 CFR 2920.** These regulations "direct BLM to include terms and conditions that . . . "minimize damage" and "require the use to be located in an area which shall cause least damage to the environment" (43 CFR 2920.7(b)).

CLIMATE CHANGE

For many years, the BLM has considered climate change, its effects on public lands and public land users, and how BLM decisions contribute to climate change, primarily through NEPA analyses for land use planning and project authorizations. BLM began working on formal climate change policy in 2008 through issuance of an Instruction Memorandum (IM), transmitting draft guidance for state and field office comments on incorporating climate change into land use planning and NEPA documents. In 2010, the CEQ released a document entitled "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emission" for review by the public and agencies. The CEQ issued revised draft guidance in December of 2014 for review and comment. Final CEQ guidance was issued in August of 2016.

BLM CLIMATE CHANGE ACTIONS

The BLM has adopted or is in the process of developing the following list of actions relating to the guidance identified in Secretarial Order 3349 and the 2016 CEQ's "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews."

1. **BLM Permanent IM No. 2017-003, The Council on Environmental Quality Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews** (December 2016). The IM transmits CEQ guidance on considering climate change in NEPA analysis. It also provides specific step-down guidance for how to calculate the "downstream" or indirect greenhouse gas emissions associated with fossil fuel actions (coal, oil, and gas), when production estimates are reasonably foreseeable.
2. **BLM IM, Considering Climate Change in NEPA Documents** (never issued). This draft policy was intended to provide BLM-specific step-down guidance based on CEQ guidance and Department of the Interior Office of Environmental Policy and Compliance (OEPC) guidance on considering climate change in NEPA analysis. Topics included land use and carbon sequestration, biogenic emissions associated with prescribed- and wild-fire, and the social cost of carbon.

Prior to issuance of the documents listed in SO 3349, the BLM took the following actions of note related to climate change.

1. **BLM New Mexico IM No. NM-2013-022, Availability of Updated Air Resources Technical Report (ARTR); Use of Environmental Assessment (EA) Template Air Quality and Climate Change Language for Applications for Permit to Drill (APDs) and Lease Sales** (June 2013). The IM instructed District and Field Offices to use the latest version of the BLM New Mexico Air Resources Technical Report, and provided template language for use in NEPA environmental analysis documents, to address air quality and climate change impacts.
2. **BLM Oregon/Washington IM No. OR-2010-012, Analysis of Greenhouse Gas Emissions and Consideration of Climate Change in National Environmental Policy Act Documents** (January 2010). The IM provided guidance on analyzing greenhouse gas emissions and addressing changing climate conditions in NEPA documents. The IM expired in October 2011.
3. **BLM IM No. 2008-171, Guidance on Incorporating Climate Change into Planning and NEPA Documents** (August 2008). The IM transmitted draft guidance on incorporating climate change considerations into the Land Use Planning/NEPA analysis process, and requested feedback from the BLM states on their experience with incorporating climate change into NEPA documents.

BLM has also developed tools to assist in assessing emissions, including the following:

1. **Tool: BLM Emissions Inventory Toolkit.** The BLM Washington Office is developing an Emissions Inventory Toolkit, scheduled for completion in September 2017, which

would consolidate and enhance existing emissions inventory tools. The Emissions Inventory Toolkit would be a web-based application for calculating emissions from criteria pollutants, hazardous air pollutants and greenhouse gases. It would store emissions inventories from various projects to assess cumulative emissions, and would include a modeling component for near-field impacts analysis. The toolkit would include a library to store documents and reports. The toolkit would be useful in streamlining air analyses for NEPA and General Conformity requirements and showing whether air quality standards or management goals would be met.

2. **Tool: BLM Colorado Emissions Inventory Calculator.** The BLM Colorado emissions calculator estimates air resources emissions, including greenhouse gases, with the goal of providing technical consistency and efficiency in gathering data on emissions-generating activities for use in NEPA analyses. The ability of the tool to gather information from external sources to be compiled for analysis has led to faster processing times for projects requiring air analysis. This tool would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
3. **Tool: BLM Oregon/Washington carbon calculators.** Four of the BLM western Oregon Districts have developed carbon storage and greenhouse gas calculators to support environmental analyses, primarily timber sales. Key features of these tools would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
4. **Tool: BLM New Mexico emissions calculators.** In BLM New Mexico, three calculators are available to estimate air resources emissions, including greenhouse gases, for use in NEPA environmental analysis documents associated with applications for permit to drill and oil and gas lease sales. Key features of these tools would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
5. **Report: Greenhouse Gas & Climate Change Report.** The Greenhouse Gas and Climate Change Report provides a database and air emissions tool to calculate greenhouse gas emissions for the base year database and the out-year projections for 10 western states. The report includes emissions associated with production and consumption activities, separated by Federal and non-Federal lands for coal, oil, natural gas, and natural gas liquids, for incorporation by reference into NEPA analyses. The reports would be housed in the library section of the BLM Emissions Inventory Toolkit mentioned above.

In addition to the policies and tools listed above, the BLM has taken a wide variety of actions over the years to assess and address the risks associated with wildland fire, invasive plants and animals, drought and other environmental changes that may be caused, in part, by climate change. Examples of such adaptation actions include, helping develop and implement the National Cohesive Wildland Fire Management Strategy, participating in the work of the National Invasive Species Council, working with the State of Montana and the National Drought Resilience Partnership to build drought resilience in the Upper Missouri River Basin, synthesizing and considering ecoregional information related to impacts of climate change on resources BLM manages in land use planning, and partnering with individual livestock permittees to adapt their operations to be more resilient to wildland fire and drought.

NEXT STEPS

In responding to SO 3349, the BLM has focused primarily on policies that have been adopted since the date of the documents specified in the Order. The BLM has applied mitigation and considered climate change in its decision-making and use authorizations for years, encompassing thousands of individual actions and decisions. As noted previously, several laws, such as the National Historic Preservation Act and the National Environmental Policy Act, require the BLM to consider mitigation in its decision-making processes. Courts have also weighed in on the need for the BLM to consider both mitigation and climate change, including greenhouse gas emissions. (b) (5) , the BLM recommends modification of these policies, rather than complete rescission.

When the Deputy Secretary informs the Assistant Secretary for Land and Minerals, in accordance with Section 5(a)(ii) of the SO 3349, about how to proceed in modifying the BLM's mitigation policy, the BLM requests that clarification be provided on what elements of the "mitigation hierarchy" (which variously encompasses avoid, minimize, rectify (repair, rehabilitate, restore), reduce, eliminate, compensate) should be reconsidered. The BLM also requests clarification on whether specific past decisions should be reconsidered. In general, BLM believes the primary mitigation-related issues of concern relate to compensation. Therefore, the BLM recommends that reconsideration of its mitigation policies focus on its approach to compensation in ongoing or future land use plans and projects, such as which resources should be compensated for and what standard(s) should be applied when compensatory mitigation is appropriate (e.g., no net loss, net conservation gain).

When the Deputy Secretary informs the Assistant Secretary for Land and Minerals, in accordance with Section 5(b)(ii) of the SO 3349, about how to proceed in modifying the BLM's climate change policy, the BLM requests that clarification be provided on whether reconsideration should focus on analyzing the impacts of BLM's land use authorizations on climate change (e.g., greenhouse gases) or should also include reconsideration of BLM's adaptation actions (e.g., drought, invasive species, fire and other changes that may be related to climate change). In general, BLM believes there is broad public support for BLM's adaptation related actions and recommends that reconsideration focus on policy related to greenhouse gases, such as evaluation of downstream effects.

Based on feedback from the Deputy Secretary to the Assistant Secretary, the BLM will, in accordance with Section 5(a)(iii) and 5(b)(iii), determine which mitigation or climate policies cause an unnecessary burden to domestic energy development and provide a draft revised or substitute action for review.

Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:36 PM

Conversation Contents

Revised Memo re: Secretarial Order 3349 - American Energy Independence

Attachments:

/5. Revised Memo re: Secretarial Order 3349 - American Energy Independence/1.1 Briefing Memo_2017_0410.docx

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Apr 10 2017 14:19:54 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
CC:	Erica Pionke <epionke@blm.gov>
Subject:	Revised Memo re: Secretarial Order 3349 - American Energy Independence
Attachments:	Briefing Memo_2017_0410.docx

Tim and Lonny,

Attached is a revised version of the memo with edits based on our Friday meeting.

--
Shelley McGinnis, Ph.D.
Resource Advisor
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Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Mon Apr 10 2017 14:20:46 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>, Lonny Bagley <lbagley@blm.gov>
CC:	Erica Pionke <epionke@blm.gov>
Subject:	RE: Revised Memo re: Secretarial Order 3349 - American Energy Independence

Is this in TC from what you had created before?

Thanks
Tim

‘Serenity Now!’ – Frank Costanza, *Seinfeld*, 1997
‘Serenity now, insanity later’ – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
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tspisak@blm.gov
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From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Monday, April 10, 2017 4:20 PM
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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Apr 10 2017 14:38:29 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Lonny Bagley <lbagley@blm.gov>, Erica Pionke <epionke@blm.gov>
Subject:	Re: Revised Memo re: Secretarial Order 3349 - American Energy Independence

Yes - are you able to see the track changes?

On Mon, Apr 10, 2017 at 4:20 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Mon Apr 10 2017 14:39:35 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
Subject:	Re: Revised Memo re: Secretarial Order 3349 - American Energy Independence

I didn't open it yet, I just didn't see them in the viewer. Will look at it first thing in the am. Thanks

Sent from my iPhone

On Apr 10, 2017, at 4:38 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> Yes - are you able to see the track changes?

On Mon, Apr 10, 2017 at 4:20 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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> **********
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> **Sent:** Monday, April 10, 2017 4:20 PM
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From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Apr 10 2017 14:41:05 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
Subject:	Re: Revised Memo re: Secretarial Order 3349 - American Energy Independence

OK, sounds good. Pay special attention to Next Steps because that is new.

On Mon, Apr 10, 2017 at 4:39 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: April 10~~5~~, 2017

FROM: Michael D. Nedd, Acting Director – Bureau of Land Management

SUBJECT: Secretarial Order 3349 - American Energy Independence

BACKGROUND
Secretarial Order (S.O.) 3349, which was signed on March 29, 2017, implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017, entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (DOI) in order to better balance conservation strategies and policies with the need for creating jobs.

DISCUSSION
~~Following is a summary of the actions to be taken pursuant to S.O. 3349 that relate to the Bureau of Land Management (BLM) Energy, Minerals and Realty Management Directorate.~~ This memorandum responds to sections 5(c)(i), 5(c)(ii), and 5(c)(v) of S.O. 3349. Section 5(c)~~.~~(i) ~~of S.O. 3349~~ states that the BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg*. 16128 (Mar. 26, 2015). Section 5(c)~~.~~(ii) states that within 21 days, the BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O. The BLM has initiated both of these efforts in coordination with the DOI Solicitor's Office.

Section 5(c)~~.~~(v) of S.O. 3349 states that within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources. The term burden as defined in the March 28, 2017 E.O. means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources. In addition to the Hydraulic Fracturing and Waste Prevention Rules, following is a preliminary list of the Actions that have been identified by the BLM Energy, Minerals and Realty Management Directorate ~~with~~ that have the highest potential to burden the development or utilization of ~~on~~ BLM energy resources ~~that have been identified by the BLM Energy, Minerals and Realty Management Directorate~~. These are in addition to the items that were identified by the BLM in a separate memorandum responding to sections 5(a)(i) and 5(b)(i) of S.O. 3349, regarding "actions" the BLM has adopted or is in the processes of developing with respect to certain memoranda and orders related to mitigation and climate change.

Fluid Minerals

Title: Instruction Memorandum (IM) 2010-117, Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews
Date: 5/17/2010
Purpose: Establishes a process for ensuring orderly, effective, timely, and environmentally responsible leasing of oil and gas resources on Federal lands. The leasing process established in this IM will create more certainty and predictability, protect multiple-use values when the BLM makes leasing decisions, and provide for consideration of natural and cultural resources as well as meaningful public involvement.

Title: IM 2013-101, Oil and Gas Leasing Reform – Master Leasing Plans
Date: 4/15/2013
Purpose: Supplements existing BLM policy and guidance for processing Applications for Permit to Drill and outlines the regulatory and statutory requirements of Onshore Oil and Gas Order Number 1 (Order 1) and the Energy Policy Act of 2005.

Title: IM 2013-177, National Environmental Policy Act (NEPA) Compliance for Oil and Gas Lease Reinstatement Petitions
Date: 8/13/2013
Purpose: Directs all oil and gas leasing offices to: 1) ensure Resource Management Plan conformance; 2) evaluate the adequacy of existing NEPA analysis and documentation; and 3) complete any necessary new or supplemental NEPA analysis and documentation before approving a Class I or Class II oil and gas lease reinstatement petition.

Title: IM 2016-140, Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments – Oil & Gas Leasing and Development Sequential Prioritization
Date: 9/1/2016
Purpose: Provides guidance on prioritizing implementation decisions for BLM oil and gas leasing and development, to be consistent with the Approved Resource Management Plan Amendments for the Rocky Mountain and Great Basin Greater Sage-Grouse Regions and nine Approved Resource Management Plans in the Rocky Mountain Greater Sage-Grouse Region (collectively referred to as the GRSG Plans). This IM applies to activities in the areas covered by both the Rocky Mountain and Great Basin Regions Records of Decision, issued by the BLM in September 2015. This IM also contains reporting requirements for communication between State Offices and the Washington Office.

Title: Onshore Orders Nos. 3, 4 and 5
Date: All three final rules were published in the *Federal Register* on 11/17/2016, and became effective on 1/17/2017
Purpose: "Onshore Orders" is shorthand for the three concurrent rulemakings that replaced the BLM's site security, oil measurement, and gas measurement regulations contained in Onshore Oil and Gas Orders Nos. 3, 4 and 5, which had been in place since 1989. The recent rulemakings resulted in new site security, oil measurement, and gas measurement regulations for Onshore Federal and Indian oil and gas production and are codified in the Code of Federal Regulations at 43 C.F.R. part 3170. These rulemakings were prompted by external and internal oversight reviews which found many of the BLM's production measurement and accountability policies to

be outdated and inconsistently applied. The new rules also address some of the Government Accountability Office concerns for High Risk with regards to the Department's production accountability.

Solid Minerals

Title: IM 2014-156, Supplemental Guidance on Processing Royalty Rate Reduction Applications
Date: 9/26/2014
Purpose: Provides State Directors notice that they must provide the Washington Office (WO) a royalty rate reduction (RRR) justification with a copy of their draft decision when requesting WO concurrence. A checklist is attached to ensure that all required RRR application elements are included. Further, this IM augments and reiterates the existing policy for processing RRR applications.

(b) (5) [redacted]

Title: IM 2017-035, Publicly Accessible Bureau of Land Management Websites for Information Regarding Federal Coal Program Leasing, Exploration Licensing, and Royalty Rate Reductions
Date: 1/19/2017
Purpose: Improves transparency in administering the Federal coal program. Responds to stakeholder suggestions for improved access to information on the Federal coal program, and replaces the policy and guidance previously provided in ~~Washington Office (~~WO~~)~~-IM-2014-159, *Publicly Accessible Bureau of Land Management Websites for Coal Leasing Information*. This IM directs the BLM offices to post and update specified Federal coal program information on BLM publicly accessible websites, including, as described more fully below: (1) information about Federal coal lease applications and leases, lease modification applications, and lease modifications; (2) information about exploration licensing applications and exploration licenses; (3) information about royalty rate reduction applications; and (4) summary information on the Federal coal program.

Title: IM 2017-037, Waste Mine Methane Policy
Date: 1/20/2017
Purpose: Establishes national policies and processes to foster voluntary activities by operators to capture waste mine methane from underground coal or other solid mineral mines. These policies will allow waste mine methane to be put to productive use, where economical, and reduce environmental impacts, while ensuring continued safe underground mining operations on Federal lands.

Other

(b) (5) [redacted]

Title: IM 2016-140, Process for Assessing, Coordinating, and Implementing Greater Sage-Grouse Land Use Plan Adaptive Management Hard and Soft Triggers
Date: 9/1/2016
Purpose: Directs the implementation of the land use plan adaptive management process to evaluate and apply hard and soft triggers and responses, as detailed in the Greater Sage-Grouse Approved Resource Management Plans and Amendments, Great Basin and Rocky Mountain Greater Sage-Grouse Regional Records of Decision (September 21, 2015).

(b) (5) [redacted]

Title: BLM Land Use Planning Handbook, H-1601-1, Appendix C
Date: 3/11/2017
Purpose: The Handbook provides specific guidance for preparing, amending, revising, maintaining, implementing, monitoring, and evaluating BLM land use plans. Appendix C of the handbook identifies resource-specific guidance for BLM program areas that could restrict or impact energy development. The specific restrictions depend on the individual program's requirements, as identified in the laws, regulations, manuals, handbooks, and instruction memoranda governing each program.

NEXT STEPS
In some cases, the aforementioned Actions include only certain components that are burdensome. (b) (5) [redacted] Therefore, the BLM recommends coordination with the DOI Solicitor's Office to discuss modification of these Actions as appropriate, rather than outright rescission.

Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:36 PM

Conversation Contents

SO 3349 section (c)

"Kelleher, Karen" <kkelleh@blm.gov>

From:	"Kelleher, Karen" <kkelleh@blm.gov>
Sent:	Mon Apr 10 2017 10:36:28 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Leah Baker <lbaker@blm.gov>, "Bernier, Heather" <hbernier@blm.gov>
Subject:	SO 3349 section (c)

Hi Shelly,
one approach to avoid having to identify every regulation & policy of every program that could put restrictions on energy development during land use planning would be to reference the land use planning handbook, with text that states something like:
Appendix C of the land use handbook identifies resource programs that may place restrictions on uses that could impact energy development. The specific restrictions considered would depend on the individual program's requirements, as identified in the laws, regulations, manuals, handbooks, and instruction memoranda governing each program.

I'm also including leah & heather on this email to see what they think of this suggestion.

karen

--

Karen Kelleher

Deputy Assistant Director - Resources and Planning

Main Interior room 5644

kkelleh@blm.gov

202-208-4896

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Apr 10 2017 11:23:04 GMT-0600 (MDT)
To:	"Kelleher, Karen" <kkelleh@blm.gov>
CC:	Leah Baker <lbaker@blm.gov>, "Bernier, Heather" <hbernier@blm.gov>
Subject:	Re: SO 3349 section (c)

OK, I want to make sure that I list the reference to the correct document. I have it listed as BLM Land Use Planning Handbook, H-1601-1 (March 11, 2005)

Is this correct? Following is the link to this document:

https://www.blm.gov/sites/blm.gov/files/uploads/Media_Library_BLM_Policy_Handbook_h1601-1.pdf

Thanks, Shelley

On Mon, Apr 10, 2017 at 12:36 PM, Kelleher, Karen <kkelleh@blm.gov> wrote:

> Hi Shelly,
> one approach to avoid having to identify every regulation & policy of every program that could put restrictions on energy development during land use planning would be to reference the land use planning handbook, with text that states something like:
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>
> karen
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> --
>
> Karen Kelleher
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> Deputy Assistant Director - Resources and Planning
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> Main Interior room 5644
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> kkelleh@blm.gov
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> 202-208-4896

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Shelley McGinnis, Ph.D.
Resource Advisor
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"Bernier, Heather" <hbernier@blm.gov>

From:	"Bernier, Heather" <hbernier@blm.gov>
Sent:	Mon Apr 10 2017 13:13:31 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
	"Kelleher, Karen" <kkelleh@blm.gov>, Leah Baker

CC: <lbaker@blm.gov>

Subject: Re: SO 3349 section (c)

This is the correct version and the link is correct as well.

On Mon, Apr 10, 2017 at 1:23 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> OK, I want to make sure that I list the reference to the correct document. I have it listed as BLM Land Use Planning Handbook, H-1601-1 (March 11, 2005)
>
> Is this correct? Following is the link to this document:
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> > karen
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> >
> > Karen Kelleher
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> > 202-208-4896

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Heather Bernier
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hbernier@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Apr 10 2017 13:55:51 GMT-0600 (MDT)
To:	"Bernier, Heather" <hbernier@blm.gov>
CC:	"Kelleher, Karen" <kkelleh@blm.gov>, Leah Baker <lbaker@blm.gov>
Subject:	Re: SO 3349 section (c)

Thanks, Heather!

On Mon, Apr 10, 2017 at 3:13 PM, Bernier, Heather <hbernier@blm.gov> wrote:

> This is the correct version and the link is correct as well.
>
> On Mon, Apr 10, 2017 at 1:23 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:
>
> > OK, I want to make sure that I list the reference to the correct document. I have it listed as BLM Land Use Planning Handbook, H-1601-1 (March 11, 2005)
> >
> > Is this correct? Following is the link to this document:
> >
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> > >
> > > Karen Kelleher
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Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:37 PM

Conversation Contents

final draft 3349 memo

Attachments:

/7. final draft 3349 memo/1.1 Memo to AS-LM on SO 3349 final draft.docx
/7. final draft 3349 memo/2.1 Memo to ASLM on SO3349_clean final draft_040917.docx
/7. final draft 3349 memo/2.2 Memo to ASLM on SO3349_combined comments_040917.docx

"Kelleher, Karen" <kkelleh@blm.gov>

From:	"Kelleher, Karen" <kkelleh@blm.gov>
Sent:	Fri Apr 07 2017 10:36:48 GMT-0600 (MDT)
To:	Aaron Moody <aaron.moody@sol.doi.gov>, Christopher McAlear <cmcalear@blm.gov>, Gregory Russell <gregory.russell@sol.doi.gov>, Kristin Bail <kbail@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Nikki Moore <nmoore@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Steve Tryon <stryon@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Timothy Spisak <tspisak@blm.gov>
Subject:	final draft 3349 memo
Attachments:	Memo to AS-LM on SO 3349 final draft.docx

for 1pm.

--

Karen Kelleher

Deputy Assistant Director - Resources and Planning

Main Interior room 5644

kkelleh@blm.gov

202-208-4896

"Kelleher, Karen" <kkelleh@blm.gov>

From:	"Kelleher, Karen" <kkelleh@blm.gov>
Sent:	Sun Apr 09 2017 08:45:41 GMT-0600 (MDT)
	Aaron Moody <aaron.moody@sol.doi.gov>, Christopher McAlear <cmcalear@blm.gov>, Gregory Russell

To:	<gregory.russell@sol.doi.gov>, Kristin Bail <kbail@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Nikki Moore <nmoore@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Steve Tryon <stryon@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Timothy Spisak <tspisak@blm.gov>, Briana Collier <briana.collier@sol.doi.gov>, Wendy Dorman <wendy.dorman@sol.doi.gov>
Subject:	Re: final draft 3349 memo
Attachments:	Memo to ASLM on SO3349_clean final draft_040917.docx Memo to ASLM on SO3349_combined comments_040917.docx

HI all,
clean and track changes version of document that has been sent to Mike Nedd, Jerry Perez, and Kathy Benedetto for review.
Karen

On Fri, Apr 7, 2017 at 12:36 PM, Kelleher, Karen <kkelleh@blm.gov> wrote:

> for 1pm.
>
> --
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> Karen Kelleher
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> Deputy Assistant Director - Resources and Planning
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> Main Interior room 5644
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> kkelleh@blm.gov
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> 202-208-4896

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Deputy Assistant Director - Resources and Planning

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kkelleh@blm.gov

202-208-4896

INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: **April 12, 2017**

FROM: Michael Nedd, Acting Director – Bureau of Land Management

SUBJECT: **Implementation of Secretarial Order 3349, Section 5**

This memorandum responds to questions posed in sections 5(a)(i) and 5(b)(i) of Secretarial Order (SO) 3349, "American Energy Independence," which requests summary information about "actions" taken by the Bureau of Land Management (BLM) in the areas of mitigation and climate change. The BLM has interpreted "actions," as described in SO 3349 to include: (1) new regulations or amendments to existing regulations, (2) new or revised BLM Manual Sections, (3) new or revised handbooks, (4) Instruction Memoranda (IM), (5) Information Bulletins (IB), and (6) other policy and guidance documents that include direction on mitigation and climate change.

MITIGATION

BLM has been using mitigation to address impacts to resources and land uses across the landscape for decades. As required under the National Environmental Policy Act (NEPA), the BLM routinely evaluates mitigation measures in its Environmental Impact Statements and Environment Assessments on land use plans and specific projects. (b) (5) [redacted]

Avoidance and minimization measures are often referred to as lease stipulations, permit conditions of approval, best management practices, or reclamation measures; they may also be built into the proposed action as design features to avoid known sensitive resources. Mitigation, including compensation, (b) (5) [redacted]

The Permian Basin Agreement is an example of a voluntary program in which a company may choose to use the Agreement procedures, contributing the cost of the required archaeological survey (required under Section 106 of the NHPA), into a mitigation pool. The pooled fund allows for effective management of the area's archaeological resources and provides industry more predictability and control over schedules and budgets needed to operate efficiently. (b) (5) [redacted]

(b) (5) [redacted]

For example, in 2008, when BLM authorized natural gas development in the Pinedale Anticline in western Wyoming, that record of decision was challenged on the grounds that it violated FLPMA's prohibition on preventing unnecessary or undue degradation. The D.C. Circuit, however, found that BLM's authorization complied with FLPMA, citing BLM's reliance on mitigation measures to reduce project impacts (*Theodore Roosevelt Conservation Partnership v. Salazar*, 661 F.3d 66; 398 U.S. App. D.C. 199 (2011).

BLM began working on formal mitigation policy in the early 2000s to provide clarity and guidance for the field and increase consistency in the implementation of mitigation, in particular, identifying, considering, and, as appropriate, requiring mitigation, to address impacts to sensitive, important, or rare resources from public land uses. BLM has also focused on proactive and regional approaches that consider mitigation in the planning process, as well as to encourage the use of mitigation banks, exchanges and similar mechanisms. This has provided more certainty to applicants on the types of mitigation likely to be considered for a project and has helped to streamline the permitting process.

BLM MITIGATION ACTIONS

The Bureau of Land Management (BLM) has adopted or is in the process of developing the following list of actions relating to, (1) Secretarial Order 3330, dated October 31, 2013, "Improving Mitigation Policies and Practices of the Department of the Interior;" and the associated report dated April 2014, "A Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior;" and (2) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment."

1. **BLM Information Bulletin No. 2017-015, *Availability of Model Compensatory Mitigation MOU*** (December 2016). The IB announces the availability of a model memorandum of understanding (MOU) for use by the BLM State Offices when collaborating with state governments regarding State-based compensatory mitigation programs for the greater sage-grouse or its habitat. This model provides language that makes the strongest commitment the BLM can make within our legal constraints to coordinate our project review processes with the states' compensatory mitigation programs. The model MOU can be adapted for other resources and circumstances where state compensatory mitigation programs may assist the BLM in achieving its mission.
2. **BLM Mitigation Manual, MS-1794** (December 2016). This manual section and the Mitigation Handbook, H-1794-1 (listed below), were issued under **BLM Instruction Memorandum No. 2017-021**. This policy includes principles for mitigation that require, "effective mitigation is durable, defined by outcomes, implemented and monitored for effectiveness, considered within an adaptive management framework, reported upon, managed by a responsible party, guided by the best available science, and developed through effective, early, and frequent communication with public land users, cooperating agencies, and other stakeholders, including the public."
3. **BLM Mitigation Handbook, H-1794-1** (December 2016). Description included above under MS-1794.
4. **BLM New Mexico Instruction Memorandum No. NMF010-2016-004, *Bureau of***

Land Management (BLM) Sensitive Species – Brack's Cactus Management (September 7, 2016). This State Office issued IM provides management guidance to conserve habitat and protect Brack's cactus, a BLM Sensitive Species and a species included on the State of New Mexico list of endangered plant species, from ground-disturbing projects by (1) requiring surveys to identify Brack's cactus locations; and (2) implementing management guidance to mitigate impacts to Brack's cactus by avoiding and minimizing impacts, and then compensating for impacts that cannot be avoided.

5. **BLM California Instruction Memorandum No. CA-2015-009 - Renewal of IM Implementing Provisions within the Consolidated Appropriations Act, 2012 (Public Law 112-74) Related to Livestock Grazing Authorizations in the California Desert Conservation Area** (December 17, 2014). This IM reiterates and provides direction on implementing the livestock grazing provisions in P.L. 112-74, which states that BLM shall accept the donation of valid existing grazing allotments and make the land available for mitigation by allocating the forage to wildlife use consistent with any applicable Habitat Conservation Plan, Endangered Species Act section 10 permit, or biological opinion.
6. **Multi-Scale Guidance for Identifying Shared Visual Resources and Mitigation Adverse Impacts through a Collective and Collaborative Process** (in progress). The National Park Service and the BLM are co-leading an interagency group to advance a coordinated effort to encourage thoughtful management of shared scenic resources, which encompass both natural and cultural settings. As part of its effort, the team developed the visual resources guidance called for under #15 of the "Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior;". The guidance underwent solicitor review but has not has not been finalized. The NPS and BLM agreed to wait for the new Administration to finalize the guidance. Once completed, the participating agencies will need to determine the extent to which they integrate the guidance into their procedures. The guidance does not place requirements on agencies instead it encourages them to work cooperatively with states, industry, private property owners and stakeholders to identify upfront important scenic views and visual resources and to forge a collective management strategy for their stewardship into the future. The guidance is wholly voluntary and does not "burden" energy development but rather seeks to resolve potential conflicts early in decision making processes.

(b) (5)

[redacted]

Prior to issuance of Secretarial Order 3330 and the 2015 Presidential Memorandum, the BLM

took the following actions of note related to mitigation:

1. **BLM Information Memorandum No. 2013-142, *Interim Policy, Draft Regional Mitigation Manual Section (MS-1794)*** (June 2013). This interim policy directed resource programs to move from case-by-case application of mitigation to a regional approach that involves anticipating future mitigation needs and strategically identifies mitigation sites and measures that can help the BLM achieve its resource objectives while improving permitting efficiencies and providing greater certainty to permit applicants, partners, stakeholders, and the public. The 2013 interim policy covered all resource programs and was the precursor to the current Mitigation Policy.
2. **BLM Arizona Instruction Memorandum No. AZ-2012-031, *Desert Tortoise Conservation Agreement Implementation*** (June 2012). The Arizona State Office issued IM articulates mitigation policy, including off-site compensation for the desert tortoise and its habitat on public lands managed by the Bureau of Land Management (BLM) in Arizona, (b) (5) .
3. **BLM *Special Status Species Manual* (M 6840)** (December 2008). This Manual identifies and interprets BLM's responsibilities under the Endangered Species Act and mentions off-site compensatory mitigation as a means to further the conservation of federally-listed species.
4. **BLM Instruction Memorandum No. 2009-011, *Assessment and Mitigation of Potential Impacts to Paleontological Resources*** (October 10, 2008). The IM provides guidelines for assessing potential impacts to paleontological resources in order to determine mitigation steps for federal actions on public lands under the Federal Land Policy and Management Act and the National Environmental Policy Act. These guidelines also apply where a federal action impacts split-estate lands. It also provides field survey and monitoring procedures to help minimize impacts to paleontological resources determined to be significant that are expected to be adversely affected by a federal action.
5. **BLM Instruction Memorandum No. 2008-204, *Offsite Mitigation*** (September 30, 2008). This instruction memorandum outlines policy for the use of offsite mitigation for authorizations issued by the Bureau of Land Management and replaced IM WO-2005-069 *Interim Offsite Compensatory Mitigation for Oil, Gas, Geothermal and Energy Rights-of-way Authorizations* (February 1, 2005).
6. **BLM *National Environmental Policy Act Handbook*, H-1790-1** (January 2008)**.** Following the Council of Environmental Quality's regulations at 40 CFR 1508.20, this Handbook defines mitigation and states that mitigation can be used to reduce the effects of an action below the threshold of significance thereby avoiding the need to prepare an EIS. It also requires description of any residual effects that remain after mitigation measures have been applied, requires that adopted mitigation measures be described in decision documentation, and requires monitoring to ensure implementation of adopted measures.
7. **BLM Instruction Memorandum No. 2008-050 – *Migratory Bird Treaty Act – Interim Management Guidance*** (December 2007). This Memorandum provides direction to avoid, reduce or mitigate adverse impacts to the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or

statewide bird conservation priorities.

8. **BLM's land use planning regulations, 43 CFR 1600** and **the BLM's Land Use Planning Handbook H-1601-1** (2005). (b) (5) [redacted]
9. ***Protecting Cultural Resources Manual*** **(MS-8140)** (December 2004). This Manual provides general guidance for protecting cultural resources from inadvertent adverse effects associated with BLM land use decisions, pursuant to the National Historic Preservation Act, the National Environmental Policy Act, Executive Order 11593, and the National Programmatic Agreement regarding the manner in which the BLM will meet its responsibilities under the National Historic Preservation Act.
10. **BLM's hardrock mining regulations, 43 CFR 3809.** Among the general performance standards for surface management within a mining plan of operations is the requirement to "take mitigation measures specified by BLM to protect public lands" (43 CFR 3809.420(a)(4)).
11. **BLM's FLPMA right of way regulations, 43 CFR 2800.** (b) (5) [redacted]

CLIMATE CHANGE

The BLM has considered climate change, its effects on public lands resources and public land users, and how BLM decisions contribute to climate change for many years, primarily through the land use planning and NEPA analysis process. BLM began working on formal climate change policy in 2008 through issuance of an Instruction Memorandum (IM), transmitting draft guidance on incorporating climate change into land use planning and NEPA documents. In 2010, the Council on Environmental Quality (CEQ) released a document entitled "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emission" for review by the public and agencies. The CEQ issued revised draft guidance in December of 2014 for review and comment. Final CEQ guidance was issued in August of 2016.

BLM CLIMATE CHANGE ACTIONS

The Bureau of Land Management (BLM) has adopted or is in the process of developing the following list of actions relating to the guidance identified in Secretarial Order 3349 and the 2016 Council on Environmental Quality's "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews."

1. **BLM Instructional Memorandum No. 2017-003,** ***The Council on Environmental Quality Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*** (December 2016). The IM transmits CEQ guidance on considering climate change in NEPA analysis. It also provides specific step-down guidance for how to calculate the "downstream" or indirect greenhouse gas emissions associated with fossil fuel actions (coal, oil, and gas), when production estimates are reasonably foreseeable.
2. **BLM Instructional Memorandum,** ***Considering Climate Change in NEPA Documents*** (never issued). This draft policy was intended to provide BLM-specific step-down guidance based on CEQ guidance and Department of the Interior Office of Environmental Policy and Compliance (OEPC) guidance on considering climate change in NEPA analysis. Topics included land use and carbon sequestration, biogenic emissions associated with prescribed- and wild-fire, and the social cost of carbon.

Prior to issuance (b) (5) [redacted] the BLM took the following actions of note related to climate change:

1. **BLM New Mexico Instructional Memorandum No. IM-NM-2013-022,** ***Availability of Updated Air Resources Technical Report (ARTR); Use of Environmental Assessment (EA) Template Air Quality and Climate Change Language for Applications for Permit to Drill (APDs) and Lease Sales*** (June 2013). The IM instructed BLM New Mexico District Office and Field Offices to use the latest version of the BLM New Mexico Air Resources Technical Report, and provided template language for use in NEPA environmental analysis documents, to address air quality and climate change impacts.
2. **BLM Oregon/Washington Instructional Memorandum No. IM-OR-2010-012,** ***Analysis of Greenhouse Gas Emissions and Consideration of Climate Change in National Environmental Policy Act Documents*** (January 2010). The IM provided BLM Oregon/Washington State Office guidance on analyzing greenhouse gas emissions and addressing changing climate conditions in NEPA documents. The IM expired in October 2011.
3. **BLM Instructional Memorandum No. 2008-171,** ***Guidance on Incorporating Climate Change into Planning and NEPA Documents*** (August 2008). The IM transmitted draft guidance on BLM offices to follow to adequately incorporate climate change considerations into the Land Use Planning/NEPA analysis process.

BLM has also developed tools to assist in assessing emissions, including the following:

1. **Tool: BLM Emissions Inventory Toolkit.** The BLM Washington Office is developing an Emissions Inventory Toolkit, scheduled for completion in September 2017, which would consolidate and enhance existing emissions inventory tools. The Emissions Inventory Toolkit would be a web-based application for calculating emissions from criteria pollutants, hazardous air pollutants and greenhouse gases. It would store

emissions inventories from various projects to assess cumulative emissions, and would include a modeling component for near-field impacts analysis. The toolkit would include a library to store documents and reports. The toolkit would be useful in streamlining air analyses for NEPA and General Conformity requirements and showing whether air quality standards or management goals would be met.

2. **Tool: BLM Colorado Emissions Inventory Calculator.** The BLM Colorado emissions calculator estimates air resources emissions, including greenhouse gases, with the goal of providing technical consistency and efficiency in gathering data on emissions-generating activities for use in NEPA analyses. The ability of the tool to gather information from external sources to be compiled for analysis has led to faster processing times for projects requiring air analysis. This tool would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
3. **Tools: BLM Oregon/Washington carbon calculators.** Four of the BLM western Oregon Districts have developed carbon storage and greenhouse gas calculators to support environmental analyses, primarily timber sales. Key features of these tools would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
4. **Tools: BLM New Mexico emissions calculators.** In BLM New Mexico, three calculators are available to estimate air resources emissions, including greenhouse gases, for use in NEPA environmental analysis documents associated with applications for permit to drill and oil and gas lease sales. Key features of these tools would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
5. **Report: Greenhouse Gas & Climate Change Report.** The Greenhouse Gas and Climate Change Report provides a database and air emissions tool to calculate greenhouse gas emissions for the base year database and the out-year projections for 10 western states. The report includes emissions associated with production and consumption activities, separated by Federal and non-Federal lands for coal, oil, natural gas, and natural gas liquids, for incorporation by reference into NEPA analyses. The reports would be housed in the library section of the BLM Emissions Inventory Toolkit mentioned above.

In addition to the policies and tools listed above, the BLM has taken a wide variety of actions over the years to assess and address the risks associated with wildland fire, invasive plants and animals, drought and other environmental changes that may be caused, in part, by climate change. Examples of such adaptation actions include, helping develop and implement the National Cohesive Wildland Fire Management Strategy, participating in the work of the National Invasive Species Council, working with the State of Montana and the National Drought Resilience Partnership to build drought resilience in the Upper Missouri River Basin, synthesizing and considering ecoregional information related to impacts of climate change on resources BLM manages in land use planning, and partnering with individual livestock permittees to help them adapt to their operations to be more resilient to wildland fire and drought.

NEXT STEPS

In responding to SO 3349, the BLM has focused primarily on policies that have been adopted since the documents specified in the Order. The BLM has applied mitigation and considered

climate change in its decision-making and use authorizations for years, encompassing thousands of individual actions and decisions. Several laws, such as the National Historic Preservation Act and the National Environmental Policy Act, require the BLM to consider mitigation. Courts have also weighed in on the need for the BLM to consider both mitigation and climate change, including greenhouse gas emissions. (b) (5) BLM recommends that consideration be given to reconsideration or modification of these policies, rather than outright rescission.

(b) (5) In general, BLM believes the primary mitigation-related issues of concern relate to compensation and recommends that reconsideration of its mitigation policies focus on its approach to compensation in future land use plans and future projects, such as which resources should be compensated for and what standard(s) should be applied when compensatory mitigation is appropriate (e.g., no net loss, net conservation gain).

(b) (5) the BLM requests clarification on whether reconsideration should focus on analyzing the impacts of authorization on climate change (e.g., greenhouse gases) or should also include reconsideration of BLM's adaptation actions (e.g., drought, invasive species, fire and other changes that may be related to climate change). In general, BLM believes there is broad support for BLM's adaptation related actions and recommends that reconsideration focus on consideration of greenhouse gases, such as evaluation of downstream effects.

INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: April 12, 2017

FROM: Michael Nedd, Acting Director – Bureau of Land Management

SUBJECT: Implementation of Secretary's Order 3349, Section 5 (a) and (b)

This memorandum responds to questions posed in sections 5(a)(i) and 5(b)(i) of Secretary's Order (SO) 3349, "American Energy Independence," which requests summary information about "actions" the Bureau of Land Management (BLM) has adopted or is in the processes of developing with respect to certain memoranda and orders related to mitigation and climate change. The BLM has interpreted "actions," as described in SO 3349 to include: (1) new regulations or amendments to existing regulations, (2) new or revised BLM Manual Sections, (3) new or revised handbooks, (4) Instruction Memoranda (IM), (5) Information Bulletins (IB), and (6) other policy and guidance documents that include direction on mitigation and climate change.

MITIGATION

BLM has been using mitigation to reduce the severity or seriousness of impacts to resources and land uses across the landscape for decades. As required under the National Environmental Policy Act (NEPA), the BLM routinely evaluates mitigation measures in its Environmental Impact Statements and Environment Assessments on land use plans and project authorizations. When BLM implements mitigation, it seeks to avoid impacts, minimize impacts, and compensate for residual impacts to sensitive, scarce, or important resources consistent with the definition of mitigation in the Council on Environmental Quality (CEQ) regulations (40 C.F.R. § 1508.20). Avoidance and minimization have been and continue to be the most commonly used mitigation when BLM is authorizing an action. Compensatory mitigation (b) (5) [redacted] particularly to reduce residual impacts to threatened and endangered species, cultural resources, air, and water.

Mitigation measures are often incorporated into lease stipulations, permit conditions of approval, best management practices, or reclamation measures; avoidance and minimization measures are also commonly built into the proposed action as design features to avoid known sensitive resources. Mitigation, including compensation, can help to facilitate compliance with a variety of applicable laws.[1] The Permian Basin Agreement is an example of a voluntary program in which

[1] Mitigation can play an important role under the Clean Water Act, for example when restoration can help achieve the no net loss of wetlands standard; under the Clean Air Act to comply with Implementation Plans for non-attainment areas or to prevent/reduce air quality degradation; under the Endangered Species Act, as incorporated in reasonable and prudent alternatives to avoid jeopardizing the continued existence of a listed species under section 7 or as a component of a Habitat Conservation Plan under section 10; under the National Historic Preservation Act, since BLM must consult with states, tribes, and other parties to seek to resolve an undertaking's adverse impacts on historic properties, and seek to minimize harm on National Historic Landmarks; and under the Federal Land Policy

a company may choose to contribute the cost of the required archaeological survey (required under Section 106 of the NHPA), into a mitigation pool. The pooled fund allows for effective management of the area's archaeological resources and provides industry more predictability and control over schedules and budgets needed to operate efficiently.

In addition to aiding compliance with various laws and regulations, use of mitigation in appropriate circumstances may also increase the defensibility of BLM's decisions. For example, in 2008, when BLM authorized natural gas development in the Pinedale Anticline in western Wyoming, that record of decision was challenged on the grounds that it violated FLPMA's direction to prevent unnecessary or undue degradation of the public lands. The D.C. Circuit, however, found that BLM's authorization complied with FLPMA, citing BLM's reliance on mitigation measures to reduce project impacts (Theodore Roosevelt Conservation Partnership v. Salazar, 661 F.3d 66, 76–77 (D.C. Cir. 2011)).

BLM began working on formal mitigation policy in the early 2000s to provide clarity and guidance for the field and increase consistency in the implementation of mitigation, in particular, identifying, considering, and, as appropriate, requiring, mitigation to address impacts to sensitive, important, or rare resources from public land uses. BLM has also focused on proactive and regional approaches that consider mitigation in the planning process, as well as to encourage the use of mitigation banks, exchanges and similar mechanisms. This has provided more certainty to applicants on the types of mitigation likely to be considered for a project and has helped to streamline the permitting process.

BLM MITIGATION ACTIONS

The BLM has adopted or is in the process of developing the following actions relating to (1) Secretary's Order 3330, dated October 31, 2013, "Improving Mitigation Policies and Practices of the Department of the Interior;" and the associated report dated April 2014, "A Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior;" and (2) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment."

1. **BLM IB No. 2017-015, Availability of Model Compensatory Mitigation MOU** (December 2016). The IB announces the availability of a model memorandum of understanding (MOU) for use by the BLM State Offices when collaborating with state governments regarding state-based compensatory mitigation programs for the Greater Sage-Grouse and its habitat. This model provides language that makes the strongest commitment the BLM can make within our legal constraints to coordinate our project review processes with the states' compensatory mitigation programs. The model MOU can be adapted for other resources and circumstances where state compensatory mitigation programs may assist the BLM in achieving its mission.
2. **BLM Mitigation Manual, MS-1794** (December 2016). This manual section and the Mitigation Handbook, H-1794-1 (listed below), were issued under **BLM IM No. 2017-**

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and Management Act (FLPMA), to prevent unnecessary or undue degradation of public lands.

021. This policy includes principles for mitigation that, "effective mitigation is durable, defined by outcomes, implemented and monitored for effectiveness, considered within an adaptive management framework, reported upon, managed by a responsible party, guided by the best available science, and developed through effective, early, and frequent communication with public land users, cooperating agencies, and other stakeholders, including the public."

3. **BLM Mitigation Handbook, H-1794-1** (December 2016). Description included above under MS-1794.
4. **BLM New Mexico IM No. NM-F010-2016-004, Bureau of Land Management (BLM) Sensitive Species – Brack's Cactus Management** (September 7, 2016). This IM is specific to the Farmington District and provides guidance to conserve habitat and protect Brack's cactus, a BLM Sensitive Species and a species included on the State of New Mexico list of endangered plant species, from ground-disturbing projects by (1) requiring surveys to identify Brack's cactus locations; and (2) implementing management guidance to mitigate impacts to Brack's cactus by avoiding and minimizing impacts, and then compensating for impacts that cannot be avoided.
5. **BLM California IM No. CA-2015-009, Renewal of IM Implementing Provisions within the Consolidated Appropriations Act, 2012 (Public Law 112-74) Related to Livestock Grazing Authorizations in the California Desert Conservation Area** (December 17, 2014). This IM reiterates and provides direction on implementing the livestock grazing provisions in P.L. 112-74, which states that BLM shall accept the donation of valid existing grazing allotments and make the land available for mitigation by allocating the forage to wildlife use consistent with any applicable Habitat Conservation Plan, Endangered Species Act section 10 permit, or biological opinion.
6. **Multi-Scale Guidance for Identifying Shared Visual Resources and Mitigation Adverse Impacts through a Collective and Collaborative Process** (in progress). The National Park Service and the BLM are co-leading an interagency group to advance a coordinated effort to encourage thoughtful management of shared scenic resources, which encompass both natural and cultural settings. As part of its effort, the team developed the visual resources guidance called for under #15 of the "Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior." The guidance underwent solicitor review but has not been finalized. The NPS and BLM agreed to wait for the new Administration to finalize the guidance. The draft guidance does not place requirements on agencies instead it encourages them to work cooperatively with states, industry, private property owners and stakeholders to identify important scenic views and visual resources and to forge a collective management strategy for their stewardship into the future, while resolving potential conflicts early in the decision making processes.

(b) (5)



(b) (5) [redacted] In addition, the Greater Sage Grouse Task Force requested a team of state and federal agencies, including BLM, discuss the implementation of mitigation requirements contained in the sage-grouse plans. The team produced the "Report to the Sage-Grouse Task Force: Greater Sage-Grouse Compensatory Mitigation (December 2016)" which identifies key principles and approaches to mitigation commonly agreed to by the state and federal agencies and provides an overview of each state's approach to compensatory mitigation.

Prior to issuance of Secretarial Order 3330 and the 2015 Presidential Memorandum, the BLM took the following actions of note related to mitigation.

1. **BLM IM No. 2013-142, Interim Policy, Draft Regional Mitigation Manual Section (MS-1794)** (June 2013). This interim policy directed resource programs to move from case-by-case application of mitigation to a regional approach that involves anticipating future mitigation needs and strategically identifies mitigation sites and measures that can help the BLM achieve its resource objectives while improving permitting efficiencies and providing greater certainty to permit applicants, partners, stakeholders, and the public. The 2013 interim policy covered all resource programs and was the precursor to the current Mitigation Policy.
2. **BLM Arizona IM No. AZ-2012-031, Desert Tortoise Conservation Agreement Implementation** (June 2012). This IM articulates mitigation policy, including off-site compensation for the desert tortoise and its habitat on public lands managed by the BLM in Arizona.(b) (5) [redacted].
3. **BLM Special Status Species Manual (M 6840)** (December 2008). This Manual identifies and interprets BLM's responsibilities under the Endangered Species Act and mentions off-site compensatory mitigation as a means to further the conservation of federally listed species.
4. **BLM IM No. 2009-011, Assessment and Mitigation of Potential Impacts to Paleontological Resources** (October 10, 2008). The IM provides guidelines for assessing potential impacts to paleontological resources in order to determine mitigation steps for federal actions on public lands under the Federal Land Policy and Management Act and the National Environmental Policy Act. These guidelines also apply where a federal action impacts split-estate lands. It also provides field survey and monitoring procedures to help minimize impacts to paleontological resources determined to be significant that are expected to be adversely affected by a federal action.
5. **BLM IM No. 2008-204, Offsite Mitigation** (September 30, 2008). This instruction memorandum outlines policy for the use of offsite mitigation for authorizations issued by the BLM and replaced IM WO-2005-069 Interim Offsite Compensatory Mitigation for Oil, Gas, Geothermal and Energy Rights-of-way Authorizations (February 1, 2005).
6. **BLM National Environmental Policy Act Handbook, H-1790-1** (January 2008). Consistent with the CEQ regulations at 40 CFR 1508.20, this Handbook defines mitigation to include avoidance, minimization, and compensation. It also describes how mitigation can be used to reduce the effects of an action below the threshold of

significance thereby avoiding the need to prepare an EIS (i.e., to arrive at a "mitigated Finding of No Significant Impact (FONSI)"). It also provides guidance relating to BLM's description of any effects that remain after mitigation measures have been applied, incorporation of mitigation measures into decision documents, and discussions of monitoring to ensure implementation of adopted measures.

7. **BLM IM No. 2008-050, Migratory Bird Treaty Act – Interim Management Guidance** (December 2007). This Memorandum provides direction to avoid, reduce, or mitigate adverse impacts to the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.
8. **BLM land use planning regulations, 43 CFR 1610** and **Land Use Planning Handbook H-1601-1** (2005). BLM's land use planning regulations and handbook provide broad guidance on the development of land use plans. The handbook guidance includes the consideration of mitigation measures as appropriate to address resource, social, and economic impacts.
9. **BLM Protecting Cultural Resources Manual (MS-8140)** (December 2004). This Manual provides general guidance for protecting cultural resources from inadvertent adverse effects associated with BLM land use decisions, pursuant to the National Historic Preservation Act, the National Environmental Policy Act, Executive Order 11593, and the National Programmatic Agreement regarding the manner in which the BLM will meet its responsibilities under the National Historic Preservation Act.
10. **BLM hardrock mining regulations, 43 CFR 3809.** Among the general performance standards for surface management within a mining plan of operations is the requirement to "take mitigation measures specified by BLM to protect public lands" (43 CFR 3809.420(a)(4)).
11. **BLM FLPMA right of way regulations, 43 CFR 2800.** These regulations require holders to "restore, revegetate, and curtail erosion or conduct any other rehabilitation measures BLM determines necessary" including conditioning agreements on compensatory mitigation, 43 CFR 2805.12(i)).
12. **BLM easement regulations, 43 CFR 2920.** These regulations "direct BLM to include terms and conditions that . . . "minimize damage" and "require the use to be located in an area which shall cause least damage to the environment" (43 CFR 2920.7(b)).

CLIMATE CHANGE

For many years, the BLM has considered climate change, its effects on public lands and public land users, and how BLM decisions contribute to climate change, primarily through NEPA analyses for land use planning and project authorizations. BLM began working on formal climate change policy in 2008 through issuance of an Instruction Memorandum (IM), transmitting draft guidance on incorporating climate change into land use planning and NEPA documents. In 2010, the CEQ released a document entitled "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emission" for review by the public and agencies. The CEQ issued revised draft guidance in December of 2014 for review and comment. Final CEQ guidance was issued in August of 2016.

BLM CLIMATE CHANGE ACTIONS

The BLM has adopted or is in the process of developing the following list of actions relating to the guidance identified in Secretarial Order 3349 and the 2016 CEQ's "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews."

1. **BLM Permanent IM No. 2017-003, The Council on Environmental Quality Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews** (December 2016). The IM transmits CEQ guidance on considering climate change in NEPA analysis. It also provides specific step-down guidance for how to calculate the "downstream" or indirect greenhouse gas emissions associated with fossil fuel actions (coal, oil, and gas), when production estimates are reasonably foreseeable.
2. **BLM IM, Considering Climate Change in NEPA Documents** (never issued). This draft policy was intended to provide BLM-specific step-down guidance based on CEQ guidance and Department of the Interior Office of Environmental Policy and Compliance (OEPC) guidance on considering climate change in NEPA analysis. Topics included land use and carbon sequestration, biogenic emissions associated with prescribed- and wild-fire, and the social cost of carbon.

Prior to issuance of the documents listed in SO 3349, the BLM took the following actions of note related to climate change.

1. **BLM New Mexico IM No. NM-2013-022, Availability of Updated Air Resources Technical Report (ARTR); Use of Environmental Assessment (EA) Template Air Quality and Climate Change Language for Applications for Permit to Drill (APDs) and Lease Sales** (June 2013). The IM instructed District and Field Offices to use the latest version of the BLM New Mexico Air Resources Technical Report, and provided template language for use in NEPA environmental analysis documents, to address air quality and climate change impacts.
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BLM has also developed tools to assist in assessing emissions, including the following:

1. **Tool: BLM Emissions Inventory Toolkit.** The BLM Washington Office is developing an Emissions Inventory Toolkit, scheduled for completion in September 2017, which would consolidate and enhance existing emissions inventory tools. The Emissions

Inventory Toolkit would be a web-based application for calculating emissions from criteria pollutants, hazardous air pollutants and greenhouse gases. It would store emissions inventories from various projects to assess cumulative emissions, and would include a modeling component for near-field impacts analysis. The toolkit would include a library to store documents and reports. The toolkit would be useful in streamlining air analyses for NEPA and General Conformity requirements and showing whether air quality standards or management goals would be met.

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5. **Report: Greenhouse Gas & Climate Change Report.** The Greenhouse Gas and Climate Change Report provides a database and air emissions tool to calculate greenhouse gas emissions for the base year database and the out-year projections for 10 western states. The report includes emissions associated with production and consumption activities, separated by Federal and non-Federal lands for coal, oil, natural gas, and natural gas liquids, for incorporation by reference into NEPA analyses. The reports would be housed in the library section of the BLM Emissions Inventory Toolkit mentioned above.

In addition to the policies and tools listed above, the BLM has taken a wide variety of actions over the years to assess and address the risks associated with wildland fire, invasive plants and animals, drought and other environmental changes that may be caused, in part, by climate change. Examples of such adaptation actions include, helping develop and implement the National Cohesive Wildland Fire Management Strategy, participating in the work of the National Invasive Species Council, working with the State of Montana and the National Drought Resilience Partnership to build drought resilience in the Upper Missouri River Basin, synthesizing and considering ecoregional information related to impacts of climate change on resources BLM manages in land use planning, and partnering with individual livestock permittees to adapt their operations to be more resilient to wildland fire and drought.

NEXT STEPS

In responding to SO 3349, the BLM has focused primarily on policies that have been adopted since the date of the documents specified in the Order. The BLM has applied mitigation and considered climate change in its decision-making and use authorizations for years, encompassing thousands of individual actions and decisions. Several laws, such as the National Historic Preservation Act and the National Environmental Policy Act, require the BLM to consider mitigation in its decision-making processes. Courts have also weighed in on the need for the BLM to consider both mitigation and climate change, including greenhouse gas emissions. (b) (5) [redacted] the BLM recommends reconsideration or modification of these policies, rather than outright rescission

(b) (5) [redacted] In general, BLM believes the primary mitigation-related issues of concern relate to compensation and recommends that reconsideration of its mitigation policies focus on its approach to compensation in ongoing or future land use plans and ongoing or future projects, such as which resources should be compensated for and what standard(s) should be applied when compensatory mitigation is appropriate (e.g., no net loss, net conservation gain).

(b) (5) [redacted] the BLM requests clarification on whether reconsideration should focus on analyzing the impacts of BLM's land use authorizations on climate change (e.g., greenhouse gases) or should also include reconsideration of BLM's adaptation actions (e.g., drought, invasive species, fire and other changes that may be related to climate change). In general, BLM believes there is broad public support for BLM's adaptation related actions and recommends that reconsideration focus on consideration of greenhouse gases, such as evaluation of downstream effects.

INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: **April 12, 2017**

FROM: Michael Nedd, Acting Director – Bureau of Land Management

SUBJECT: **Implementation of Secretary'sialSecretarial Order 3349, Section 5 (a) and (b)**

This memorandum responds to questions posed in sections 5(a)(i) and 5(b)(i) of Secretary'sialSecretarial Order (SO) 3349, "American Energy Independence," which requests summary information about "actions" taken by the Bureau of Land Management (BLM) has adopted or is in the processes of developing with respect to certain memoranda and orders related in the areas ofto mitigation and climate change. The BLM has interpreted "actions," as described in SO 3349 to include: (1) new regulations or amendments to existing regulations, (2) new or revised BLM Manual Sections, (3) new or revised handbooks, (4) Instruction Memoranda (IM), (5) Information Bulletins (IB), and (6) other policy and guidance documents that include direction on mitigation and climate change.

MITIGATION

BLM has been using mitigation to address reduce the severity or seriousness of impacts to resources and land uses across the landscape for decades. As required under the National Environmental Policy Act (NEPA), the BLM routinely evaluates mitigation measures in its Environmental Impact Statements and Environment Assessments on land use plans and specific project authorizations. When BLM implements mitigation, it seeks toprojects. Mitigation consists of avoid impacts, minimize impacts, and compensate for residual impacts to sensitive, rarescarce, or important resources consistent with the definition of mitigation in the Council on Environmental Quality (CEQ) regulations (40 C.F.R. § 1508.20). While aAvoidanceavoidance and minimization are have been and continue to be the most commonly used compensatory mitigation when BLM is authorizing an action. eCompensatory mitigation (b) (5) [redacted] particularly with regards to reducing residual impacts to threatened and endangered species, cultural resources, air, and water.

Avoidance and minimizationMitigation measures are often referred to as incorporated into (?) lease stipulations, permit conditions of approval, best management practices, or reclamation measures; they may alsoavoidance and minimization measures are also commonly be built into the proposed action as design features to avoid known sensitive resources. Mitigation, including compensation, can help to facilitate compliance with a variety of applicable lawsmay be necessary or even required by law under certain conditions.[1] The Permian Basin Agreement is an

[1] (b) (5) [redacted]

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example of a voluntary program in which a company may choose to ~~use the Agreement procedures~~, contribute~~ing, contributing~~ the cost of the required archaeological survey (required under Section 106 of the NHPA), into a mitigation pool. The pooled fund allows for effective management of the area's archaeological resources and provides industry more predictability and control over schedules and budgets needed to operate efficiently.

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BLM began working on formal mitigation policy in the early 2000s to provide clarity and guidance for the field and increase consistency in the implementation of mitigation, in particular, identifying, considering, and, as appropriate, requiring, mitigation~~,~~ to address impacts to sensitive, important, or rare resources from public land uses. BLM has also focused on proactive and regional approaches that consider mitigation in the planning process, as well as to encourage the use of mitigation banks, exchanges and similar mechanisms. This has provided more certainty to applicants on the types of mitigation likely to be considered for a project and has helped to streamline the permitting process.

BLM MITIGATION ACTIONS

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1. **BLM IB No. 2017-015, Availability of Model Compensatory Mitigation MOU** (December 2016). The IB announces the availability of a model memorandum of

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understanding (MOU) for use by the BLM State Offices when collaborating with state governments regarding ~~S~~state~~State~~-based compensatory mitigation programs for the ~~g~~Greater ~~s~~Sage-G~~greater sage-~~grouse ~~or~~ and its habitat. This model provides language that makes the strongest commitment the BLM can make within our legal constraints to coordinate our project review processes with the states' compensatory mitigation programs. The model MOU can be adapted for other resources and circumstances where state compensatory mitigation programs may assist the BLM in achieving its mission.

2. **BLM Mitigation Manual, MS-1794** (December 2016). This manual section and the Mitigation Handbook, H-1794-1 (listed below), were issued under **BLM ~~Instruction Memorandum~~IM No. 2017-021**. This policy includes principles for mitigation that ~~require~~, "effective mitigation is durable, defined by outcomes, implemented and monitored for effectiveness, considered within an adaptive management framework, reported upon, managed by a responsible party, guided by the best available science, and developed through effective, early, and frequent communication with public land users, cooperating agencies, and other stakeholders, including the public."
3. **BLM Mitigation Handbook, H-1794-1** (December 2016). Description included above under MS-1794.
4. **BLM New Mexico ~~Instruction Memorandum~~IM No. ~~NMF010~~NM-F010-2016-004, Bureau of Land Management (BLM) Sensitive Species – Brack's Cactus Management** (September 7, 2016). ~~This State~~This IM is specific to the Farmington District ~~Office issued BLM New Mexico~~ and provides ~~management~~ guidance to conserve habitat and protect Brack's cactus, a BLM Sensitive Species and a species included on the State of New Mexico list of endangered plant species, from ground-disturbing projects by (1) requiring surveys to identify Brack's cactus locations; and (2) implementing management guidance to mitigate impacts to Brack's cactus by avoiding and minimizing impacts, and then compensating for impacts that cannot be avoided.
5. **BLM California ~~Instruction Memorandum~~ IM No. CA-2015-009–, Renewal of IM Implementing Provisions within the Consolidated Appropriations Act, 2012 (Public Law 112-74) Related to Livestock Grazing Authorizations in the California Desert Conservation Area** (December 17, 2014). This ~~BLM California~~ IM reiterates and provides direction on implementing the livestock grazing provisions in P.L. 112-74, which states that BLM shall accept the donation of valid existing grazing allotments and make the land available for mitigation by allocating the forage to wildlife use consistent with any applicable Habitat Conservation Plan, Endangered Species Act section 10 permit, or biological opinion.
6. **Multi-Scale Guidance for Identifying Shared Visual Resources and Mitigation Adverse Impacts through a Collective~~Collective~~ and Collaborative Process** (in progress). The National Park Service and the BLM are co-leading an interagency group to advance a coordinated effort to encourage thoughtful management of shared scenic resources, which encompass both natural and cultural settings. As part of its effort, the team developed the visual resources guidance called for under #15 of the "Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior~~;~~." ~~;~~." The guidance underwent solicitor review but has not has not been finalized. The NPS and BLM agreed to wait for the new Administration to

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finalize the guidance. ~~Once completed, the participating agencies will need to determine the extent to which they integrate the guidance into their procedures. The~~The draft guidance does not place requirements on agencies instead it encourages them to work cooperatively with states, industry, private property owners and stakeholders to identify ~~upfront~~ important scenic views and visual resources and to forge a collective management strategy for their stewardship into the future. The guidance is ~~wholly~~ voluntary and ~~does not "burden" energy development but rather~~ seeks to resolve potential conflicts early in the decision making processes.

(b) (5) [redacted] In addition, the Greater Sage Grouse Task Force requested a team of state and federal agencies, including BLM, discuss the implementation of mitigation requirements contained in the sage-grouse plans. ~~BLM worked as part of an interagency~~ The team ~~to~~ produced the "Report to the Sage-Grouse Task Force: Greater Sage-Grouse Compensatory Mitigation (December 2016)" which identifies key principles and approaches to mitigation commonly agreed to by the state and federal agencies and provides an overview of each state's approach to compensatory mitigation.

Prior to issuance of Secretarial Order 3330 and the 2015 Presidential Memorandum, the BLM took the following actions of note related to mitigation.~~:~~

1. BLM IM **No. 2013-142, Interim Policy, Draft Regional Mitigation Manual Section (MS-1794)** (June 2013). This interim policy directed resource programs to move from case-by-case application of mitigation to a regional approach that involves anticipating future mitigation needs and strategically identifies mitigation sites and measures that can help the BLM achieve its resource objectives while improving permitting efficiencies and providing greater certainty to permit applicants, partners, stakeholders, and the public. The 2013 interim policy covered all resource programs and was the precursor to the current Mitigation Policy.
2. **BLM Arizona ~~Instruction Memorandum~~IM No. AZ-2012-031, Desert Tortoise Conservation Agreement Implementation** (June 2012). ~~The Arizona State Office issued~~This IM articulates mitigation policy, including off-site compensation for the desert tortoise and its habitat on public lands managed by the ~~Bureau of Land Management (~~BLM~~)~~ in Arizona (b) (5) [redacted].
3. **BLM Special Status Species Manual (M 6840)** (December 2008). This Manual identifies and interprets BLM's responsibilities under the Endangered Species Act and

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mentions off-site compensatory mitigation as a means to further the conservation of federally- listed species.

4. **BLM ~~Instruction Memorandum~~IM No. 2009-011, Assessment and Mitigation of Potential Impacts to Paleontological Resources** (October 10, 2008). The IM provides guidelines for assessing potential impacts to paleontological resources in order to determine mitigation steps for federal actions on public lands under the Federal Land Policy and Management Act and the National Environmental Policy Act. These guidelines also apply where a federal action impacts split-estate lands. It also provides field survey and monitoring procedures to help minimize impacts to paleontological resources determined to be significant that are expected to be adversely affected by a federal action.
5. **BLM ~~Instruction Memorandum~~IM No. 2008-204, Offsite Mitigation** (September 30, 2008). This instruction memorandum outlines policy for the use of offsite mitigation for authorizations issued by the ~~Bureau of Land Management~~BLM and replaced IM WO-2005-069 Interim Offsite Compensatory Mitigation for Oil, Gas, Geothermal and Energy Rights-of-way Authorizations (February 1, 2005).
6. **BLM National Environmental Policy Act Handbook, H-1790-1** (January 2008). ~~Following~~ Consistent with the ~~Council of Environmental Quality's~~CEQ regulations at 40 CFR 1508.20, this Handbook defines mitigation to include avoidance, minimization, and compensation. ~~and states that~~ It also describes how mitigation can be used to reduce the effects of an action below the threshold of significance thereby avoiding the need to prepare an EIS (i.e., to arrive at a "mitigated Finding of No Significant Impact (FONSI)"). It also ~~requires~~ provides guidance relating to BLM's description of any ~~residual~~ effects that remain after mitigation measures have been applied, ~~requires that adopted mitigation measures be described in decision documentation~~incorporation of mitigation measures into decision documents, and ~~requires~~ discussions of monitoring to ensure implementation of adopted measures.
7. **BLM ~~Instruction Memorandum~~IM No. 2008-050, Migratory Bird Treaty Act – Interim Management Guidance** (December 2007). This Memorandum provides direction to avoid, reduce, or mitigate adverse impacts to the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.
8. **~~BLM's~~BLM land use planning regulations, 43 CFR 1610 and ~~the BLM's~~ Land Use Planning Handbook H-1601-1** (2005). BLM's land use planning regulations and handbook provide broad guidance on the development of land use plans. The handbook guidance includes the consideration of mitigation measures as appropriate to address resource, social, and economic impacts (b) (5) [redacted]
9. BLM **Protecting Cultural Resources Manual (MS-8140)** (December 2004). This

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Manual provides general guidance for protecting cultural resources from inadvertent adverse effects associated with BLM land use decisions, pursuant to the National Historic Preservation Act, the National Environmental Policy Act, Executive Order 11593, and the National Programmatic Agreement regarding the manner in which the BLM will meet its responsibilities under the National Historic Preservation Act.

10. ~~BLM's~~BLM **hardrock mining regulations, 43 CFR 3809.** Among the general performance standards for surface management within a mining plan of operations is the requirement to "take mitigation measures specified by BLM to protect public lands" (43 CFR 3809.420(a)(4)).
11. ~~BLM's~~BLM **FLPMA right of way regulations, 43 CFR 2800.** ~~(requiring~~ These regulations require holders to ~~"~~"restore, revegetate, and curtail erosion or conduct any other rehabilitation measures BLM determines necessary~~"~~" including conditioning agreements on compensatory mitigation, 43 CFR 2805.12(i~~)) and BLM's~~)).
~~11.~~12. BLM **easement regulations, 43 CFR 2920** ~~(which~~. These regulations "direct BLM to include terms and conditions that . . . ~~"~~"minimize damage~~"~~" and ~~"~~"require the use to be located in an area which shall cause least damage to the environment~~"~~" (43 CFR 2920.7(b)).

CLIMATE CHANGE

For many years, ~~T~~the~~The~~ BLM has considered climate change, its effects on public lands ~~resources~~ and public land users, and how BLM decisions contribute to climate change ~~for many years~~, primarily through ~~the~~ NEPA analyses for land use planning and project authorizations~~and NEPA analysis process~~. BLM began working on formal climate change policy in 2008 through issuance of an Instruction Memorandum (IM), transmitting draft guidance on incorporating climate change into land use planning and NEPA documents. In 2010, the Council on Environmental Quality (CEQ) released a document entitled "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emission" for review by the public and agencies. The CEQ issued revised draft guidance in December of 2014 for review and comment. Final CEQ guidance was issued in August of 2016.

(b) (5) [redacted]

BLM CLIMATE CHANGE ACTIONS

The ~~Bureau of Land Management (~~BLM~~)~~ has adopted or is in the process of developing the following list of actions relating to the guidance identified in Secretarial Order 3349 and the 2016 ~~Council on Environmental ~~"CEQ's ~~"~~"~~Quality's ~~"Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews."

1. **BLM Permanent IM No. 2017-003, The Council on Environmental Quality Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews** (December 2016). The IM transmits CEQ guidance on considering climate change in NEPA analysis. It also provides specific step-down guidance for how to calculate the "downstream" or indirect greenhouse gas emissions associated with fossil fuel actions (coal, oil, and gas), when production estimates are reasonably foreseeable.

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2. **BLM ~~Instructional Memorandum~~IM, Considering Climate Change in NEPA Documents** (never issued). This draft policy was intended to provide BLM-specific step-down guidance based on CEQ guidance and Department of the Interior Office of Environmental Policy and Compliance (OEPC) guidance on considering climate change in NEPA analysis. Topics included land use and carbon sequestration, biogenic emissions associated with prescribed- and wild-fire, and the social cost of carbon.

Prior to (b) (5) issuance of (b) (5) [redacted] the documents listed in SO 3349, the BLM took the following actions of note related to climate change.~~:~~

1. **BLM New Mexico ~~Instructional Memorandum~~IM No. ~~IM-~~NM-2013-022, Availability of Updated Air Resources Technical Report (ARTR); Use of Environmental Assessment (EA) Template Air Quality and Climate Change Language for Applications for Permit to Drill (APDs) and Lease Sales** (June 2013). The IM instructed ~~BLM New Mexico~~ District ~~Office~~ and Field Offices to use the latest version of the BLM New Mexico Air Resources Technical Report, and provided template language for use in NEPA environmental analysis documents, to address air quality and climate change impacts.
2. **BLM Oregon/Washington ~~Instructional Memorandum~~IM No. ~~IM-~~OR-2010-012, Analysis of Greenhouse Gas Emissions and Consideration of Climate Change in National Environmental Policy Act Documents** (January 2010). The IM provided ~~BLM Oregon/Washington State Office~~ guidance on analyzing greenhouse gas emissions and addressing changing climate conditions in NEPA documents. The IM expired in October 2011.
3. **BLM ~~Instructional Memorandum~~IM No. 2008-171, Guidance on Incorporating Climate Change into Planning and NEPA Documents** (August 2008). The IM transmitted draft guidance on ~~BLM offices to follow to adequately~~ incorporating climate change considerations into the Land Use Planning/NEPA analysis process.

BLM has also developed tools to assist in assessing emissions, including the following:

1. **Tool: BLM Emissions Inventory Toolkit.** The BLM Washington Office is developing an Emissions Inventory Toolkit, scheduled for completion in September 2017, which would consolidate and enhance existing emissions inventory tools. The Emissions Inventory Toolkit would be a web-based application for calculating emissions from criteria pollutants, hazardous air pollutants and greenhouse gases. It would store emissions inventories from various projects to assess cumulative emissions, and would include a modeling component for near-field impacts analysis. The toolkit would include a library to store documents and reports. The toolkit would be useful in streamlining air analyses for NEPA and General Conformity requirements and showing whether air quality standards or management goals would be met.
2. **Tool: BLM Colorado Emissions Inventory Calculator.** The BLM Colorado emissions calculator estimates air resources emissions, including greenhouse gases, with the goal of

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providing technical consistency and efficiency in gathering data on emissions-generating activities for use in NEPA analyses. - The ability of the tool to gather information from external sources to be compiled for analysis has led to faster processing times for projects requiring air analysis. This tool would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.

3. **Tool~~s~~: BLM Oregon/Washington carbon calculators.** Four of the BLM western Oregon Districts have developed carbon storage and greenhouse gas calculators to support environmental analyses, primarily timber sales. Key features of these tools would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
4. **Tool~~s~~: BLM New Mexico emissions calculators.** In BLM New Mexico, three calculators are available to estimate air resources emissions, including greenhouse gases, for use in NEPA environmental analysis documents associated with applications for permit to drill and oil and gas lease sales. Key features of these tools would be consolidated into the BLM Emissions Inventory Toolkit mentioned above.
5. **Report: Greenhouse Gas & Climate Change Report.** The Greenhouse Gas and Climate Change Report provides a database and air emissions tool to calculate greenhouse gas emissions for the base year database and the out-year projections for 10 western states. The report includes emissions associated with production and consumption activities, separated by Federal and non-Federal lands for coal, oil, natural gas, and natural gas liquids, for incorporation by reference into NEPA analyses. The reports would be housed in the library section of the BLM Emissions Inventory Toolkit mentioned above.

In addition to the policies and tools listed above, the BLM has taken a wide variety of actions over the years to assess and address the risks associated with wildland fire, invasive plants and animals, drought and other environmental changes that may be caused, in part, by climate change. -Examples of such adaptation actions include, helping develop and implement the National Cohesive Wildland Fire Management Strategy, participating in the work of the National Invasive Species Council, working with the State of Montana and the National Drought Resilience Partnership to build drought resilience in the Upper Missouri River Basin, synthesizing and considering ecoregional information related to impacts of climate change on resources BLM manages in land use planning, and partnering with individual livestock permittees to ~~help them~~ adapt ~~to~~ their operations to be more resilient to wildland fire and drought.

NEXT STEPS

In responding to SO 3349, the BLM has focused primarily on policies that have been adopted since the date of the documents specified in the Order. The BLM has applied mitigation and considered climate change in its decision-making and use authorizations for years, encompassing thousands of individual actions and decisions. Several laws, such as the National Historic Preservation Act and the National Environmental Policy Act, require the BLM to consider mitigation in its decision-making processes. Courts have also weighed in on the need for the BLM to consider both mitigation and climate change, including greenhouse gas emissions. (b) (5) [redacted]

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(b) (5) [redacted]

(b) (5) [redacted] the BLM recommends ~~that consideration be given to~~ reconsideration or modification of these policies, rather than outright rescission. ~~Careful consideration of these requirements should be given when determining whether to modify or rescind these policies. Any modifi~~

(b) (5) [redacted] In general, BLM believes the primary mitigation-related issues of concern relate to compensation and recommends that reconsideration of its mitigation policies focus on its approach to compensation in ongoing or future land use plans and ongoing or future projects, such as which resources should be compensated for and what standard(s) should be applied when compensatory mitigation is appropriate (e.g., no net loss, net conservation gain).

(b) (5) [redacted], the BLM requests clarification on whether reconsideration should focus on analyzing the impacts of BLM's land use authorizations on climate change (e.g., greenhouse gases) or should also include reconsideration of BLM's adaptation actions (e.g., drought, invasive species, fire and other changes that may be related to climate change). In general, BLM believes there is broad public support for BLM's adaptation related actions and recommends that reconsideration focus on consideration of greenhouse gases, such as evaluation of downstream effects.

(b) (5) [redacted]

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Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:37 PM

Conversation Contents

S.O. 3349 -- Draft Information/briefing memo (WO-300)

"Dorman, Wendy" <wendy.dorman@sol.doi.gov>

From:	"Dorman, Wendy" <wendy.dorman@sol.doi.gov>
Sent:	Fri Apr 07 2017 15:09:25 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>
CC:	Briana Collier <briana.collier@sol.doi.gov>, "Russell, Gregory" <gregory.russell@sol.doi.gov>, Aaron Moody <aaron.moody@sol.doi.gov>, Richard McNeer <richard.mcneer@sol.doi.gov>, "Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
Subject:	S.O. 3349 -- Draft Information/briefing memo (WO-300)

Tim, Lonny, Shelley--

Could you please send the Solicitor's Office (DMR and DLR) an electronic version of the draft WO-300 memo that you distributed at the meeting today on S.O. 3349? I've copied the attorneys in DLR and DMR who will review the memo.

Tim Spisak requested that SOL review be completed by **Thursday, April 13**. He said the final memo is due in the Secretary's Office by April 19. Please let us know if these dates change.

Thank you very much.

Wendy

Wendy S. Dorman
U.S. Department of the Interior
Office of the Solicitor
Division of Mineral Resources
Phone: (202) 208-5312

---------- Forwarded message ----------
From: **Collier, Briana** <briana.collier@sol.doi.gov>
Date: Fri, Apr 7, 2017 at 3:40 PM
Subject: Re: final draft 3349 memo
To: "Dorman, Wendy" <wendy.dorman@sol.doi.gov>

I don't think DLR has it electronically yet either.

Briana Collier
Attorney-Adviser, Division of Mineral Resources
U.S. Department of the Interior, Office of the Solicitor
1849 C Street NW, Washington, D.C. 20240
Office: (202) 208-4853

On Fri, Apr 7, 2017 at 3:19 PM, Dorman, Wendy <wendy.dorman@sol.doi.gov> wrote:

All,

Did you receive an electronic copy of WO-300's memo that was distributed at today's meeting? If not, I'll obtain a copy from Lonnie Bagley or Tim Spisak and will forward the memo to you.

Greg, thanks for sending us the memo prepared by WO 200 today.

Wendy

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On Fri, Apr 7, 2017 at 12:41 PM, Russell, Gregory <gregory.russell@sol.doi.gov> wrote:

---------- Forwarded message ----------
From: **Kelleher, Karen** <kkelleh@blm.gov>
Date: Fri, Apr 7, 2017 at 12:36 PM
Subject: final draft 3349 memo
To: Aaron Moody <aaron.moody@sol.doi.gov>, Christopher McAlear <cmcalear@blm.gov>, Gregory Russell <gregory.russell@sol.doi.gov>, Kristin Bail <kbail@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Nikki Moore <nmoore@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Steve Tryon <stryon@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Timothy Spisak <tspisak@blm.gov>

for 1pm.

--

Karen Kelleher

Deputy Assistant Director - Resources and Planning

Main Interior room 5644

kkelleh@blm.gov

202-208-4896

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Fri Apr 07 2017 15:22:56 GMT-0600 (MDT)
To:	"Dorman, Wendy" <wendy.dorman@sol.doi.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Briana Collier <briana.collier@sol.doi.gov>, "Russell, Gregory" <gregory.russell@sol.doi.gov>, Aaron Moody <aaron.moody@sol.doi.gov>, Richard McNeer <richard.mcneer@sol.doi.gov>, "Hawbecker, Karen" <karen.hawbecker@sol.doi.gov>
Subject:	Re: S.O. 3349 -- Draft Information/briefing memo (WO-300)

Hi Wendy,

We are going to be making some edits to the memo based on input from today's meeting. We will send the revised version of Monday.

Thanks, Shelley

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> >
> > for 1pm.
> >
> > --
> >
> > Karen Kelleher
> >
> > Deputy Assistant Director - Resources and Planning
> >
> > Main Interior room 5644
> >
> > kkelleh@blm.gov
> >
> > 202-208-4896

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"Dorman, Wendy" <wendy.dorman@sol.doi.gov>

From:	"Dorman, Wendy" <wendy.dorman@sol.doi.gov>
Sent:	Fri Apr 07 2017 15:47:53 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
CC:	Briana Collier <briana.collier@sol.doi.gov>
Subject:	Re: S.O. 3349 -- Draft Information/briefing memo (WO-300)

Hi Shelley,

Thanks for the update. We'll look forward to the new version on Monday.

Have a good weekend.

Wendy

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> > > ---------- Forwarded message ----------
> > > From: **Kelleher, Karen** <kkelleh@blm.gov>

Date: Fri, Apr 7, 2017 at 12:36 PM
Subject: final draft 3349 memo
To: Aaron Moody <aaron.moody@sol.doi.gov>, Christopher McAlear <cmcalear@blm.gov>, Gregory Russell <gregory.russell@sol.doi.gov>, Kristin Bail <kbail@blm.gov>, Lonny Bagley <lbagley@blm.gov>, Nikki Moore <nmoore@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Steve Tryon <stryon@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Timothy Shannon <tshannon@blm.gov>, Timothy Spisak <tspisak@blm.gov>

for 1pm.

--

Karen Kelleher

Deputy Assistant Director - Resources and Planning

Main Interior room 5644

kkelleh@blm.gov

202-208-4896

--
Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:37 PM

Conversation Contents

Policy Review Discussion

Attachments:

/9. Policy Review Discussion/3.1 Briefing Memo_2017_0405_track_changes.docx
/9. Policy Review Discussion/3.2 Briefing Memo_2017_0405_clean.docx
/9. Policy Review Discussion/4.1 Briefing Memo_2017_0405_clean.docx
/9. Policy Review Discussion/5.1 Briefing Memo_2017_0405_clean.docx

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed Apr 05 2017 07:50:35 GMT-0600 (MDT)
To:	Lonny Bagley <lbagley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Erica Pionke <epionke@blm.gov>, Alfred Elser <aelser@blm.gov>, "Donald (Don) Buhler" <dbuhler@blm.gov>, Mitchell Leverette <mleveret@blm.gov>, John Kalish <jkalish@blm.gov>, Steven Wells <s1wells@blm.gov>, Brenda Wilhight <bwilhigh@blm.gov>
CC:	Ruthie Jefferson <rjefferson@blm.gov>
Subject:	Policy Review Discussion

To facilitate the effort to review these policy items, I'm going to suggest we all call-in with the docs open for discussion. That will allow us to quickly go through the list and Shelley will then add in/take out any that we wish adjust. Please forward to others that you want on the call.

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
1849 C Street, NW
Washington, D.C. 20240
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>

Sent:	Wed Apr 05 2017 10:46:28 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Policy Review Discussion

Tim and Lonny,

Below is a link to the March 28, 2017 Executive Order that prompted the Secretarial Order Secretarial 3349:
https://11111011100.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energy-independence-and-economi-1

For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

Our memo should identify existing Department Actions that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

On Wed, Apr 5, 2017 at 9:50 AM, Timothy Spisak <tspisak@blm.gov> wrote:

> To facilitate the effort to review these policy items, I'm going to suggest we all call-in with the docs open for discussion. That will allow us to quickly go through the list and Shelley will then add in/take out any that we wish adjust. Please forward to others that you want on the call.
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> Acting Assistant Director,
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> 1849 C Street, NW
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Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Apr 05 2017 11:30:28 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Lonny Bagley <lbagley@blm.gov>
Subject:	Re: Policy Review Discussion
Attachments:	Briefing Memo_2017_0405_track_changes.docx Briefing Memo_2017_0405_clean.docx

Tim,

I made a couple additional changes shown in track changes in attached version. Also attached is a clean version for you to send to WO-200.

On Wed, Apr 5, 2017 at 9:50 AM, Timothy Spisak <tspisak@blm.gov> wrote:

> To facilitate the effort to review these policy items, I'm going to suggest we all call-in with the docs open for discussion. That will allow us to quickly go through the list and Shelley will then add in/take out any that we wish adjust. Please forward to others that you want on the call.
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--
Shelley McGinnis, Ph.D.
Resource Advisor
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Energy, Minerals, and Realty Management
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Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Thu Apr 06 2017 06:39:24 GMT-0600 (MDT)
To:	Karen Kelleher <kkelleh@blm.gov>, Steve Tryon <stryon@blm.gov>
CC:	"Bagley, Lonny R" <lbagley@blm.gov>, Shelley McGinnis

	<smcginnis@blm.gov>
Subject:	FW: Policy Review Discussion
Attachments:	Briefing Memo_2017_0405_clean.docx

Karen/Steve: attached is WO300's list of policy IMs that we believe fall into the requirements of SO. It is written up as a memo with all the parts that you all can use as you see fit. Lets' us know if you would like to discuss, we may have some redundant items.

Thanks!
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

"Kelleher, Karen" <kkelleh@blm.gov>

From:	"Kelleher, Karen" <kkelleh@blm.gov>
Sent:	Thu Apr 06 2017 08:38:26 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, Steve Tryon <stryon@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, Nikki Moore <nmoore@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Subject:	Re: FW: Policy Review Discussion
Attachments:	Briefing Memo_2017_0405_clean.docx

HI all,
seems like it would be helpful to have a follow up discussion tomorrow on what we have put together for response to 3349 to be sure we all understand the various components and how they are responsive. if all are agreeable, i will work on finding a time.

and on that front, 200 staff are finishing up the draft for responses to mitigation and climate and we will share those later today (300's draft list of other policies that may impact energy development is attached).

Karen

On Thu, Apr 6, 2017 at 8:39 AM, Timothy Spisak <tspisak@blm.gov> wrote:

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> (202) 251-3079 cell
> **********

--

Karen Kelleher

Deputy Assistant Director - Resources and Planning

Main Interior room 5644

kkelleh@blm.gov

202-208-4896

"Moore, Nikki" <nmoore@blm.gov>

From:	"Moore, Nikki" <nmoore@blm.gov>
Sent:	Thu Apr 06 2017 08:43:46 GMT-0600 (MDT)
To:	"Kelleher, Karen" <kkelleh@blm.gov>
CC:	Timothy Spisak <tspisak@blm.gov>, Steve Tryon <stryon@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>, Shelley McGinnis <smcginnis@blm.gov>, "Bail, Kristin" <kbail@blm.gov>, Thomas Bartholomew <tbarthol@blm.gov>, Christopher McAlear <cmcalear@blm.gov>
Subject:	Re: FW: Policy Review Discussion

Sounds great!

Nikki Moore
Acting Deputy Assistant Director, National Conservation Lands and Community Partnerships
Bureau of Land Management, Washington D.C.
202.219.3180 (office)
202.740.0835 (cell)

On Thu, Apr 6, 2017 at 10:38 AM, Kelleher, Karen <kkelleh@blm.gov> wrote:

> HI all,
> seems like it would be helpful to have a follow up discussion tomorrow on what we have put together for response to 3349 to be sure we all understand the various components and how they are responsive. if all are agreeable, i will work on finding a time.
>
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> Karen/Steve: attached is WO300's list of policy IMs that we believe fall into the requirements of SO. It is written up as a memo with all the parts that you all can use as you see fit. Lets' us know if you would like to discuss, we may have some redundant items.
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Karen Kelleher

Deputy Assistant Director - Resources and Planning

Main Interior room 5644

kkelleh@blm.gov

202-208-4896

INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: April 5~~4~~, 2017

FROM: Michael D. Nedd, Acting Director – Bureau of Land Management

SUBJECT: Secretarial Order 3349 - American Energy Independence

BACKGROUND
Secretarial Order (S.O.) 3349, which was signed on March 29, 2017, implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017, entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (DOI) in order to better balance conservation strategies and policies with the need for creating jobs.

DISCUSSION
Following is a summary of the actions to be taken pursuant to S.O. 3349 that relate to the Bureau of Land Management (BLM) Energy, Minerals and Realty Management Directorate. Section 5c.(i) of S.O. 3349 states that the BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015). Section 5c.(ii) states that within 21 days, the BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O. (b) (5) [redacted]

Section 5c.(v) of S.O. 3349 states that within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden ~~(as that term is defined in the March 28, 2017 E.O.)~~ the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources. The term burden as defined in the March 28, 2017 E.O. means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources. In addition to the Hydraulic Fracturing and Waste Prevention Rules, following is a preliminary list of the Actions with the highest burden on BLM energy resources that have been identified by the BLM Energy, Minerals and Realty Management Directorate.

Fluid Minerals

Title: Instruction Memorandum (IM) 2010-117, Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews
Date: 5/17/2010

Purpose: Establishes a process for ensuring orderly, effective, timely, and environmentally responsible leasing of oil and gas resources on Federal lands. The leasing process established in this IM will create more certainty and predictability, protect multiple-use values when the BLM makes leasing decisions, and provide for consideration of natural and cultural resources as well as meaningful public involvement.

Title: IM 2013-101, Oil and Gas Leasing Reform – Master Leasing Plans
Date: 4/15/2013
Purpose: Supplements existing BLM policy and guidance for processing Applications for Permit to Drill and outlines the regulatory and statutory requirements of Onshore Oil and Gas Order Number 1 (Order 1) and the Energy Policy Act of 2005.

Title: IM 2013-177, NEPA Compliance for Oil and Gas Lease Reinstatement Petitions
Date: 8/13/2013
Purpose: Directs all oil and gas leasing offices to: 1) ensure Resource Management Plan conformance; 2) evaluate the adequacy of existing NEPA analysis and documentation; and 3) complete any necessary new or supplemental NEPA analysis and documentation before approving a Class I or Class II oil and gas lease reinstatement petition.

Title: IM 2016-140, Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments – Oil & Gas Leasing and Development Sequential Prioritization
Date: 9/1/2016
Purpose: Provides guidance on prioritizing implementation decisions for BLM oil and gas leasing and development, to be consistent with the Approved Resource Management Plan Amendments for the Rocky Mountain and Great Basin Greater Sage-Grouse Regions and nine Approved Resource Management Plans in the Rocky Mountain Greater Sage-Grouse Region (collectively referred to as the GRSG Plans). This IM applies to activities in the areas covered by both the Rocky Mountain and Great Basin Regions Records of Decision, issued by the BLM in September 2015. This IM also contains reporting requirements for communication between State Offices and the Washington Office.

Title: Onshore Orders Nos. 3, 4 and 5
Date: All three final rules were published in the *Federal Register* on 11/17/2016, and became effective on 1/17/2017
Purpose: "Onshore Orders" is shorthand for the three concurrent rulemakings that replaced the BLM's site security, oil measurement, and gas measurement regulations contained in Onshore Oil and Gas Orders Nos. 3, 4 and 5, which had been in place since 1989. The recent rulemakings resulted in new site security, oil measurement, and gas measurement regulations for Onshore Federal and Indian oil and gas production and are codified in the Code of Federal Regulations at 43 C.F.R. part 3170. These rulemakings were prompted by external and internal oversight reviews which found many of the BLM's production measurement and accountability policies to be outdated and inconsistently applied. The new rules also address some of the Government Accountability Office concerns for High Risk with regards to the Department's production accountability. ~~Furthermore, the new measurement requirements potentially provide additional revenues to states and the Federal Treasury, including the Indian Trust.~~

Solid Minerals

Title: IM 2014-156, Supplemental Guidance on Processing Royalty Rate Reduction Applications
Date: 9/26/2014
Purpose: Provides State Directors notice that they must provide the Washington Office (WO) a royalty rate reduction (RRR) justification with a copy of their draft decision when requesting WO concurrence. A checklist is attached to ensure that all required RRR application elements are included. Further, this IM augments and reiterates the existing policy for processing RRR applications.

(b) (5) [redacted]

(b) (5) [redacted]

Title: IM 2017-035, Publicly Accessible Bureau of Land Management Websites for Information Regarding Federal Coal Program Leasing, Exploration Licensing, and Royalty Rate Reductions
Date: 1/19/2017
Purpose: Improves transparency in administering the Federal coal program. Responds to stakeholder suggestions for improved access to information on the Federal coal program, and replaces the policy and guidance previously provided in Washington Office (WO)-IM-2014-159, *Publicly Accessible Bureau of Land Management Websites for Coal Leasing Information*. This IM directs the BLM offices to post and update specified Federal coal program information on BLM publicly accessible websites, including, as described more fully below: (1) information about Federal coal lease applications and leases, lease modification applications, and lease modifications; (2) information about exploration licensing applications and exploration licenses; (3) information about royalty rate reduction applications; and (4) summary information on the Federal coal program.

Title: IM 2017-037, Waste Mine Methane Policy
Date: 1/20/2017
Purpose: Establishes national policies and processes to foster voluntary activities by operators to capture waste mine methane from underground coal or other solid mineral mines. These policies will allow waste mine methane to be put to productive use, where economical, and reduce environmental impacts, while ensuring continued safe underground mining operations on Federal lands.

Other

(b) (5) [redacted]

Title: IM 2016-140, Process for Assessing, Coordinating, and Implementing Greater Sage-Grouse Land Use Plan Adaptive Management Hard and Soft Triggers
Date: 9/1/2016
Purpose: Directs the implementation of the land use plan adaptive management process to evaluate and apply hard and soft triggers and responses, as detailed in the Greater Sage-Grouse Approved Resource Management Plans and Amendments, Great Basin and Rocky Mountain Greater Sage-Grouse Regional Records of Decision (September 21, 2015).

(b) (5) [redacted]

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[redacted]

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Date: 9/1/2016
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(b) (5) [redacted]

Label: "FOIA_2017_00883"

Created by:smcginnis@blm.gov

Total Messages in label:64 (10 conversations)

Created: 11-16-2017 at 15:37 PM

Conversation Contents

Policy Review

Attachments:

/10. Policy Review/1.1 E&M Policy 2009-2016v3.xlsx
/10. Policy Review/8.1 Briefing Memo_2017_0404.docx
/10. Policy Review/9.1 Briefing Memo_2017_0404.docx
/10. Policy Review/9.2 E&M Policy 2009-2016v3.xlsx
/10. Policy Review/10.1 Briefing Memo_2017_0404.docx
/10. Policy Review/10.2 E&M Policy 2009-2016v3.xlsx

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Mon Apr 03 2017 11:06:22 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>, Ruthie Jefferson <rjefferson@blm.gov>
CC:	"Bagley, Lonny R" <lbagley@blm.gov>
Subject:	Policy Review
Attachments:	E&M Policy 2009-2016v3.xlsx

Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.

Ruthie: Lets schedule 30 minutes of time on Wednesday at 1, 1:30 OR 2:30.
Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
1849 C Street, NW
Washington, D.C. 20240
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Mon Apr 03 2017 14:31:55 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
CC:	Ruthie Jefferson <rjefferson@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>
Subject:	Re: Policy Review

OK, will do. I see that Ruthie scheduled the meeting at 1 pm on Wednesday.

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:

> Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.
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> Ruthie: Lets schedule 30 minutes of time on Wednesday at 1, 1:30 OR 2:30.
> Thanks
> Tim
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> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
>
> **********
> Timothy 'Tim' R. Spisak
> Acting Assistant Director,
> Energy, Minerals & Realty Management, WO-300
> DOI-Bureau of Land Management
> 1849 C Street, NW
> Washington, D.C. 20240
> tspisak@blm.gov
> (202) 208-4201 office
> (202) 251-3079 cell
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--
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Cell: 202-578-3010
Email: smcginnis@blm.gov

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Mon Apr 03 2017 14:41:07 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
Subject:	Re: Policy Review

Thanks

Sent from my iPhone

On Apr 3, 2017, at 4:31 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> OK, will do. I see that Ruthie scheduled the meeting at 1 pm on Wednesday.
>
> On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
>
> > Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.
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> Cell: 202-578-3010
> Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Apr 04 2017 12:12:12 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
Subject:	Re: Policy Review

Tim - what does the color coding in your spreadsheet represent?

Thanks, Shelley

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:

> Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.
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Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Tue Apr 04 2017 12:29:16 GMT-0600 (MDT)
To:	Shelley McGinnis <smcginnis@blm.gov>
Subject:	RE: Policy Review

Each color represents different divisions. The particular color isn't relevant.

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
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tspisak@blm.gov

(202) 208-4201 office
(202) 251-3079 cell
****

From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Tuesday, April 04, 2017 2:12 PM
To: Timothy Spisak
Subject: Re: Policy Review

Tim - what does the color coding in your spreadsheet represent?

Thanks, Shelley

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.

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Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Apr 04 2017 13:09:19 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>
Subject:	Re: Policy Review

OK, I grouped them in the same way for the memo that I am drafting. There are nine identified as "High" in the spreadsheet. Plus I am adding the others we discussed. Will send first cut by COB and I can refine tomorrow morning if you and Lonny have edits.

On Tue, Apr 4, 2017 at 2:29 PM, Timothy Spisak <tspisak@blm.gov> wrote:

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>
> Thanks
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> 'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997
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> **********
>
> **From:** McGinnis, Shelley [mailto:smcginnis@blm.gov]
> **Sent:** Tuesday, April 04, 2017 2:12 PM
> **To:** Timothy Spisak
> **Subject:** Re: Policy Review
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> Tim - what does the color coding in your spreadsheet represent?
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> Thanks, Shelley
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> On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
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> Shelley McGinnis, Ph.D.

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Email: smcginnis@blm.gov

Timothy Spisak <tspisak@blm.gov>

From: Timothy Spisak <tspisak@blm.gov>
Sent: Tue Apr 04 2017 13:09:52 GMT-0600 (MDT)
To: "McGinnis, Shelley" <smcginnis@blm.gov>
Subject: Re: Policy Review

VG
Thanks

Sent from my iPhone

On Apr 4, 2017, at 3:09 PM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

> OK, I grouped them in the same way for the memo that I am drafting. There are nine identified as "High" in the spreadsheet. Plus I am adding the others we discussed. Will send first cut by COB and I can refine tomorrow morning if you and Lonny have edits.
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> On Tue, Apr 4, 2017 at 2:29 PM, Timothy Spisak <tspisak@blm.gov> wrote:
>> Each color represents different divisions. The particular color isn't relevant.
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From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Tuesday, April 04, 2017 2:12 PM
To: Timothy Spisak
Subject: Re: Policy Review

Tim - what does the color coding in your spreadsheet represent?

Thanks, Shelley

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.

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"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Tue Apr 04 2017 14:15:23 GMT-0600 (MDT)
To:	Timothy Spisak <tspisak@blm.gov>, "Bagley, Lonny R" <lbagley@blm.gov>
Subject:	Re: Policy Review
Attachments:	Briefing Memo_2017_0404.docx

Tim and Lonny,

Attached is a first cut for your review. Thanks, Shelley

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:

> Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.
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Email: smcginnis@blm.gov

Timothy Spisak <tspisak@blm.gov>

From:	Timothy Spisak <tspisak@blm.gov>
Sent:	Wed Apr 05 2017 07:25:42 GMT-0600 (MDT)
To:	BLM_WO_300_LT <blm_wo_300_lt@blm.gov>

CC:	"Bagley, Lonny R" <lbagley@blm.gov>
Subject:	FW: Policy Review
Attachments:	Briefing Memo_2017_0404.docx E&M Policy 2009-2016v3.xlsx

For the 1 pm discussion, the spreadsheet is attached for comparison. Please come prepared to discuss whether to add or subtract.

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
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tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Tuesday, April 04, 2017 4:15 PM
To: Timothy Spisak; Bagley, Lonny R
Subject: Re: Policy Review

Tim and Lonny,

Attached is a first cut for your review. Thanks, Shelley

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.

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Cell: 202-578-3010
Email: smcginnis@blm.gov

"McGinnis, Shelley" <smcginnis@blm.gov>

From:	"McGinnis, Shelley" <smcginnis@blm.gov>
Sent:	Wed Apr 05 2017 07:59:30 GMT-0600 (MDT)
To:	Erica Pionke <epionke@blm.gov>
Subject:	Fwd: FW: Policy Review
Attachments:	Briefing Memo_2017_0404.docx E&M Policy 2009-2016v3.xlsx

FYI - see attached. This is what I worked on yesterday. It is for the 1 pm discussion today.

---------- Forwarded message ----------
From: **Timothy Spisak** <tspisak@blm.gov>
Date: Wed, Apr 5, 2017 at 9:25 AM
Subject: FW: Policy Review
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>
Cc: "Bagley, Lonny R" <lbagley@blm.gov>

For the 1 pm discussion, the spreadsheet is attached for comparison. Please come prepared to discuss whether to add or subtract.

Thanks
Tim

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From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Tuesday, April 04, 2017 4:15 PM
To: Timothy Spisak; Bagley, Lonny R
Subject: Re: Policy Review

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Attached is a first cut for your review. Thanks, Shelley

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
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Email: smcginnis@blm.gov

"Pionke, Erica" <epionke@blm.gov>

From: "Pionke, Erica" <epionke@blm.gov>
Sent: Wed Apr 05 2017 10:08:14 GMT-0600 (MDT)
To: "McGinnis, Shelley" <smcginnis@blm.gov>
Subject: Re: FW: Policy Review

Thanks!

On Wed, Apr 5, 2017 at 9:59 AM, McGinnis, Shelley <smcginnis@blm.gov> wrote:

FYI - see attached. This is what I worked on yesterday. It is for the 1 pm discussion today.

---------- Forwarded message ----------
From: **Timothy Spisak** <tspisak@blm.gov>
Date: Wed, Apr 5, 2017 at 9:25 AM
Subject: FW: Policy Review
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>
Cc: "Bagley, Lonny R" <lbagley@blm.gov>

For the 1 pm discussion, the spreadsheet is attached for comparison. Please come prepared to discuss whether to add or subtract.

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(202) 208-4201 office
(202) 251-3079 cell
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From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Tuesday, April 04, 2017 4:15 PM
To: Timothy Spisak; Bagley, Lonny R
Subject: Re: Policy Review

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On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
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Erica Pionke, JD, PMP
WO-301 Realty Specialist - Roads, Railroads, Pipelines
Bureau of Land Management
20 M Street, SE, Room 2134 LM
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Direct: (202) 912-7219
Cell: (202) 570-2624
epionke@blm.gov

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Youtube, Flickr, Pinterest, Steller, Vine, LInkedIn

"Lopez, Jayme" <j06lopez@blm.gov>

From:	"Lopez, Jayme" <j06lopez@blm.gov>
Sent:	Wed Apr 05 2017 11:06:37 GMT-0600 (MDT)
To:	"McGinnis, Shelley" <smcginnis@blm.gov>
Subject:	Re: FW: Policy Review

Shelley,

On the call as a silent party... but wanted to share with you that the new link to BLM's public policies can be found at the following link.

https://www.blm.gov/media/blm-policy

Jayme Lopez
Renewable Energy Coordination Office
Office: (202) 912-7547
Cell: (202) 740-0683

On Wed, Apr 5, 2017 at 11:03 AM, Kalish, John <jkalish@blm.gov> wrote:

> A 1pm call was set-up an hour ago to discuss these IMs. I am going back looking at e-mails when we discussed these. Feel free to call in if you want.....
>
> ---------- Forwarded message ----------
> From: **Timothy Spisak** <tspisak@blm.gov>
> Date: Wed, Apr 5, 2017 at 9:25 AM
> Subject: FW: Policy Review
> To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>
> Cc: "Bagley, Lonny R" <lbagley@blm.gov>
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> (202) 208-4201 office
> (202) 251-3079 cell
> **********
>
> **From:** McGinnis, Shelley [mailto:smcginnis@blm.gov]
> **Sent:** Tuesday, April 04, 2017 4:15 PM
> **To:** Timothy Spisak; Bagley, Lonny R
> **Subject:** Re: Policy Review
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> Tim and Lonny,
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>
> On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
> Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.
>
> Ruthie: Lets schedule 30 minutes of time on Wednesday at 1, 1:30 OR 2:30.
> Thanks
> Tim
>
> 'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
>
> **********
> Timothy 'Tim' R. Spisak

Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
1849 C Street, NW
Washington, D.C. 20240
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

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Shelley McGinnis, Ph.D.
Resource Advisor
Bureau of Land Management
Energy, Minerals, and Realty Management
1849 C Street NW, Room 5625
Washington, DC 20240
Office: 202-208-6551
Cell: 202-578-3010
Email: smcginnis@blm.gov

--
John R. Kalish, Chief
Office of Renewable Energy Coordination (WO-301)
Bureau of Land Management
20 M Street SE, Rm. 2134LM
Washington DC 20003
202-912-7312 office
202-306-3681 cell

"McGinnis, Shelley" <smcginnis@blm.gov>

From: "McGinnis, Shelley" <smcginnis@blm.gov>
Sent: Wed Apr 05 2017 12:13:18 GMT-0600 (MDT)
To: "Lopez, Jayme" <j06lopez@blm.gov>
Subject: Re: FW: Policy Review

Thanks!

On Wed, Apr 5, 2017 at 1:06 PM, Lopez, Jayme <j06lopez@blm.gov> wrote:

Shelley,

On the call as a silent party... but wanted to share with you that the new link to BLM's public policies can be found at the following link.

https://www.blm.gov/media/blm-policy

Jayme Lopez
Renewable Energy Coordination Office
Office: (202) 912-7547
Cell: (202) 740-0683

On Wed, Apr 5, 2017 at 11:03 AM, Kalish, John <jkalish@blm.gov> wrote:

A 1pm call was set-up an hour ago to discuss these IMs. I am going back looking at e-mails when we discussed these. Feel free to call in if you want.....

---------- Forwarded message ----------
From: **Timothy Spisak** <tspisak@blm.gov>
Date: Wed, Apr 5, 2017 at 9:25 AM
Subject: FW: Policy Review
To: BLM_WO_300_LT <blm_wo_300_lt@blm.gov>
Cc: "Bagley, Lonny R" <lbagley@blm.gov>

For the 1 pm discussion, the spreadsheet is attached for comparison. Please come prepared to discuss whether to add or subtract.

Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997
'Serenity now, insanity later' – Lloyd Braun, *Seinfeld*, 1997

****
Timothy 'Tim' R. Spisak
Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
DOI-Bureau of Land Management
tspisak@blm.gov
(202) 208-4201 office
(202) 251-3079 cell
****

From: McGinnis, Shelley [mailto:smcginnis@blm.gov]
Sent: Tuesday, April 04, 2017 4:15 PM
To: Timothy Spisak; Bagley, Lonny R
Subject: Re: Policy Review

Tim and Lonny,

Attached is a first cut for your review. Thanks, Shelley

On Mon, Apr 3, 2017 at 1:06 PM, Timothy Spisak <tspisak@blm.gov> wrote:
Shelley: As discussed, attached is the spreadsheet with the various IMs promulgated since 2009. Let's do a first cut with those just marked as 'High'. Use the Purpose already in there, and if it makes sense to you then we are good, if not, you might look at the IM to better describe. Group by Program. Looking to get over to 200 later this week and a conversation with 300 LT on Wednesday.

Ruthie: Lets schedule 30 minutes of time on Wednesday at 1, 1:30 OR 2:30.
Thanks
Tim

'Serenity Now!' – Frank Costanza, *Seinfeld*, 1997

****
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Acting Assistant Director,
Energy, Minerals & Realty Management, WO-300
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INFORMATION/BRIEFING MEMORANDUM
FOR THE ASSISTANT SECRETARY – LAND AND MINERALS MANAGEMENT

DATE: April 4, 2017

FROM: Michael D. Nedd, Acting Director – Bureau of Land Management

SUBJECT: Secretarial Order 3349 - American Energy Independence

BACKGROUND
Secretarial Order (S.O.) 3349, which was signed on March 29, 2017, implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017, entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (DOI) in order to better balance conservation strategies and policies with the need for creating jobs.

DISCUSSION
Following is a summary of the actions to be taken pursuant to S.O. 3349 that relate to the Bureau of Land Management (BLM) Energy, Minerals and Realty Management Directorate. Section 5c.(i) of S.O. 3349 states that the BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg*. 16128 (Mar. 26, 2015). Section 5c.(ii) states that within 21 days, the BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary – Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O. (b) (5) [redacted]

Section 5c.(v) of S.O. 3349 states that within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources. In addition to the Hydraulic Fracturing and Waste Prevention Rules, following is a preliminary list of the Actions with the highest burden on BLM energy resources that have been identified by the BLM Energy, Minerals and Realty Management Directorate.

Fluid Minerals

Title: Instruction Memorandum (IM) 2010-117, Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews
Date: 5/17/2010
Purpose: Establishes a process for ensuring orderly, effective, timely, and environmentally responsible leasing of oil and gas resources on Federal lands. The leasing process established in this IM will create more certainty and predictability, protect multiple-use values when the BLM

makes leasing decisions, and provide for consideration of natural and cultural resources as well as meaningful public involvement.

Title: IM 2013-101, Oil and Gas Leasing Reform – Master Leasing Plans
Date: 4/15/2013
Purpose: Supplements existing BLM policy and guidance for processing Applications for Permit to Drill and outlines the regulatory and statutory requirements of Onshore Oil and Gas Order Number 1 (Order 1) and the Energy Policy Act of 2005.

Title: IM 2013-177, NEPA Compliance for Oil and Gas Lease Reinstatement Petitions
Date: 8/13/2013
Purpose: Directs all oil and gas leasing offices to: 1) ensure Resource Management Plan conformance; 2) evaluate the adequacy of existing NEPA analysis and documentation; and 3) complete any necessary new or supplemental NEPA analysis and documentation before approving a Class I or Class II oil and gas lease reinstatement petition.

Title: IM 2016-140, Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments – Oil & Gas Leasing and Development Sequential Prioritization
Date: 9/1/2016
Purpose: Provides guidance on prioritizing implementation decisions for BLM oil and gas leasing and development, to be consistent with the Approved Resource Management Plan Amendments for the Rocky Mountain and Great Basin Greater Sage-Grouse Regions and nine Approved Resource Management Plans in the Rocky Mountain Greater Sage-Grouse Region (collectively referred to as the GRSG Plans). This IM applies to activities in the areas covered by both the Rocky Mountain and Great Basin Regions Records of Decision, issued by the BLM in September 2015. This IM also contains reporting requirements for communication between State Offices and the Washington Office.

Title: Onshore Orders Nos. 3, 4 and 5
Date: All three final rules were published in the *Federal Register* on 11/17/2016, and became effective on 1/17/2017
Purpose: "Onshore Orders" is shorthand for the three concurrent rulemakings that replaced the BLM's site security, oil measurement, and gas measurement regulations contained in Onshore Oil and Gas Orders Nos. 3, 4 and 5, which had been in place since 1989. The recent rulemakings resulted in new site security, oil measurement, and gas measurement regulations for Onshore Federal and Indian oil and gas production and are codified in the Code of Federal Regulations at 43 C.F.R. part 3170. These rulemakings were prompted by external and internal oversight reviews which found many of the BLM's production measurement and accountability policies to be outdated and inconsistently applied. The new rules also address some of the Government Accountability Office concerns for High Risk with regards to the Department's production accountability. Furthermore, the new measurement requirements potentially provide additional revenues to states and the Federal Treasury, including the Indian Trust.

Solid Minerals

Title: IM 2014-156, Supplemental Guidance on Processing Royalty Rate Reduction Applications

Date: 9/26/2014
Purpose: Provides State Directors notice that they must provide the Washington Office (WO) a royalty rate reduction (RRR) justification with a copy of their draft decision when requesting WO concurrence. A checklist is attached to ensure that all required RRR application elements are included. Further, this IM augments and reiterates the existing policy for processing RRR applications.

(b) (5) [redacted]

(b) (5) [redacted]

Title: IM 2017-035, Publicly Accessible Bureau of Land Management Websites for Information Regarding Federal Coal Program Leasing, Exploration Licensing, and Royalty Rate Reductions
Date: 1/19/2017
Purpose: Improves transparency in administering the Federal coal program. Responds to stakeholder suggestions for improved access to information on the Federal coal program, and replaces the policy and guidance previously provided in Washington Office (WO)-IM-2014-159, *Publicly Accessible Bureau of Land Management Websites for Coal Leasing Information*. This IM directs the BLM offices to post and update specified Federal coal program information on BLM publicly accessible websites, including, as described more fully below: (1) information about Federal coal lease applications and leases, lease modification applications, and lease modifications; (2) information about exploration licensing applications and exploration licenses; (3) information about royalty rate reduction applications; and (4) summary information on the Federal coal program.

Title: IM 2017-037, Waste Mine Methane Policy
Date: 1/20/2017
Purpose: Establishes national policies and processes to foster voluntary activities by operators to capture waste mine methane from underground coal or other solid mineral mines. These policies will allow waste mine methane to be put to productive use, where economical, and reduce environmental impacts, while ensuring continued safe underground mining operations on Federal lands.

Other

(b) (5) [redacted]

Title: IM 2016-140, Process for Assessing, Coordinating, and Implementing Greater Sage-Grouse Land Use Plan Adaptive Management Hard and Soft Triggers
Date: 9/1/2016
Purpose: Directs the implementation of the land use plan adaptive management process to evaluate and apply hard and soft triggers and responses, as detailed in the Greater Sage-Grouse Approved Resource Management Plans and Amendments, Great Basin and Rocky Mountain Greater Sage-Grouse Regional Records of Decision (September 21, 2015).

(b) (5) [redacted]

From: Holzel, Fred
To: Thomas, Emily B.
Cc: Barron, Mark S.
Subject: Re: EdgeMarc-follow-up call
Date: Thursday, February 15, 2018 9:53:32 AM

Emily

Good morning. Thank you for the background information. I probably won't be able to review our records regarding how the parcel is characterized prior to our call.

Talk to you later today

Fred

Fred Holzel

Geologist

Eastern States BLM

Northeastern States District

626 E. Wisconsin Avenue, Suite 200

Milwaukee, Wisconsin 53202-4617

Office telephone number: 414-297-4418

Office fax number: 414-297-4409

fholzel@blm.gov

On Wed, Feb 14, 2018 at 4:01 PM, Thomas, Emily B. <ethomas@bakerlaw.com> wrote:

> Fred,
>
> In advance of our call, I wanted to pass on some informative materials to aid our discussion and to raise a preliminary question for our talk:
>
> 1- I have reattached the CA diagram, so you do not need to hunt for it;
>
> 2- The tax parcel covering federal land that would be implicated in our proposed CA is 16-001021.0000.
>
> 3- EdgeMarc has procured a title search and opinion, which showed this parcel is subject to an originating oil and gas lease (lease is attached).
>
> 4- There are two operating shallow wells on this parcel (see attached recent well reports).
>
> 5- The United States was granted this parcel on 9/13/1979, subject to oil and gas leases (WD

176/522, attached with highlighting);

6- Are you able to look in your records to see how the BLM has characterized this parcel for purposes of oil and gas activities, including any considerations regarding this lease and the wells? (16-001021.0000)

Thank you and I look forward to our talk tomorrow,

Emily

From: Holzel, Fred [mailto:fholzel@blm.gov]
Sent: Wednesday, February 14, 2018 4:08 PM
To: Thomas, Emily B. <ethomas@bakerlaw.com>
Subject: Re: EdgeMarc-follow-up call

Thank you

Fred Holzel

Geologist

Eastern States BLM

Northeastern States District

626 E. Wisconsin Avenue, Suite 200

Milwaukee, Wisconsin 53202-4617

Office telephone number: 414-297-4418

Office fax number: 414-297-4409

fholzel@blm.gov

On Wed, Feb 14, 2018 at 2:29 PM, Thomas, Emily B. <ethomas@bakerlaw.com> wrote:

Fred,

By the way, I also circulated an invite, but here is the call-in information again if you need it:

Toll-free dial-in number (U.S. and Canada):

(866) 468-2930

Conference code:

(303) 764-4096

Thanks,

Emily

From: Holzel, Fred [mailto:fholzel@blm.gov]
Sent: Wednesday, February 14, 2018 12:48 PM
To: Thomas, Emily B. <ethomas@bakerlaw.com>
Cc: Barron, Mark S. <mbarron@bakerlaw.com>
Subject: Re: EdgeMarc-follow-up call

Emily

I will talk with you tomorrow at 2pm CST.

Enjoy your Wednesday

Fred

Fred Holzel

Geologist

Eastern States BLM

Northeastern States District

626 E. Wisconsin Avenue, Suite 200

Milwaukee, Wisconsin 53202-4617

Office telephone number: 414-297-4418

Office fax number: 414-297-4409

fholzel@blm.gov

On Wed, Feb 14, 2018 at 11:13 AM, Thomas, Emily B. <ethomas@bakerlaw.com> wrote:

> Fred,
>
> Tomorrow at 2 CT is actually much better for me. Let's go with that. I will circulate a call in number.
>
> Thanks for your flexibility!
>
> Emily
>
> Sent from my iPhone
>
> On Feb 14, 2018, at 11:54 AM, Holzel, Fred <fholzel@blm.gov> wrote:
>
> > Emily
> >
> > Good morning. I was referencing today, Wednesday February 14, 2018, at 2 pm CST. If Thursday February 15, 2018, at the same time works better for you, I can make that time slot available.
> >
> > Let me know.
> >
> > Fred
> >
> > Fred Holzel
> >
> > Geologist
> >
> > Eastern States BLM
> >
> > Northeastern States District
> >
> > 626 E. Wisconsin Avenue, Suite 200
> >
> > Milwaukee, Wisconsin 53202-4617
> >
> > Office telephone number: 414-297-4418
> >
> > Office fax number: 414-297-4409
> >
> > fholzel@blm.gov

On Wed, Feb 14, 2018 at 10:19 AM, Thomas, Emily B. <ethomas@bakerlaw.com> wrote:

> Fred,
>
> Before I circulate an invite, since there may have been a delay on your email transmission, I just wanted to confirm the date and time: do you mean today, February 14 at 2 CT; or tomorrow, February 15?
>
> Thank you,
>
> Emily
>
> Sent from my iPhone
>
> On Feb 14, 2018, at 10:45 AM, Holzel, Fred <fholzel@blm.gov> wrote:
>
> > Emily
> >
> > If tomorrow (Wednesday February 14th) from 2 to 3 pm CST is good, then give me a number to call and we can talk then.
> >
> > Have a good evening.
> >
> > Fred
> >
> > Fred Holzel
> >
> > Geologist
> >
> > Eastern States BLM
> >
> > Northeastern States District
> >
> > 626 E. Wisconsin Avenue, Suite 200
> >
> > Milwaukee, Wisconsin 53202-4617
> >
> > Office telephone number: 414-297-4418
> >
> > Office fax number: 414-297-4409

fholzel@blm.gov

On Tue, Feb 13, 2018 at 3:40 PM, Thomas, Emily B. <ethomas@bakerlaw.com> wrote:

> That would be wonderful.
>
> Thanks so much,
>
> Emily
>
> **From:** Holzel, Fred [mailto:fholzel@blm.gov]
> **Sent:** Monday, February 12, 2018 5:10 PM
> **To:** Thomas, Emily B. <ethomas@bakerlaw.com>
> **Cc:** Barron, Mark S. <mbarron@bakerlaw.com>
> **Subject:** Re: EdgeMarc-follow-up call
>
> Emily
>
> Let me review my schedule and get back to you tomorrow.
>
> Fred
>
> Fred Holzel
>
> Geologist
>
> Eastern States BLM
>
> Northeastern States District
>
> 626 E. Wisconsin Avenue, Suite 200
>
> Milwaukee, Wisconsin 53202-4617
>
> Office telephone number: 414-297-4418
>
> Office fax number: 414-297-4409
>
> fholzel@blm.gov

On Mon, Feb 12, 2018 at 4:08 PM, Thomas, Emily B. <ethomas@bakerlaw.com> wrote:

> Fred,
>
> Mark and I are available on Wednesday from 12-3 MT/1-4 CT/2-5 ET. We are also available Thursday from 1-3 MT/2-4 CT/3-5 ET.
>
> Do any of those times work for you?
>
> Thanks,
>
> Emily
>
> **From:** Holzel, Fred [mailto:fholzel@blm.gov]
> **Sent:** Monday, February 12, 2018 4:43 PM
> **To:** Thomas, Emily B. <ethomas@bakerlaw.com>
> **Cc:** Barron, Mark S. <mbarron@bakerlaw.com>
> **Subject:** Re: EdgeMarc-follow-up call
>
> Ms. Thomas
>
> Good afternoon. I am in the office this week through Thursday, out of the office on Friday. If you would provide suggested dates and times I can evaluate which one works best for me.
>
> Take care
>
> Fred
>
> Fred Holzel
>
> Geologist
>
> Eastern States BLM

Northeastern States District

626 E. Wisconsin Avenue, Suite 200

Milwaukee, Wisconsin 53202-4617

Office telephone number: 414-297-4418

Office fax number: 414-297-4409

fholzel@blm.gov

On Mon, Feb 12, 2018 at 3:31 PM, Thomas, Emily B. <ethomas@bakerlaw.com> wrote:

> Fred,
>
> I hope you are well. Are you available this week for a call with me and colleague, Mark Barron, to discuss some questions we have regarding the draft communitization agreement EdgeMarc is currently preparing?
>
> Thank you very much,
>
> Emily
>
> **Emily Thomas**
> Counsel
>
> ---
>
> <image001.jpg>
> T +1. 303.764.4096
> M +1.412.215.2848
>
> ethomas@bakerlaw.com
> bakerlaw.com
>
> <image003.jpg>
>
> ---
>
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From: echavez@blm.gov
To: king@westernlaw.org
Cc: Christopher Walls; Bernadette Read
Subject: Acknowledgment/Clarification for FOIA NM 2018-017 from Western Environmental Law Center
Date: Friday, February 16, 2018 2:04:42 PM

This serves as an acknowledgment of receipt of your Freedom of Information Act (FOIA) request dated February 2, 2018. Your request was received via email on the same date in our BLM Washington Office. Your request was forwarded via email and received in this office on the same date.

You requested:

"1. All waste minimization plans accompanying Applications for Permit to Drill on federal lands submitted to the Bureau of Land Management's New Mexico State BLM Office for the Pecos District BLM Office, the Carlsbad Field Office, and the Roswell Field Office, or directly to the District and Field Offices, between January 17, 2017 and December 8, 2017, the effective date of the Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements Rule, 82 Fed, Reg. 58050 (Dec. 8. 2017) ("Waste Prevention Rule").

2. All Applications for Permit to Drill on federal lands submitted to the Bureau of Land Management's New Mexico State BLM Office for the Pecos District BLM Office, the Carlsbad Field Office, and the Roswell Field Office, or directly to the District and Field Offices, between January 17, 2017 and December 8, 2017. Please provide these APDs directly to us, rather than pointing us to the New Mexico state database where they may be found, as you did during a previous informal inquiry. We are interested in Applications for Permit to Drill for specific BLM Field Offices, and the state database does not sort APDs by BLM Field Office. To gather all APDs for a specific Field Office, our staff would need to click on each APD file within the state database and then scroll down to determine which Field Office the permit application is associated with—a time-consuming and cumbersome task.

3. All Conditions of Approval documents associated with Applications for Permit to Drill on federal lands submitted to the Bureau of Land Management's New Mexico State BLM Office for the Pecos District BLM Office, the Carlsbad Field Office, and the Roswell Field Office, or directly to the District and Field Offices, between January 17, 2017 and December 8, 2017. Again, please provide these Conditions of Approval documents directly to us.

4. All "agency records" related to applications to vent or flare gas from federal oil and gas leases or wells managed by the District and Field Offices submitted pursuant to Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases: Royalty or Compensation for Oil and Gas Loss ("NTL-4A"), Section IV.B., between December 8, 2017 and the date of this request. This includes:

- Records—including Form 3160-5 Sundry Notices, "evaluation reports," and "action plans" required by NTL-4A Section IV.B—submitted in support of such applications.

- Records of BLM approvals or denials of such applications.

- Records regarding the duration or length of time flaring is approved for each Federal well, and records of any subsequent extensions of time allowed for flaring, re-applications to flare, or other records identifying the length of time flaring is or has been authorized.

Note that, in the publication of the final Waste Prevention Rule, BLM stated that "[T]he

> BLM already publicly posts APDs for a period prior to approval, and we plan to post the waste minimization plans accompanying the APDs in the same manner, subject to any protections for confidential business information." 81 Fed. Reg. at 83,043. Accordingly, please identify where BLM publicly posts APDs for the District and Field Offices referenced above and describe how to access waste minimization plans accompanying the APDs, if they are publicly available on a federal government website."

Your request was assigned Request No. NM 2018-017/BLM 2018-00433. Please reference this number on correspondence concerning your request. Freedom of Information Act requests are processed on a first-in, first-out basis. If we anticipate a delay in processing your request, we will inform you of the delay.

This also serves as a confirmation of our telephone conversation today regarding your request. I informed you that Christopher Walls, Petroleum Engineer, Carlsbad Field Office, and I left you a voice mail message on February 13, 2018, to ask for clarification of your request. I spoke to you initially regarding your request and then we did a follow-up conference call with Christopher Walls and Bernadette Read, State Records Management Specialist.

After much discussion of what WELC is requesting, the following will be provided by BLM. You agreed to the following:

1. A listing of all APD's submitted and approved from January 17, 2017 to December 8, 2017.. You stated that you do want copies of the Waste Minimization Plans. Chris informed you that WMP's are not required when the APD is submitted; however, before the APD is approved, a WMP must be submitted to our office. We will provide a scanned copy of the WMP.

2. See response to Item 1. (The APD listing and the WMP's will be provided.)

3. For the conditions of approval, a sample of the standard language in the COA will be provided. You stated you did not need a copy of the actual COA for every APD approved since the language is the same.

4. You stated that you did not need the sundry notices or any records for this item; however, you are interested in our process for vending and flaring after the December 8, 2017 date to the present. Chris explained that for venting and flaring, effective December 8, 2017, a stay was issued for 43 CFR 3179 and some other regulations related to the Waste Prevention Rule. In the background section it stated the following: "One commenter stated that the 2017 RIA incorrectly assumes that suspension of the 2016 final rule will result in a return to NTL–4A. The BLM disagrees.

The 2017 final rule RIA does not state nor imply an assumption that the suspension of the 2016 final rule will result in a return to NTL–4A. Several States have published regulations and policies that have the effect of limiting the waste of gas from production operations in the States where the production of oil and gas from Federal and Indian leases is most prevalent. See the 2017 RIA at 17 for a summary of these State regulations."

The BLM must now rely on the authority of 43CFR §3162.7-1 Disposition of Production, which requires the operator to put gas in a marketable condition, if economically feasible and to prevent avoidable loss of oil and gas.

Without an economic justification we consider most cases of Venting or Flaring to be avoidably lost and therefore royalty bearing. Until guidance is issued Venting and Flaring will be reviewed on a case by case basis in respect to the existing regulations.

Please let us know if you agree with what we discussed. You can respond to this email message.

Questions regarding this request may be directed to me at the contact information below or at blm_nm_foia@blm.gov.

Eileen Griego Chavez
FOIA/Privacy Officer
BLM NM/TX/OK/KS
(505) 954-2129

Bernadette Read
FOIA & Records Specialist
BLM NM/TX/OK/KS
(505) 954-2130